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Title: Teachers' perceptions of job resources

**A thesis submitted in fulfilment of the requirements
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DECLARATION

The thesis is an original research and a product of candidate's own work. Furthermore, it has not been previously submitted for a degree at another university.

ABSTRACT

This study explored teachers' perceptions of their job resources, how they are constructed under perceived change demands and the perceived influence of participants' school contexts. A mixed-methods research design was followed. It consisted of a pilot-study, a survey and two rounds of semi-structured interviews in a convenience sample of secondary school teachers that were employed in schools located in a region of the Midlands in UK from June 2010 till July 2013.

Based on Demerouti et al.'s (2001) generic definition of job resources, six aspects of participants' perceptions of Job resources were addressed:

- a) teachers' perceptions of their schools as learning organisations,
- b) teachers' perceptions of their school activities/arrangements,
- c) teachers' perceptions of Job resources and their Positive Psychological capital,
- d) teachers' perceptions of their sources of engagement support,
- e) teachers' perceptions of available sources of support, and
- f) teachers' perceptions of the influence of their school contexts' on their perceived sources of support.

This thesis will present a literature review of key areas in relation to the study's research questions and methodological issues regarding its research design. It will discuss each aspect of teachers' perceptions of job resources in relation to relevant literature and it will show how the findings answered the research questions, present the study's limitations and contribution to the field.

Overall, the study's findings are in accordance to psychological and educational research in teachers' perceptions of sources of support in their work-environment. In particular, the surveys' and interviews' analyses showed that those sources of support mainly involve teachers' perceptions

of their relationships with their colleagues and leadership as well as their perceptions of their participation in decision-making committees and their perceived influence in any developments in their schools.

The contribution of this study is that it focuses on what individual teachers perceive as most important for them. This is important as it can highlight what sources of support may best meet the needs of individual teachers. This became especially evident through the analysis of interviewees' responses about what supported them when they faced a change in their careers.

Most importantly the present study showed the complexity of adopting a holistic approach towards teachers' job resources. For example, participants in both surveys and participants in the first round of interviews focused on non-work related aspects of their lives to describe what supports their engagement in their work. On the other hand, in the second round of interviews, where the focus was on the perceived influence of participants' school contexts on teachers' perceptions, such descriptions did not occur. Finally, the use of both surveys and interviews to explore teachers' perceptions of job resources allowed both targeting specific factors in teachers' work-environment, as well as letting individuals reflect on them.

1.0) CHAPTER 1: INTRODUCTION

The growth of the positive psychology movement in the last decade spurred interest in research fields that examine in greater depth what is positive in people and organisations. Positive organisational behaviour (POB) is an example of such research fields. In recent years, researchers have developed a large variety of theoretical models addressing different aspects of employees' work-lives. Job resources is a concept that emerged from such models, such as the Job Demands and Resources model and the Work-Engagement model (Demerouti et al., 2001; Bakker & Schaufeli, 2004; Bakker and Demerouti, 2006).

The present study explores secondary school teachers' work-perceptions based on Demerouti's et al. (2001) generic definition of job resources:

“Physical, psychological, social or organizational aspects of the job that may do any of the following: (a) are functional in achieving work-related goals; (b) reduce job demands and the associated physiological and/or psychological costs; (c) stimulate personal growth, learning, and development”

I was drawn to this topic by my interest in positive organisational behaviour and research in the teaching profession. I was particularly, though, interested in the definition of job resources as it assumes that all occupations have their own job resources that may share the same generic definition (Demerouti et al., 2001).

This study draws on research in positive organisational behaviour and educational research in relevant fields in order to address teachers' perceptions of such aspects of teachers' work. A literature review of the area showed that there is a string of research in positive organisational behaviour in the teaching profession that tests psychological models on teachers' work-related well-being (e.g. Hakanen et al., 2006; Bakker et al., 2007). Generally, psychological research in job resources has been carried out using models emanating from stress models. Therefore, they focus

on aspects of teachers' work that are described by the first and second part of the generic definition of job resources (physical, psychological, social or organizational aspects of the job that may be functional in achieving work-related goals and reduce job demands and the associated physiological and/or psychological costs).

However, a more extensive literature review showed that educational research has examined aspects of teachers' work like the ones described by the generic definition of job resources adopting a greater variety of research methods. For example, educational research in schools as learning organisations (Bowen et al., 2007) examines aspects of teachers' work that stimulate personal growth, learning, and development. In addition, educational research in teachers' professional lives and professional development (Rosenholtz, 1989; Goodall et al., 2005; Day et al., 2007) have addressed a great variety of supportive aspects of teachers' jobs using qualitative research methods.

For this reason, the present study was, also, influenced by educational research in teachers' perceptions of such aspects of their work. In particular, it focused primarily on aspects of teachers' jobs that may stimulate personal growth, learning, and development and secondly on aspects of their job that may reduce job demands and the associated physiological and/or psychological costs. The surveys' and interviews' findings were able to describe teachers' perceptions of such aspects of their work but interviews, also, described teachers' perceptions of aspects of their work that may be functional in achieving work-related goals.

One research question and one research sub-question were formed for this study. The former asked what teachers' perceptions of job resources are and the latter asked if those perceptions differ under perceived change demands. The review of the literature guided the development of a mixed-methods research design that consisted of a pilot-study, a survey-study and two rounds of semi-structured one-to-one interviews. However, the two methods were designed to complement each other.

This research design allowed six aspects of teachers' perceptions of job resources to be addressed that answered the study's research question and sub-question. The surveys explored:

- a) teachers' perceptions of their schools as learning organisations,
- b) teachers' perceptions of their school activities/arrangements, and
- c) teachers' perceptions of their sources of engagement support and they also highlighted potential relationship between teachers' perceptions of job resources and their Positive Psychological Capital (PsyCap).

Interviews, on the other hand, explored:

- a) teachers' perceptions of school activities/arrangements,
- b) teachers' perceptions of their sources of engagement support,
- c) teachers' perceptions of their sources of available support at an event of a change, and
- d) the perceived influence that school contexts may have had on teachers' perceived sources of support.

This thesis is comprised of eleven chapters. The next chapter will present the literature review that was carried out for the purposes of the present study. Therefore, it will present a review of the relevant psychological and educational research in fields related to the definition of job resources. Those involved psychological research in job resources and employee engagement and educational research in teachers' continuous professional development, professional lives and schools as learning organisations. The third and fourth chapters will focus on the methodological stance of the present study. The third chapter will discuss key research issues that influenced the development of the study's methodology such as researcher's positionality and the issue of data integration in mixed methods research. The fourth chapter will present in detail the study's methodology which includes the study's research design, such as the development and selection

process of the surveys' and interview's questions and a description of the analysis and discussion procedures.

Then, six chapters will present the analysis and discussion of the six aspects of teachers' perceptions of job resources that the present study addressed. In particular, the fifth chapter will focus on teachers' perceptions of their schools as learning organisations and show how they can describe teachers' perceptions of job resources. The sixth chapter will explore teachers' perceptions of job resources focusing on teachers' perceptions of their available school activities/arrangements. The seventh chapter will explore potential relationships between teachers' perceptions of job resources and their Positive Psychological Capital. The eighth chapter will address teachers' perceptions of job resources focusing on teachers' perceptions of their sources of engagement support and discuss the relevant literature as well. The ninth chapter will focus on teachers' perceptions of their available sources of support at an event of a demanding change and therefore address the study's research sub-question. The tenth chapter will explore further teachers' perceptions of job resources by focusing on the influence of participants' school contexts on their perceived sources of support. Finally, the eleventh chapter will present the study's conclusions and discuss its limitations and contribution to psychological and educational research in teachers' job resources.

2.0) CHAPTER 2: LITERATURE REVIEW

2.1) Introduction

The present study focuses on the field of job resources and reviews psychological and educational research in the field. This field involves the study of teachers' work-perceptions in ways that meet the generic definition of job resources describing what teachers perceive that supports them in their work.

Teachers' work-related perceptions have been examined both from psychologists and educational researchers as they are significant for teachers' well-being and development. However, the growth of the positive psychology movement in the last decade has spurred interest in research fields that examine such topics in greater depth and the study of teachers' work-perceptions has also been influenced by those developments. Such a development is the area of positive organizational behaviour that reflects a positive approach to developing and managing human resources (Luthans & Youssef, 2007). On the other hand, educational research in teachers' work-perceptions provides a wider understanding of teachers' perceptions of their school contexts. Although, researchers traditionally focus on the value of those perceptions for teachers' learning or their teaching performance their findings often unveil teachers' professional needs and how school contexts can support their fulfilment. Therefore, the developments across these lines of research have guided the present literature review and the consequent development of the study's research design.

Job resources is a concept that has been influenced by such developments and focuses on employees' positive work-perceptions. This chapter will present a literature review of the concept of job resources (Demerouti et al., 2001; Bakker & Demerouti, 2006) as well as psychological and educational research in areas related to teachers' perceptions of their job resources. Furthermore, the present study gives an emphasis on the third part of its definition (*physical, psychological, social*

or organizational aspects of the job that may stimulate personal growth, learning, and development) as it has been the least addressed by psychological research in job resources.

For this reason, the present literature review is extended into areas that share conceptual similarities with the definition of job resources or can add to our understanding of job resources. What those areas share in common is that they examine different supportive aspects of teachers' work using both quantitative and qualitative research methods and, thus, are able to address a wider variety of factors that may define teachers' perceptions of job resources. Such factors can include teachers' perceptions of their schools as learning organisations, their perceptions of specific activities that may be available to them for their professional development or their perceptions of specific sources of support at an event of a change. The advantage of addressing such groups of perceptions is that they demonstrate how job resources are relevant to teachers' perceptions of their work and provide a better understanding of where job resources can be located within teachers' work-lives.

2.2) Chapter structure

This chapter consists of three sections that review different research areas that meet the generic definition of job resources and formed the study's research purposes. Each section will present the characteristics of those areas and their conceptual similarities with the concept of job resources, as well as relevant empirical research findings in the teaching profession.

The first section involves a literature review of the concept of job resources and perceived individual resources at work. This is a review of the psychological literature of the Job-Demands and Resources model and the Work-Engagement model as well as the construct of Positive Psychological Capital as an outgrowth of the developments in the area of Positive Organisational Behaviour (POB). For this reason, it also includes a presentation of the research area of Positive Organisational Behaviour (POB) and Positive Psychological Capital as a core construct of personal resources.

The second section involves a literature review of the concept of employee engagement because a key characteristic of job resources is that they are considered to be antecedents of employees' work-engagement. Therefore it includes a short review of psychological and organisational research in the concept of employees' engagement and work-engagement.

The third section presents a literature review of educational research in areas that show conceptual similarities with the third part of the definition of job resources involving schools as learning organisations, teachers' work-motivation, and educational research in teachers' continuous professional development. Finally, the fourth section presents the study's research purposes and how they are related with its research questions.

Therefore, the present literature review is a presentation of the most relevant literatures to the concept of job resources. This aims to highlight gaps in the literature and the issues that the study's research questions address.

2.3) Section A: Psychological research in job resources

Job resources is a term introduced in occupational health psychology to address aspects of employees' perceptions of their work-characteristics that support their adaptive functioning at work. Demerouti et al. (2001) defined job resources as those physical, psychological, social or organizational aspects of the job that may do any of the following:

- (a) are functional in achieving work-related goals;
- (b) reduce job demands and the associated physiological and/or psychological costs;
- (c) stimulate personal growth, learning, and development.

Furthermore, job resources are necessary for individuals to deal with the psychological demands of their job, while they are also important in their own right, as they play a separate motivating role. For this reason, in the last decade occupational health psychologists have developed questionnaires

that assess employees' perceptions of their work-environment. The concept of job resources has emerged as part of psychological models such as:

- a) Karasek' Job Demands-Control model (JDC) and Demands-Control-Support (DCS)
- b) Job-Demands and Resources model
- c) Work-Engagement model

A.1) Job Demands-Control model (JDC) and Demands-Control-Support (DSC) model

A model that spurred research in the significance of employees' work perceptions for their well-being was Karasek's Job Demands-Control model (JDC) model. For example, Van der Doef & Maes (1999) in a review of 20 years of empirical research using Karasek's model showed that that high demand and low control work environments are associated with lower psychological wellbeing and job satisfaction, burnout and other forms of psychological distress. However, research findings over the next decade were contradictory mainly due to its simplistic form (e.g. Baker, 1985; Hobfoll, 1988).

Key issues pertaining research using the JDC model were related with its mere focus on job control as one's sole resource that buffers the negative effects of job stress. By doing so it does not address the influence that the psychosocial environment exercises on employees' well-being or the impact of cultural differences. A characteristic example of such contradictory results was the use of the JDC model often shows is a recent study on the job satisfaction of employees (N=200) in Nadra (an organisation in Pakistan). Hussain and Khalid (2011) using linear regression and correlation analysis found the unusual result of low demand, low control and low social support being the factors for employees' job satisfaction. The researchers called for more research on the matter concluding that there may be other factors related to employees' satisfaction or dissatisfaction (e.g. personal attributes- relationships between employees and their managers).

Attempting to address issues like the above the Job Demands-Control model was expanded to include the psychosocial resource of social support. Karasek & Theorell (1990) proposed the multidimensional model of Demands-Control-Support (DCS) model that examined the interaction between person and environment in employment settings. The key characteristic of the Demands-Control-Support model is that it utilizes three factors in order to explain the development of stress for the individual at work: (a) demand, (b) control, and (c) support (Karasek & Theorell, 1990). The main gain of incorporating “support” as an individual’s resource is that it allows the examination of psychosocial factors at work and their influence on employees’ well-being and job satisfaction. A report of International Labor Organisation (ILO) defined such psychosocial factors at work as:

“interactions between and among work environment, job content, organisational conditions and workers’ capacities, needs, culture, personal extra-job considerations that may, through perceptions and experience, influence health, work performance and job satisfaction” (ILO, 1984, p.3)

A.2) Job Demands and Resources model

Based on those initial models, Schaufeli & Bakker (2004) proposed the Job-demands and Resources model (JD-R) that approaches employees’ well-being focusing on the characteristics of their work-place. The most important premise of this approach is that it constitutes an occupation-specific approach that recognizes the uniqueness of each work environment that has its own work characteristics that are responsible for employee well-being. It is a development on the previous models as it offers more opportunities to address significantly more aspects of one’s life that can be either a strain or resources for work-related well-being.

Schaufeli and Tarris (2014) in their review of the literature offer two reasons for the increasing popularity of the model. The first one is that contrary to other models it *“does not restrict itself to specific job demands or job resources assuming that any demand and any resource may affect employee health and well-being (p.44)*. The second reason, that is also extremely important

for the present study on teachers' perceptions of job resources, is that *"the JD-R model is heuristic in nature and represents a way of thinking about how job (and recently also personal) characteristics may influence employee health, well-being, and motivation (p. 44)."* Thus, contrary to the previous models the JD-R model offers a flexibility for any researcher interested into employees' well-being and motivation, although it comes with challenges such as its epistemological status, the accurate distinction between "demands" and "resources", the incorporation of personal resources and its applicability beyond the individual level. Those issues were taken into consideration in the development of the present study in teachers' perceptions of job resources and the purpose was to select relevant literature and take methodological decisions that matches the *"way of thinking"* that is reflected by the generic definition of job resources and its assumptions.

Job Demand and Resources: theoretical assumptions and empirical findings

According to Demerouti et al. (2001) job demands refer to physical, social or organizational aspects of the job that require sustained physical and/or psychological effort and are therefore associated with physiological and/or psychological costs. Job resources, on the other hand, are those physical, social or organizational aspects of the job that: (a) are functional in achieving work-related goals; (b) reduce job demands and the associated physiological and psychological costs; (c) stimulate personal growth and development. A central assumption of this model is that job demands evoke a stress process, because they lead to energy depletion, whereas a lack of job resources evokes a withdrawal process, because it undermines employee motivation and learning. The model's main assumption is that although each occupation has its own work-characteristics, they can be classified in two general categories (i.e. job demands and job resources), which initiate two fairly independent processes: the "health-impairment" one that leads to burnout and the "motivational" one that leads to work-engagement.

Schaufeli & Bakker (2004) explored these two psychological processes using four Dutch organizations that provide different services (an insurance company, a pension fund company, an Occupational Health and Safety Service and a home-care institution). Their findings showed that burnout and work engagement exhibit different patterns of causes and consequences in the context of JD-R model. Specifically, it was clear that burnout mediated the relationship between job demands and health problems, which means that high job demands standards lead to high levels of professional burnout, which in turn lead to more serious health problems. Work engagement, on the other hand, appeared to mediate the relationship between job resources and intentions for retirement, which means that a greater number of job resources lead to higher levels of professional commitment, which in turn leads to reducing the chances that employees want to leave their jobs. These patterns have been confirmed in heterogenous occupational samples (Korunka et al., 2009; Llorens et al., 2006), as well as in a variety of occupational groups in the Netherlands and Finland such as a Dutch Telecom company (Bakker, Demerouti & Schaufeli, 2003), Finnish teachers (Hakanen et al., 2006), nutrition production employees (Bakker et al., 2003b), four home care organisations (Bakker et al., 2003c), Finnish dentists (Hakanen et al., 2008) etc.

Therefore, the JD-R model can be considered as an overarching theoretical framework that may be applied to many occupational settings, irrespective of the particular demands and resources involved. Furthermore, its empirical findings show that it can be seen as a development from a simple model to a more complex one that takes into account more possible factors that influence employees' perceptions of job resources. Finally, it suggests that there is a positive gain spiral between those perceptions and employees' decisions to stay or leave their jobs.

The existence of such a positive spiral is in accordance with other theoretical work on the psychological mechanisms that underlie human flourishing such as Fredrickson's (1998, 2001, 2004) broaden-and-build theory of positive emotions. In particular, it describes how positive emotions broaden peoples' momentary thought-action repertoires and build their enduring personal resources, such as social connections, better coping strategies and knowledge about the

environment, and, thus, become more creative, knowledgeable, resilient and socially integrated and healthy (Fredrickson, 1998, 2001, 2004; Fredrickson & Losada, 2005). A difference, though, between job resources and broaden-and-build theory is the focus on personal resources as the JD-R acknowledges and examines their impact on employees' well-being whereas broaden-and-build theory focuses solely on how positive emotions shape them.

Job Resources and work-engagement: Incorporating personal resources and its motivational spiral

More recently, the JD-R model was expanded to incorporate employees' personal resources in relation to the assumed health impairment and motivational processes. The purpose of this development was to construct a more robust framework of the antecedents of work-related well-being as the JD-R model was only focusing on employees' perceptions of work-characteristics neglecting the potential role of individual characteristics (Xanthopoulou et al 2009a, b, c).

The outcome of this development was a model of work-engagement model which focuses solely on the motivational process that was depicted in the job demands and resources model. Bakker et al. (2008) signifies work-engagement as a unique emerging concept in occupational health psychology that can be best predicted by job resources and personal resources.

Bakker & Demerouti (2008) illustrate the characteristics of a work-engagement model, which involves the interplay between job demands, job resources and personal resources and treat work-engagement as a facet of positive organisational behaviour. In this model job resources is the first driver of work engagement. In particular, it assumes that job characteristics of each profession have a motivational potential (Hackman & Oldham, 1980) and that a source of motivation for the individuals is to maintain and increase their pool of resources (Hobfoll, 2001). In this context, employees' motivation depends, on the one hand, on the degree to which job characteristics will allow the development of critical psychological states that contribute to personal development and job satisfaction and, on the other hand, on employees' available resources.

Moreover, job resources are considered to exist in various levels of analysis within the organisation. At the organizational level, such resources involve professional development opportunities, salary and career advancement opportunities and job security. At the interpersonal, such factors include the interpersonal and social relationships (e.g. relationships with superiors and colleagues), at the level of the organisation of work include the ways work is organised (e.g. role clarity, participation in decisions). Finally, at the task-level they include the characteristics of individual work (e.g. work significance, work identity, autonomy and job feedback).

What is more, job resources are considered to trigger a resource gain spiral that gains its salience in the context of resource loss (Hobfoll, 2002). This characteristic feature of job resources is identified by Bakker & Demerouti (2008) as the second driver of work-engagement, which means that job resources become more salient and gain their motivational potential when employees are confronted with high job demands (Bakker et al., 2007).

Finally, personal resources are identified as the third driver of work-engagement (Bakker & Demerouti, 2008) and they refer to positive self-evaluations that are linked to resilience and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll et al., 2003). Such self-evaluations have been researched extensively by psychologists in different contexts with regards to individual well-being and performance but only recently have been examined as part of the extended job demands and resources model (Xanthopoulou, 2007). For example, it has been shown that such positive self-evaluations predict goal-setting, motivation, performance, job and life satisfaction, career ambition and other desirable outcomes (Judge et al., 2004). The reason for this is that the higher an individual's personal resources are, the more positive the person's self-regard will be and so will be his or her goal self-concordance (Judge et al., 2005). Individuals with high goal self-concordance are intrinsically motivated to pursue their goals and as a result they trigger higher performance and satisfaction (see also Luthans and Youssef, 2007).

A.4) Individual perceived resources in Positive Organisational Behaviour (POB)

The present study views Positive Psychological Capital as a key construct of personal resources. Indeed, research in positive organisational behaviour confirms its significance as an asset towards desirable employee outcomes but there is no extensive research in teachers' positive psychological capital.

In general, the term *Positive Organisational Behaviour* focuses on positive approaches to developing and managing human resources in today's workplace (Luthans & Youssef, 2007; Luthans, Youssef, & Avolio, 2007). A common topic among POB scholars is what should be considered part of positive organisational behaviour and what not. This is important as knowing what constitutes positive organisational behaviour influences directly the kind of research questions that are examined which in turn influences how the research is viewed by peers and interpreted by policy makers.

Nelson & Cooper (2007) stress the variance in the perspectives of POB scholars demonstrated through different theoretical frameworks and focus on different positive-oriented constructs. Luthans' (2002a) management-oriented approach, for example, recognises specific inclusion criteria for positive constructs in order to be considered facets of POB as an attempt to differentiate POB from the popular positively oriented self-help, personal development literature. Furthermore, Wright (2003), counterbalances the management-driven view of POB and calls for a need of an employee-centred view of POB whose mission should also be the pursuit of employee happiness and health as viable goals in themselves.

The rise of Positive Organisational Behaviour (POB) was another reason that spurred additional interest in perceived resources at work and in the development of psychological models: e.g. the expansion of the job demands and resources model to incorporate personal resources or the development of the work-engagement model. Bakker and Schaufeli (2008), also, treat work-engagement as a facet of positive organisational behaviour summarizing POB studies that

investigate how the combination of stressful and motivating job characteristics influences negative and positive aspects of employees' well-being (Bakker et al., 2005; Hakanen et al., 2005; Bakker et al. 2007). The present research in teachers' perceptions of Job resources follows the above Bakker & Schaufeli's (2008) rationale for attaining inclusivity in POB studies.

Bakker & Schaufeli (2008) argue that both approaches could be integrated into one positive business value model of employee health and well-being. For this reason, they identified various studies that can also be treated as studies in positive organisational behaviour. A key characteristic of all those studies is that they examine factors that influence employees' well-being by testing hypotheses based on the job demands and resources model. In particular, Bakker et al. (2005) examined the interaction between four job resources (measured as social support, quality of the relationship with the supervisor, autonomy, and performance feedback) and four job demands (measured as work overload, emotional demands by students, physical demands, and work-home interference) among 1,012 employees working in an institute for higher education in the Netherlands.

Bakker et al.'s (2005) analysis of the interactions between employees' job demands and job resources showed that high job demands and low job resources significantly added to predicting exhaustion and cynicism. Most importantly, though, their results showed that employees' well-being was influenced and counterbalanced by stressful and motivating job characteristics. Specifically, they found that experiencing work overload, emotional demands, physical demands, and work-home interference did not result in high levels of burnout if employees also experienced autonomy, received feedback, had social support, or had a high-quality relationship with their supervisor.

Similarly, Hakanen et al. (2005) examined the interactions between four job demands (measured as qualitative workload, physical environment, emotional dissonance and negative changes), five job resources (measured as job control, "innovativeness", "variability of required professional skills", "peers contact", and "positive patient outcomes") and work-engagement among 1,919 Finnish dentists. Their regression analyses showed that the negative influence of job demands

on dentists' work engagement was diminished by their job resources at work and what is more participants benefited more from them under conditions of high demands.

This interaction between job demands and job resources was also investigated by Baker et al. (2007) among 805 Finnish teachers working in elementary, secondary, and vocational schools. Their analyses confirmed their hypotheses that job resources (measured as supervisor support, innovativeness, appreciation, and organisational climate) diminish the negative relationship between pupil misbehaviour and teachers' work-engagement and they influence engagement under conditions of high demands.

Researchers in positive organisational behaviour have often focused on the personal resources that employees' identify as significant for them at work (e.g. Sweetman & Luthans, 2010). Indeed, personal resources are identified as antecedents of work-engagement (Bakker & Demerouti, 2008). As previously noted, personal resources involve positive self-evaluations that are linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll et al., 2003). This focus on perceived resources and the motivational processes that they can trigger, also, distinguishes this line of research in engagement from other approaches such as Harter et al. (2002) description of employee engagement or Macey & Schneider (2008) descriptions of the components of employee engagement.

Overall, research results demonstrate that the interplay of personal resources with job demands and job resources contributes in explaining variance in exhaustion and work engagement. For the purposes though of this review only the most relevant research findings were selected and a selection will be explored in more detail later as their participants were teachers.

Particularly, Prieto al. (2008), in a sample of 274 Spanish teachers from 23 secondary schools, estimated job demands (quantitative overload, mental demands, emotional demands, role ambiguity, role conflict), job resources (autonomy, support climate) and personal resources (mental competences, emotional competences) over a year. Their findings confirmed the hypotheses of the extended JD-R model about predicting burnout and work-engagement.

Moreover, Hakanen et al. (2008) in a sample of Finnish dentists in a period of three years, examined a positive spiral model of interaction between job resources, work-engagement, individual initiative and innovation observed at division level. Their findings confirmed the existence of this spiral, as job resources predicted work-engagement, which in turn predicted future job resources. Furthermore, they found that individual initiative predicted work-innovation showing that personal resources can also affect the wider working environment.

Xanthopoulou (2007) in a longitudinal study, involving 163 employees over period of 18 months on average showed found an overlapping relationship between employees' pool of resources (job resources and personal resources) and their work-engagement over time. In particular, her employees' levels of job resources (autonomy, supervisory coaching, performance feedback, opportunities for professional development) as well as their personal resources (self-efficacy, organisational based self-esteem) were related with their levels of work-engagement at the end of the study. At the same time their levels of work engagement at beginning of the study were positively related with their levels of job resources and personal resources at the end of it.

Finally, Salanova et al. (2008) in a 2-wave field study among 242 high school teachers and another one among students showed that efficacy beliefs (self-efficacy and perceived collective efficacy) were linked to work-engagement through positive emotions confirmed the upward spiral from engagement to efficacy beliefs.

A.5) Positive Psychological Capital (PsyCap)

Positive Psychological Capital (PsyCap) is an outgrowth of positive organisational behaviour or POB (Luthans, 2002a, 2002b, and 2003). However, the majority of research in positive psychological capital involves other occupational groups than teachers. Luthans (2002b, p.59) defines positive organisational behaviour (POB) as "the study and application of positively oriented

human resource strengths and psychological capacities that can be measured, developed and effectively managed for performance improvement in today's workplace". Therefore, Luthans supports the view that for a construct to be included in POB it must meet certain criteria as being: (a) positive, strength-based, and relatively unique to the organizational behaviour field; (b) theory and research-based with valid measures, therefore, important for human resources development, and (3) state-like and thus open to development and performance management. Luthans's approach shows that among the constructs proposed in the positive psychology literature self-efficacy, state-hope, optimism and resilience meet those criteria (Luthans, 2002a; Youssef & Luthans, 2005a; Masten & Reed, 2002; Youssef & Luthans, 2005b).

Research findings show that the construct of PsyCap and its components are positively related to desirable employee outcomes (e.g. performance, organisational commitment, job satisfaction, well-being over time) but PsyCap seems to be a better predictor than its individual components (Luthans et al., 2007). Focusing on hope, for example, Peterson and Luthans (2003) found that organizational leaders with high levels of hope had more profitable work units and had better satisfaction and retention rates among their subordinates compared to leaders with low levels of hope. Similarly, Adams et al. (2002) showed that firms with higher levels of hope in people have more income and increased customer satisfaction and loyalty of employees.

Luthans, Avolio, Walumbwa, & Li, (2005) in a sample of Chinese workers found that all PsyCap components were positively related to supervisory rated performance, but that positive relationship was higher for the PsyCap as a whole. This is a typical finding for PsyCap research. Indeed, also, Larson and Luthans (2006) found PsyCap components to be significantly positively related to job satisfaction and organisation commitment but the effect was stronger for the PsyCap construct as a whole. For this reason is argued that more research is needed on the convergent and discriminant validities of the PsyCap construct and its component with regards to outcome variables.

More recently, there is also research examining the value of PsyCap as a personal resource for employee well-being. Specifically, Avey et al. (2010) found that employees' PsyCap is significantly

correlated with psychological well-being over time. Avey et al. (2009), also, found a negative relationship between the levels of employees' PsyCap and their perceived symptoms of job stress which means that the higher participants scored in the PsyCap scale the lower their score was in scales measuring symptoms of job stress. Specifically, psychological capital was found to have a negative relationship with respondents' symptoms of stress, their intentions to quit and job search behaviours. Finally, Avey et al. (2006) found that PsyCap and its components were negatively related to employee absenteeism in a sample of engineering managers. However, PsyCap was significantly correlated only with voluntary absenteeism and not involuntary.

A.5.1) Self-efficacy

Self-efficacy has been argued to best meet the inclusion criteria that Luthans has set for a construct to be considered a facet for PsyCap (Luthans, Youssef, & Avolio, 2007). It represents a positive belief and was defined for the workplace by Stajkovic and Luthans (1998b, p. 66) as "the employee's conviction or confidence about his or her abilities to mobilize the motivation, cognitive resources or courses of action needed to successfully execute a specific task within a given context." Indeed, comprehensive meta-analyses show that self-efficacy had a strong positive relationship with work-related performance (Stajkovic & Luthans, 1998a; also see Bandura, 2000; Bandura & Locke, 2003).

A.5.2) Hope

The PsyCap component of hope follows Snyder's definition of state-hope. Snyder and colleagues (1991, p. 287) define hope as a "positive motivational *state* that is based on an interactively derived sense of successful (a) agency (goal directed energy) and (b) pathways (planning to meet goals)." In this way, as a psychological construct, hope consists of three major conceptual foundations: agency, pathways, and goals. (Snyder, 2000, 2002; Snyder et al., 1996). The agency thinking refers to the perceived ability to use (to start and continue) any plan of action to

achieve a goal. This is especially important when a person faces significant obstacles to achieving one's objectives and provides the necessary incentive to use another plan of action from that used until that time. The second component (pathways thinking) refers to the perception of people about their ability to invent effective action plans to achieve the desired objectives. These two components of hope are assumed to be complementary and equally necessary.

A.5.3) Optimism

The PsyCap component of optimism draws from Seligman's attribution theory. Seligman (1998) defines optimists as those who make internal, stable, and global attributions regarding positive events (e.g., task accomplishment) and those who attribute external, unstable, and specific reasons for negative events (e.g., a missed deadline). Therefore, optimism as a facet of PsyCap is associated with a positive outcome outlook or attribution of events, which includes positive emotions and motivation. What is more, though, a characteristic of PsyCap optimism is that it is realistic (Luthans, 2002a). Realistic optimism includes an evaluation of what one can and cannot accomplish in a particular situation and hence adds to one's efficacy and hope. As Peterson (2000) notes, realistic optimism is very dynamic and changeable and is considered state-like. In relation to self-efficacy, Bandura (1998, p. 56) notes that "evidence shows that human accomplishments and positive well-being require an optimistic sense of personal efficacy to override the numerous impediments to success."

A.5.4) Resilience

Generally, in positive psychology, resilience is characterized by positive coping and adaptation in the face of significant risk or adversity (Masten, 2001; Masten & Reed, 2002). Masten and Reed (2002, p.75) define resilience as "a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk." Based on this definition, Luthans et al. (2007) conceptualised resilience as a personal resource as part of the construct of

Psychological Capital defined as the “positive psychological capacity to rebound, to ‘bounce back’ from adversity, uncertainty, conflict, failure, or even positive change, progress and increased responsibility” (Luthans, 2002a, p. 702).

Their conceptualization differs from others as it is relevant to HRD due to its state-like nature, which means that it can be targeted and opened to development. Indeed, although resiliency has traditionally been portrayed as trait-like there is evidence that is in fact developable (Bonano, 2004; Masten, 1994; 2001; Masten & Reed, 2002; Tugade & Fredrickson, 2004; Youssef & Luthans, 2005).

Due to the previously discussed close relationships between job resources and personal resources it was expected that in the course of the present study teachers’ personal resources would interplay with their perceptions of job resources. As the main focus, though, was on teachers’ perceptions of their job resources, the definition of Positive Psychological Capital was selected to be included in this study for two reasons. First of all, it describes psychological states rather stable personality characteristics whose influence may be more pervasive and, secondly, due to its nature it is expected to be open to development and, therefore, potentially able to be targeted. The main impact of this decision was that it required to be incorporated within the quantitative component of a research design.

A.6) Summary

This section presented a literature review on the development of the concept of individual resources at work from their role in stress models as a buffer to the detrimental effect of work-stress to its role in the work-engagement model. This showed the evolution of the concept of job resources from being a buffer against stress to being part of a motivational spiral that stirs work-engagement. Indeed, the main difference between the stress models and the work-engagement

model is that the latter focuses primarily on motivational procedures and therefore it addressed both job resources and personal resources. For this reason, the present study aims to highlight potential relationships that may be important for our understanding of teachers' perceptions of job resources.

Furthermore, as this evolution of the concept of job resources follows the rise of positive organisational behaviour then its relationship with positive psychological capital should also be examined as PsyCap is a key construct of personal resources that aims to support employees' adaptive functioning at work. For this reason, the present study aims to highlight the need for a closer examination of the relationships between job resources and positive psychological capital. A significant limitation, though, of this line of research is that it employs strictly quantitative research methods and is cut off from other closely related research fields that examine teachers' work perceptions in schools. The same limitation, though, is also met in the research area of employee engagement that focuses on employees' perceptions of aspects of their work that may support their adaptive functioning at work. For this reason, the present study, also, explored teachers' perceptions of what supports their engagement in their work.

2.4) Section B: The concept of employees' engagement

The concept of employees' engagement and the concept of job resources have been linked in the model of work-engagement. However, employees' engagement is a broader concept than work-engagement and different researchers have suggested different definition. As a result, their work has identified a larger variety of aspects of employees' work that support their engagement in their work. In particular, in the model of work-engagement job resources is defined as the antecedents of work-engagement and refers to employees' perceptions of various aspects of their work.

Generally, research in employees' engagement has focused on employees' work-perceptions without always adopting the definition of job resources. Indeed, examining work-engagement, based on the extended JD-R model, can add a lot to our knowledge on the factors that affect both work-related well-being and motivation.

However, there have been noted significant short-comings with regards to its inability to capture the effect of employees' personality characteristics (Semmer et al. 1996). Specifically, Wefald (2008) compared three different measures of engagement with regards to personality characteristics, transformational leadership and related psychological constructs. His findings showed that Shirom's (2003) conception of engagement as a trait was the strongest engagement construct, while Schaufeli's construct of work-engagement was found to be a better predictor for turnover intentions.

Finally, Bakker & Schaufeli (2008) note that a reason that personality has not been taken largely into consideration on work-engagement studies is because often researchers follow Luthans' advice that positive organisational behaviour constructs must be state-like rather than trait-like.

B.1) Employee Engagement

As a topic, employees' engagement has received increasing attention by researchers in the last decade due to its seemingly important impact on positive outcomes both for the individual and the organisation. Generally, there is a consensus that employee engagement involves the elements of energy and identification with one's work. However, a review of the literature showed significant differences in the ways that researchers define engagement, its components and its antecedents, as well as what is considered to be its opposite: disengagement or burnout. Researchers have focused on various kinds of employees' perceptions at work in order to approach the antecedents of employees' engagement. However, only the line of research that followed Bakker & Demerouti (2008) work-engagement model identifies employees' job resources as being one of its drivers. For

the purposes of the present research, this specific approach on work engagement was initially adopted because it also allows an examination of employees' job resources.

B.2) Engagement as the opposite of disengagement

The first scholar that talked about engagement- and its opposite disengagement-was Kahn (1990), viewing it as the psychological bond of workers with their work-roles during the performance of their duties. He described engagement as a two-dimensional construct that consists of attention (“...the cognitive availability and the amount of time that one spends thinking about a role”; 656) and absorption (“...the intensity of one’s focus on the role”; p.656). What he noted as antecedents of employee engagement and disengagement are three psychological conditions of the individual: meaningfulness (e.g through tasks, roles, and work interactions), safety (e.g. through interpersonal relationships, groups and intergroup dynamics, management styles and organizational norms) and availability (e.g. through physical energies, emotional energies, insecurity, and outside life). May’s et al. (2004) field study examined engagement and its determinants, based on Kahn’s work, demonstrating a positive relationship between engagement and all three psychological conditions- with meaningfulness being the most influential one.

Harter et al. (2002), also, views employee engagement as the opposite of employee disengagement but suggested a slightly different definition. They defined engagement as the “individual’s involvement and satisfaction as well as enthusiasm for work” and they recognise four workplace determinants of employee engagement:

- 1) clarity of expectations and provision of basic materials and equipment,
- 2) feelings of contribution to the organization,
- 3) feeling a sense of belonging to something beyond oneself, and
- 4) feeling as though there are opportunities to discuss progress and grow.

Furthermore, Harter et al. (2002) presented the Gallup Workplace Audit that assesses the antecedents of employee engagement by measuring employee perceptions on work characteristics. Indeed, Harter et al.'s meta-analysis, that included Gallup data from 42 studies in 36 independent companies, signifies a positive relationship at the business unit level between employee engagement and various organisational outcomes with employee turnover, customer satisfaction-loyalty and safety to be the most important ones.

More recently, Macey & Schneider (2008) describe the components of what comprises employee engagement, acknowledging that their model does not include the motivational components of engagement. They, also, explain that their model doesn't include those aspects of employee engagement because they can often coincide with other constructs often found in the literature (e.g. professional involvement, professional commitment, productive behaviour, conscientiousness, etc.). Indeed, Macey & Schneider (2008) suggest three levels of engagement:

- 1) a predisposition (trait engagement),
- 2) a mental state (state engagement) (as job satisfaction, organizational commitment to, involvement in professional, psychological help as part of the image of himself),
- 3) observable behaviour (behavioural engagement)

Meyer & Gagné (2008) go a step further by demonstrating that internal motivation and elements of external motivation, as defined in self-determination theory, can give a valuable insight into state engagement. In particular, they note that engagement depicts autonomous regulation, which includes internal motivation, the attainment of a valued personal goal (identification) or the expression of one's self (integration). What is more, the underlying psychological mechanisms of autonomous regulation (satisfaction of the basic psychological need for competence, autonomy and relatedness) can provide a better understanding of how engagement is developed.

A characteristic of this line of research is that it approaches employee engagement as a desirable state for both the individual and the organisation without focusing explicitly on its links

with employee well-being. The present study did not use any of those definitions as the main focus was on teachers' perceptions of their sources of support rather than defining teachers' engagement. On the other hand, Schaufeli's approach on work-engagement was included in the present study because it is closely linked to the definition of job resources and, thus, relationships between the construct of work-engagement and supportive aspects of teachers' work may, also, further describe teachers' perceptions of their job resources.

B.3) Engagement as the opposite of burnout

The line of research on employee engagement that has evolved treating it as the opposite pole of burnout by utilising the term work-engagement is the most relevant for the present study in teachers' perceptions of job resources. What differentiates it, though, for most researchers following this line of research, is the way they measure work-engagement. Specifically, Maslach & Leiter's (1997) conceptualization of burnout was extended to include work-engagement, characterised by high energy, high involvement, and high efficacy. Studies based on Maslach & Leiter's work, using the Maslach Burnout Inventory (Maslach et al., 1996) have repeatedly shown the significance of work-environment factors in the occurrence of either burnout or engagement and their mediating role in organisational outcomes (e.g. Cho et al., 2006).

Arguably, Schaufeli et al. (2002), acknowledging that burnout and work-engagement are experienced as opposite psychological states, suggested that they should also be assessed differently. They defined work-engagement as a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption. Moreover, they suggested that vigour and dedication should be considered as the opposite two poles of the burnout dimensions (emotional exhaustion and cynicism, respectively). Absorption was identified by Schaufeli & Bakker (2001) as the third component of work engagement.

Additionally, Schaufeli et al. (2002) highlight that work-engagement, as opposed to emotional experiences, refers to a more persistent state of mind that is not focused on any particular object, event, individual, or behaviour but instead shows relatively stability over time. Moreover, they analyze its components explaining that a) vigour is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties, b) dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge, and finally c) absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (p. 74).

Studies based on Schaufeli et al.'s (2002) conceptualization of work-engagement examine the determinants of work engagement using the Job-Demands and Resources model. For this reason, they examine work-engagement as the opposite of professional burnout in the context of the job demands and resources model. They focus on identifying factors that as job resources can predict employees' work-engagement and therefore signal an assumed motivational process. This approach also shows that work engagement can be distinguished from other similar concepts, allowing for a different insight with regards to job performance and turnover intentions (see Bakker et al.; de Lange et al.; Hakanen et al., *Work & Stress*, 22, 3, July_September, 2008).

B.4) Work-Engagement as a separate construct

The need, though, for work-engagement to be treated as a construct separately to burnout was also raised by evidence showing that the work efficiency dimension of burnout fitted better with the work-engagement construct than that of burnout. In particular, Duran et al. (2004) showed a negative relationship between the dimensions of professional burnout (emotional exhaustion and cynicism) and work engagement (vigour, dedication, absorption), but positive relationship between work efficiency and the three dimensions of work-engagement. Furthermore, Bresó et al (2007)

concluded that it is preferable when measuring professional burnout to involve a measure of inefficiency rather than reversing the score of efficiency beliefs, as they seem to reflect employees' work-engagement. Schaufeli & Salanova (2007), also, comparing the two structures in samples of Spanish students and Dutch and Spanish workers, concluded that beliefs of inefficiencies are more suited to the other two dimensions of professional burnout than efficiency beliefs. Indeed, their data were more suited to a model in which inefficiency "loaded" to burnout, and effectiveness in work-engagement.

The study of work engagement as an independent, separate construct has been mostly achieved by the use of the Utrecht Work Engagement Scale (UWES), a self-report questionnaire first developed by Schaufeli & Bakker (2003) and further tested by Schaufeli et al. (2006). Overall, confirmatory factor analyses of both scales support the theoretical assumption that work-engagement consists of three interrelated dimensions and the 17-item version of UWES scale has been used in studies in several countries (e.g. Greece-Xanthopoulou, 2007; China-Yi-Wen & Yi-Qun, 2005; Japan-Shimazu et al., 2008; Finland-Hakanen, 2002; South Africa-Storm & Rothmann, 2003; Spain-Schaufeli et al., 2002b; Netherlands- Schaufeli et al., 2002a).

This scale was originally developed for the evaluation of professional burnout, but contains both positive and negative expressed questions and can therefore be used to assess work-engagement. Schaufeli & Bakker (2003) indicate that the total score of work-engagement may be more valuable to empirical research than the scores of work-engagement dimensions due to the high correlations among them. Similarly, Salanova et al. (2003) suggest that the measurement of work-engagement should include only the two dimensions of vigour and dedication, while the dimension of the absorption may play a different role and should not be regarded as a component of work-engagement. In fact, Seppälä et al. (2009) examining the construct validity of the two versions of UWES scales note that if the research purpose is in general to examine work-engagement a one-factor solution may be more suitable than the three factor one.

B.5) Summary

This section presented a review of the literature of employee engagement and presented key differences in which researchers have attempted to approach the concept of engagement in work. In particular, it presented the different lines of research based on the way researchers define employee engagement and its opposite (disengagement or burnout). These differences led to significant differences in the way researchers assess engagement and its antecedents. However, they all share in common that they focus on employees' perceptions to assess them.

The present study adopts Demerouti et al.'s (2001) definition of job resources. Although all the conceptualisations of employee engagement focus on employees' work-perceptions only the line of research that approaches engagement as the opposite of burnout and especially the model of work-engagement defines its antecedents as employees' job resources. Furthermore, compared to other professional groups there is less systematic research in teachers' engagement beyond psychological research in their work-engagement. For this reason, the present study allows participants to describe their sources of engagement support and using the generic definition of job resources aims to construct a definition of teachers' perceived sources of engagement support based on those descriptions.

2.5. Section C: Research in the teaching profession in areas relevant to the definition of job resources

Research in the teaching profession in physical, psychological, social or organizational aspects of the job that may do any of the following: (a) are functional in achieving work-related goals; (b) reduce job demands and the associated physiological and/or psychological costs; (c) stimulate personal growth, learning, and development (Demerouti et al., 2001) is fragmented into different research areas.

Some of those areas have significant conceptual similarities with the concept of job resources and its line of research. Others, though, may offer a more in-depth analysis of certain aspects of teachers' work but with significantly different research methodologies (e.g. Hargreaves & Goodson 1996; Hargreaves 1994; Helsby, 1996; Day; 2000). In particular, psychologists have focused on teachers' perceptions in order to examine factors that may influence teachers' work-motivation and well-being. Similarly to research in job resources, they test hypotheses based on specific psychological theories in occupational psychology and they employ quantitative research methods to do so. Although those researchers do not use the term "job resources" their findings can provide a wider understanding of teachers' positive work-perceptions, especially within the theoretical context of positive organisational behaviour. Their findings can be used to flag teachers' job resources beyond the ones already identified by researchers using the extended job-demands and resources model. Educational researchers, on the other hand, have examined teachers' positive perceptions at work as part of their enquiry into teachers work-lives and schools as organisations. The advantage of those research findings are that they explore teachers' perceptions in greater depth as apart from a few quantitative measures in most of the times they employ qualitative research methods.

C.1) Psychological research in teachers' Job resources

As has been already mentioned the present research follows the Bakker & Schaufeli's (2008) rationale for attaining inclusivity in POB studies. This line of research in teachers' perceptions is characterised by the way that concepts are operationalised and the data analyzed and interpreted. Specifically, psychologists have researched job resources as part of quantitative models of work-related well-being models that originated from previous models of stress at work in an attempt to depict better the processes that lead to employees' work-engagement (the opposite of burnout) and their organisational commitment. A lot of research has been carried out across a large variety of occupational groups based on the same definition of job resources.

Focusing on research in the teaching profession, Hakanen et al. (2006) in a sample of over 2000 Finnish teachers showed that job resources (job control, information, supervisory support, innovative climate and social climate) were all positively related to work engagement. Moreover, Bakker et al. (2007) in a sample of 805 Finnish teachers working in elementary, secondary and vocational schools found that job resources reduced the negative relationship between pupil misbehaviour and work-engagement. Furthermore, Prieto et al. (2008) in a sample of 274 Spanish teachers from 23 secondary schools, estimated job demands (quantitative overload, mental demands, emotional demands, role ambiguity, role conflict), job resources (autonomy, support climate) and personal resources (mental competences, emotional competences) over a year confirming the hypotheses of the extended Job Demands and Resources model about predicting burnout and work-engagement. Specifically, they found that job demands positively predicted burnout (exhaustion, cynicism and depersonalisation) and negatively predicted work-engagement (vigor and dedication); while resources (job resources and personal resources) negatively predicted burnout but positively work-engagement. However, they, also, showed that such longitudinal effects can be influenced by teachers' levels of burnout and work-engagement at the time of the first measurement.

Bakker et al. (2006) in a sample of female school principals found that resilience, self-efficacy, and optimism contributed to work engagement, over and above the contribution of job resources (social support from team members and colleague principals, opportunities for development, and social support from the intimate partner). Also, Salanova et al. (2008) in a 2-wave field study among 242 high school teachers and another one among students showed that efficacy beliefs (self-efficacy and perceived collective efficacy) were linked to work-engagement through positive emotions. Finally, Federici and Skaalvik (2011) in their study in a sample of 300 Norwegian principals developed an instrument that measured eight dimensions of principle self-efficacy and tested its relationship with their work-engagement. Their analysis showed that among the eight

dimensions of principal self-efficacy, instructional leadership was the strongest predictor of their work-engagement followed by administrative leadership and school environment.

The significance of teachers' perceived organisational characteristics for their well-being was also demonstrated by Timms et al.'s (2012) cluster analysis among members of the Queensland Independent Education Union (QIEU) in Australia the majority of which were teachers. Their analysis showed that burnout and engagement may co-exist but teachers' perceptions of their organizational characteristics will make a difference on whether they are empowered, under-pressure, unengaged, burnt out or severe burnout. In particular, high scores in control reward, community, values and fairness were more often found in the empowered group of teachers, while higher scores on workload and longer work hours were more common in the two burnt out groups and the unengaged group.

C.2) Psychological research in teachers' positive work perceptions

Research in teachers' work motivation and well-being has given significant findings on teachers' positive work-perceptions, in ways that meet the generic definition of job resources. In particular, they examine teachers' work perceptions based not only on motivation theories but also on occupational health psychology models.

C.2.1) Teachers' positive work-perceptions and work-motivation

Researchers' have focused on teachers' positive work-perceptions as part of their research on factors that influence their work-motivation and, consequently, their job satisfaction. For example, Addison & Brundrett's (2008) examined teachers' motivation and demotivation in six primary schools in UK following Scott et al. (1999) work on internal and external factors of satisfaction and dissatisfaction. Their findings showed that the most significant motivator for

teachers was children's positive responses, while their most significant demotivators were children's negative responses and heavy workload. Furthermore, by capturing the intrinsic nature of motivation and the extrinsic nature of demotivation, they note that school leaders should aim to manage them separately. Their results, also, agree with those of a wide-ranging survey in UK by Market and Opinion Research International (MORI) (Woodward, 2003) on teachers' motivators and demotivators. Indeed, these approaches on teachers' motivators share a lot in common with the definition of job resources and the motivational components of employees' engagement at their work.

C.2.2) Teachers' positive work-perceptions and well-being

In recent years, researchers have approached teachers' motivation following the trend in organisational psychology to use modern occupational health psychology models to assess both factors that have a negative impact on teachers' well-being, as well as those that can support it. Therefore, they often examine teachers' work-perceptions by employing psychological models that examine the buffering effect of personal and social resources (Antonovsky, 1987) on psychological strain. Such examples are the previously discussed studies of Hakanen et al. (2006) and Bakker et al. (2007) with Finnish teachers and Prieto et al.'a (2008) in Spanish teachers, based on the Job-Demands and Resources model.

Researchers have, also, focused on teachers' perceived resources using other theories of occupational health psychology. For example, Kieschke & Schaarschmidt's (2008) report on professional commitment and health among German teachers between 2000-2005 using the Occupational Stress and Coping Inventory-(Schaarschmidt & Fischer, 1997). The most stressful conditions reported included the behaviour of difficult pupils, large class sizes, and high numbers of classes to be taught (Schaarschmidt, 2005); while the most relieving condition was the experience of social support (supportive school administration and colleagues) (Schaarschmidt & Kieschke, 2007).

Furthermore, they found that professional commitment cannot protect teachers from burnout if they lack the necessary coping and emotional self-regulation skills to manage stress. Specifically, based on individuals' scores they identified four patterns of professional commitment, satisfaction, and coping: risk pattern B, pattern S, risk pattern A and pattern G .

- The B-type individuals were the *burnout* cluster. They were characterised by low scores in the dimensions of professional commitment, especially in the subjective significance of work and professional ambitions.

-The S-type was a cluster that was characterised by an attitude of sparing personal investment at work. People belonging to this cluster restricted their efforts at work to what is absolutely necessary. Characteristics of the S-type include below average scores on subjective significance of work, professional ambition, tendency to exert, and striving for perfection.

-A-type individuals were the ambitious cluster. This cluster is characterized by excessive commitment at the workplace and a low ability to distance oneself from work. At the same time, high commitment is not followed by sufficient resilience to withstand excessive stress and work-related demands which set the individual at a high risk for developing health problems.

-Finally, the cluster of G-type individuals was the *good health* cluster. It consisted of people that were in good psychological health and showed a health-promoting attitude towards their work. Their longitudinal analyses showed that only those teachers who began in the G (good health) group were still in this group at the end of the study. On the other hand, teachers that were initially in the other clusters did not move to the G (good health) cluster at the end of the study.

Klusmann et al. (2008), also, proposed a model of teachers' occupational well-being in which successful teachers are those who experience high levels of occupational well-being and succeed in creating optimal learning environments for their students. Similarly, though, to the rationale of other psychological models of teachers' occupational well-being this process depends on an assumed interplay between teachers' personal characteristics and their institutional characteristics. As teachers' personal characteristics the authors identify their motivation and self-regulation,

engagement, resilience, professional knowledge and beliefs. On the other hand, institutional characteristics involve general demands of the classroom, differential resources (principal's support, parents' support, colleagues' support) and differential demands (student characteristics and organisational features). Specifically, in a sample of 1936 secondary teachers in 198 German schools, they examined the relationships between teachers' personal characteristics (motivation and self-regulation, engagement, resilience), aspects of teachers' occupational well-being (emotional exhaustion and job satisfaction) and teachers' instructional performance and student outcomes.

Klusmann et al. (2008) used the Occupational Stress and Coping Inventory (Schaarschmidt & Fischer, 1997), and they identified four self-regulatory patterns: the healthy-ambitious type (H), the unambitious type (U), the excessively ambitious, and the resigned (R) type. Overall, their finding showed that teachers of the H type (highly engaged and resilient teachers) had the lowest ratings on emotional exhaustion and the highest ratings on job satisfaction, while they also received the most favourable student ratings.

A different approach to teachers' well-being at work was adopted by Kitching et al. (2009) in Irish primary schools. They approached teachers' personal resources by utilizing two diary studies assessing weekly incidents of positive and negative affect, as well as teachers' commitment, self-efficacy and self-esteem. Indeed, a common theme in stress research is that minor but frequent negative events are more detrimental to well-being than infrequent but major traumatic events (Lazarus, 1991). Furthermore, both self-efficacy and self-esteem are considered as psychological conditions (states) susceptible to short- and medium-term influences. Again, the most important motivator for teachers (regular positive feelings) were found to be students' engagement and achievement, while the most important demotivator (regular negative feelings) were students' behaviour and perceived difficulties around home influences.

C.3) Research in teachers' positive work perceptions and conditions in schools as learning organizations

Recently, research in school conditions that foster organisational learning and/or schools as learning organisations has addressed teachers' perceived resources usually examining how teachers perceive their organisation, their colleagues and also themselves at work. The advantage of this line of research is that it allows the examination of job resources focusing even more on the third part of its definition: "physical, psychological, social or organizational aspects of the job that stimulate personal growth, learning, and development" which is the less researched compared to the its other two parts "physical, psychological, social or organizational aspects of the job that may do any of the following: (a) are functional in achieving work-related goals; (b) reduce job demands and the associated physiological and/or psychological costs"

C.3.1) School conditions for organisational learning

Collinson and Cook (2007) define organisational learning as "the deliberate use of individual, group, and system learning to embed new thinking and practices that continuously renew and transform the organisation in ways that support shared aims" (p. 8) and identify six interrelated conditions that support it. These involve: prioritizing learning for all members, fostering inquiry, facilitating the dissemination of knowledge, practicing democratic principles, attending to human relationships, and providing for members' self-fulfilment. What differentiates Collinson and Cook's approach from the previous ones is that they acknowledge the provision for members' self-fulfilment as a way of thinking that is required for successful organisational learning.

Furthermore, Collinson and Cook (2003) discuss conditions that foster organisational learning presenting the findings of a qualitative study that explored dissemination of teachers

learning within a multi-school computer technology project. Their study was part of a 5-year technology demonstration project that involved three inner city middle schools in USA and included all ten teachers who remained as classroom teachers in these three schools throughout the initial years of the project. The teachers in this study identified 43 factors that motivate dissemination and 35 factors that restrain it. Specifically, the motivating factors in this study were generally internal and, for the most part, related to teachers' professional judgments, attitudes, and relationships. Conversely, the restraining factors were generally external and related mostly to the structure of the school day and year, especially the lack of time.

Moreover, Leithwood, et al. (1998) reported the results from three independent studies on conditions that foster organisational learning in elementary and secondary schools. Those conditions were related to school culture, structure, resources and leadership. With regards to school cultures, the most significant effects were noted for collaborative and collegial cultures. Those included norms of mutual support, respect for colleagues' ideas, a willingness to take risks in attempting new practices, the exchange of honest and candid feedback, shared celebrations of successes, a strong focus on the needs and achievements of the students, informal sharing of ideas and resources, and continuous professional growth (p.262-263). The school structures that were found to support organisational learning were those that allowed for greater participation in decision making by teachers (p.263). Current and sufficient resources supporting professional development to promote school initiatives were decisive boosts to the teachers' learning (p.263). Transformational forms of principal leadership were found to contribute significantly to school conditions fostering organisational learning processes as well as to organisational processes directly (p.267).

A systematic research project in the ways in which schools can foster organizational learning has been a federally funded, five-year collaborative research project titled Leadership for Organisational Learning and Student Outcomes (LOLSO) in secondary schools in South Australia and Tasmania. For the purposes of this research, organisational learning refers to the way the whole school staff, collaboratively and on a continuous basis, learn and put this learning to use. The study

argued that it is this collective, continuous learning initiative that results in a learning organisation. The project surveyed teachers and principals from 50 South Australian secondary schools and 46 Tasmanian secondary schools to determine their perceptions of schools as learning organisations, their views on school management and the nature of principals' leadership (Mulford & Silins, 2003).

Silins et al. (2002) using data from this research project examined perceptions of schools as learning organisations. Learning organisations were defined as schools that employ the processes related to environmental scanning, developing shared goals, establishing collaborative teaching and learning environments, encouraging initiatives and risk taking, regularly reviewing aspects related to and influencing the work of the school, recognising and reinforcing good work, and providing opportunities for continuing professional development. The results showed that there is both an underlying single factor (organisational learning) as well as four separate and correlated component factors. These four factors are depicted as:

- 1) Trusting and collaborative climate,
- 2) Taking initiatives and risks,
- 3) Shared and monitored mission and
- 4) professional development

Overall, they stress the need to find ways to link staff meaningfully across internal real and imagined school boundaries. Similarly they argue that across the school system it must be made sure that no spasmodic flurry of professional activity is spurred each time new demands are made of the school, curriculum or practices by being ahead of the change game.

Additionally, Orthner et al. (2006) provide an analysis of an exploratory, longitudinal research study conducted into after-school programs for children at risk in US and Israel. This study examined program and client outcomes from introducing organisational learning adopting a quasi-experimental longitudinal design. Organisational learning was measured using the Organisational Learning Assessment Scale (OLAS) (Orthner et al., 2003) that assesses cultural and structural facets for organizational learning. Their findings showed that staff in programs that were exposed to a

learning development process were more likely than staff in parallel organizations who did not receive this learning training to improve selected elements of the structure and culture of their organizations that support learning. In particular, the staff reported significant improvements in beliefs that the organisation is (1) a safe place to introduce and discuss new ideas and (2) that has clear and consistent goals and strategies to achieve them showing that a culture of stimulating dialogue had been encouraged in the programs over the course of the OL intervention.

In addition, Sabah & Orthner (2007) presented a methodology for the implementation of OL in schools, by assessing school readiness for organisational learning based on the work of Orthner et al. (2006). Specifically, they note that such an assessment should include two key components for learning: the presence of a learning culture and a structure that supports learning. The cultural aspect of OL refers to the school norms and values that support its exploration of new ideas and ways of operating more effectively. The school's culture can be assessed along four dimensions:

- (1) innovation: beliefs that support getting, sharing, and using new ideas to promote organizational work,
- (2) safety: beliefs that promote freedom of discussion and the ability to test ideas that may or may not work out,
- (3) goal-centred: beliefs that encourage developing goals and setting objectives to achieve them, and
- (4) leadership: an administrative philosophy that encourages new ideas.

The structural aspect of OL refers to learning mechanisms that allow school personnel to readily exchange information and to learn collaboratively. The structure necessary for learning can be assessed along four dimensions:

- (1) collaboration: staff regularly meet together to learn from each other and review program progress measures,
- (2) “planfulness”: staff set measurable outcomes to be achieved and make sure plans and activities link to outcomes,

- (3) diffusion: staff actively share their program successes with each other and with other schools or organizations, and
- (4) infrastructure: organizational resources and time are set aside to promote learning.

Sabah & Orthner's (2007) methodology involves seven steps:

- 1) formulate a learning question,
- 2) assemble a learning team,
- 3) gather relevant existing knowledge,
- 4) formulate a tentative model,
- 5) implement the model in practice and methodically improve it, 6) formulate and share the evolving model, and
- 7) formulate the next learning question

They stress, though, that the proposed methodology can be used to address a single issue in a limited time frame, but that will not create a learning organization.

Additionally, Lam (2004) compared the relative effects of external environment, internal conditions and the contextual variables on school organisational learning and mapped the causal relationships with organisational learning processes and outcomes in six secondary schools in Western Australia. Lam's findings show that internal school factors, supportive culture, flexible structure, and dynamic leadership persistently and positively contributed to school regeneration. Understandably, with leaders supporting change, with culture that promotes sharing and mutual support, and with structure that encourages collaborative undertaking, learning at the organisational level is much enhanced. In terms of contextual factors, only type and size of schools made some impact on organisational learning process and outcomes. It seems that coeducational schools were more complicated to manage than unisex schools. Large schools, likewise, complicated staff working relationships and the school operation. More effort was required for staff and administrators to reach consensus before directions could be set and action could be taken.

What is more, Marks and Louis (1999) investigated the intersection of teacher empowerment (structural empowerment) and school capacity for organisational learning in 24 public schools in the USA. Based on the characteristics of high performance schools, their main assumptions were that teachers' participation in decision-making can strengthen school capacity for organizational learning, which in turn facilitated teachers' empowerment exercise. They identified five dimensions of school capacity for organizational learning: structure, shared commitment and collaborative study, knowledge and skills, leadership and feedback and accountability. Teacher empowerment was measured using a 14-items survey that asked teachers to rate the extent of their influence over school policy and management, their work lives, and the school experiences of students.

Marks and Louis' (1999) findings demonstrate that even among restructured schools, high schools in the USA often lack a strong capacity for organizational learning and the empowerment of teachers that is fundamental both to their professionalism and, indirectly, to school improvement. Only one high school, ranked high on both of these dimensions. However, among the low-scoring high schools, it is important to note that considerable variation exists in both the extent of teacher influence and the capacity for organizational learning. For this reason, the authors conclude that both the capacity for organizational learning and empowerment are largely a matter of staff relationships, such as having mutual support, exchanging ideas and reaching consensus, and treating each other in professional ways. Therefore external resources, buildings, assessment programs, or student schedules alone may prove inadequate to increase teachers' willingness to take on the rather significant role changes required to actively design their own work settings outside the classroom.

What is more, Marks and Louis (1999) suggest that for building capacity for organizational learning to become a real strategy for school improvement, several developments need to take place. Firstly, the specific characteristics of schools that indicate capacity for organizational learning need to be refined so that teachers and administrators will be able to assess whether their schools

have them, maximizing direct appeal and salience to practicing educators in schools. Secondly, the critical ideas underlying organizational learning need to be grounded in the evolution of thinking about how schools change, and how their structure, culture, and leadership need to be organized to facilitate the best synthesis and application of professional knowledge. Thirdly, teachers' involvement in midlevel decisions is vital as it affects the core technologies of teaching and learning that are most associated with increased capacities for learning on the part of the school.

This line of research provide significant insights on the ways in which conditions for organisational learning may, also, prove to be significant sources for support for teachers' work in ways that meet the third part of the definition of job resources. For this reason, its arguments were taken up to a degree into consideration for this study but they did not inform the quantitative part of the research design as they did not provide a scale addressing teachers' work-perceptions in a way compatible to the study's research purposes.

C.3.2) Bowen's approach on schools as learning organisations

Bowen et al. (2006) define *learning organizations* as "associated with a core set of conditions and processes that support the ability of an organization to value, acquire, and use information and tacit knowledge acquired from employees and stakeholders to successfully plan, implement, and evaluate strategies to achieve performance goals" (Bowen et al., 2006, pp. 98-99) . This core set of conditions and processes involve both actions and sentiments. The action component of learning organizations reflects employees' approach to work that provide opportunities for learning and the demonstration of shared responsibility and collective competence in addressing organizational goals. Bowen et al. (2007), also, recognize that this is the most frequently discussed component in the organisational learning literature. The "sentiment"

component of schools as learning organisations, on the other hand, depict the “softer” side of an organisation: collective expressions of positive regard, emotions and attitudes among employees that encourage, support, and reinforce internal integration and social harmony. These aspects of the organisations, though, are expected to hold the group together during the change process and facilitate the change process itself.

Based on a review of the literature of schools as learning organisations Bowen et al. (2007) identified six action and six sentiment dimensions of a learning organization. Their six action dimensions were:

- (1) team orientation,
- (2) innovation,
- (3) involvement,
- (4) information flow,
- (5) tolerance for error, and
- (6) results orientation

On the other, hand their six sentiment dimensions of learning organizations were:

- (1) common purpose,
- (2) respect,
- (3) cohesion,
- (4) trust,
- (5) mutual support, and
- (6) optimism.

In the present study Bowen’s approach on schools as learning organisations is adopted because it also provides an assessment instrument (the Success Profile Learning Organization-SSPLO). It was validated in 11 middle schools in North Carolina (Bowen et al. 2006; 2007) and it provides an assessment of teachers’ perceptions of the assumed dimensions of a school as learning organisation.

C.4) Research in teachers' perceptions of their school context and professional development

Researchers have for long examined school conditions that support teachers' development and how they are related to effective CPD. However, this research has focused primarily on the effectiveness of CPD rather than teachers' perceptions of CPD that meets their needs. For example, McCoemick (2010) highlight that there is often a confusion in the literature on the way ideas are used such as those of "network" and "community" (e.g. Lieberman and Miller, 2008; Lieberman, 2000) or the "form" and "content" of collaboration (Little, 1990).

C.4.1) The role of supportive school context

Hawley & Valli (1999) describing the characteristics of effective teachers' professional development note that both what teachers learn and how they learn it is important. First of all, they note that it should involve teachers in the identification of what they need to learn and in the development of the learning experiences in which they will be involved. Moreover, it should be primarily school-based and built into the day-to-day work of teaching and organized around collaborative problem-solving. In addition, it should be continuous and on-going involving follow-up and support for further learning-including support from sources external to the school that can provide necessary resources and new perspectives. Apart from this, though, it should be, also, connected to a comprehensive change process focused on improving students' learning.

Louis & Kruse (1995) note that the most meaningful forms of teacher development are fostered most directly and powerfully by conditions found inside the school followed by appropriate leadership initiatives. School leaders can realistically support individual teachers as they attempt to further develop their professional knowledge and skill by encouraging teacher participation in well-

conceived school-improvement processes. Such processes not only create conditions for teacher development, they also distribute those conditions broadly throughout the school's social organisation. Furthermore, participation with others in authentic, non-routine activities give rise to the acquisition of situated knowledge required for expert, practical problem-solving as concepts can only be understood through experience with their use and the refined appreciations (including tacit knowledge) that occur as a result of feedback from such use.

Participation with others, especially members of the field of practice, teaching in this case, who are more expert in some areas substantially, extends the potential for individual development. Explanations for this effect began, most notably with Vygotsky's (1978) conception of a zone of proximal development. He argued that processes involved in social interaction are eventually taken over and internalized by a person to form individual cognitive processes. Hence, participation with others in addressing a problem that demonstrates processes more sophisticated than those possessed by the individual potentially stimulates growth in the individual's problem-solving capacity. This is at least: a) when group processes are at a challenging but comfortable level of sophistication beyond the individual, b) when the group process adjusts the difficulty of tasks for individual members so that they are manageable for those members (Mehan, 1984; Rogoff & Lave, 1984; Wertsch, 1984), and c) when there are opportunities for individuals to reflect on differences between their own processes and those used by the group. For useful, robust, situated knowledge to develop most readily, participation with others must also be an activity that is authentic-circumstances that involve the ordinary activities of whatever the culture is within which the practitioner works (e.g. classroom teaching). Authentic activities are embedded in the social and physical content that must be accounted for in problem solving and must be represented in the knowledge structures stored by the practitioner. Knowledge for problem-solving will be readily accessible as Sternberg & Caruso (1985) argue, to the extent that the cues needed at the time of access were encoded (or acquired or learned) when the knowledge was originally being stored. Finally, the authentic activities in which teacher participate must also be non-routine if they are to

contribute to further development. Furthermore, teachers must be assisted in reflecting critically on these activities. Non-routine does not necessarily mean novel, although it may be. It means looking at one's usual practices through fresh eyes; developing a capacity, as Rudduck (1988) argues, for the kind of "constructive discontent" with one's existing practices that will fuel the motivation for professional learning.

The evidence reviewed by Leithwood & Jantzi (1990) and Leithwood et al. (1993b) suggest that leadership initiatives can contribute significantly to teachers' development when school leaders:

- ensure that adequate financial, time, personnel, materials and other resources necessary to support teacher development activities are available

- provide opportunities for teachers to develop a shared view of the school's overall mission and more specific goals to which they are strongly committed.

- help teachers to assess their own needs for growth and gain access to sources of assistance inside or outside the school.

- foster the development of a collaborative school culture within which opportunities exist for authentic participation in decision making about school-improvement efforts and meaningful interaction with colleagues about collective purposes and how to achieve them.

- build feelings of self-efficacy by recognising teachers' accomplishments and by providing support to help reduce anxiety about tackling new initiatives.

- share or distribute the responsibility for teacher development broadly throughout the school-for example to teachers' colleagues, to teachers themselves, to external people who may be assisting in the school-improvement effort and to the school improvement initiative in which teachers are engaged.

Harris and Muijs (2005), also, identify six important messages about the role of professional development in building leadership capacity for school improvement. Specifically, they note that it is important to:

- 1) to foster deep collaboration and not superficial cooperation among

- the teaching staff,
- 2) form partnerships within schools and to network with other school and agents,
 - 3) generate teacher leadership and pupil leadership,
 - 4) provide opportunities for teacher enquiry and action research,
 - 5) allocate time for professional reflection and opportunities for teachers to talk together about teaching and learning, and
 - 6) generate the collective ability, expertise and commitment of teachers to ensure that all teachers are involved.

Leithwood et al. (2009) highlight that the school structures that support learning within the organisations are those that allow for greater participation in decision-making by teachers. Such structures included: brief weekly planning meetings, frequent and often informal problem-solving sessions; flexible and creative timetables; regularly scheduled professional development time in school; and common preparation period for teachers who needed to work together. Other structures involved the cross-departmental appointment of teachers, integrated curriculum teams and team-teaching. The physical space, also, of schools had some bearing on teachers' learning, when it encouraged or discouraged closer physical proximity of staff. Moreover, teachers reported that current and sufficient resources to support essential professional development in aid of school initiatives were a decided boost to their learning. Within their own schools, teacher used colleagues as professional development resources, along with professional libraries and any professional readers that were circulated among staff. Access to relevant curriculum resources and to computer hardware and software aided teachers' learning, in their view, as did access to technical and programme assistance.

Hargreaves (1994) demonstrates how a collaborative culture can facilitate restructuring initiatives and educational improvement. Specifically, it allows moral support that can carry people through the failures and frustrations that accompany change, while it increases efficiency by

eliminating duplication as responsibilities are shared in complementary ways. Furthermore, it improves effectiveness by encouraging teachers to employ a greater diversity in teaching strategies and improving their sense of efficacy, while it reduces overload as burdens and pressures are shared and are dealt with in a collaborative manner than in solitude. Moreover, collaboration reduces uncertainty by setting agreed boundaries on what can be achieved and creates collective professional confidence. What is more, collaboration facilitates organisational responsiveness as it provides more learning opportunities. It, also, allows continuous improvement by drawing together the collective knowledge and expertise of teachers (Hargreaves, 1994). This allows them to respond swiftly to changing environments, scanning the environment proactively for upcoming changes and seeking out the opportunities that they may offer. Collaboration, also, facilitates individual learning as teachers have more opportunities to learn from each other between classrooms, departments and schools. Finally, collaboration fuels continuous improvement as it encourages teachers to see change “as an unending process of continuous improvement in the asymptotic pursuit of ever greater excellence on the one hand, and emergent solutions to rapidly changing problems in the other” (Hargreaves, 1994). As Voulalas & Sharpe (2005, p191) note:

“When all definitions were pieced together the school as learning community was perceived as a place where life-long learning takes place for all stakeholders for their own continuous growth and development, teachers act as exemplary learners students are prepared adequately for the future and mistakes become agents for further learning and improvement. Furthermore, it is a place where collaboration and mutual support is nurtured, clear shared visions for the future are built, and the physical environment contributes to learning”.

Lieberman and Grolnick (1996) in a study of 16 US educational reform networks found that networks attempt to shift the meaning of adult learning from prescription towards challenging involvement and problem solving. Bell et al. (2006) defines networks in education as groups or system of interconnected people and/or organisations (including schools) whose aims and purposes include the improvement of learning and whose structure and organisation include explicit

strategies designed to achieve these goals. Furthermore, Church et al. (2002) argues that participation itself is the main issue to be addressed when examining a network, and especially who participates, how, why and for how long. Finally, Hadfield and Chapman (2009) note that what characterize networks are their structures, processes, networked agency and purposes.

C.4.2) Teachers' perceptions of effective CPD and their professional needs

Researchers have often examined CPD effectiveness and teachers' perceptions of what constitutes effective CPD but there is less systematic research around teachers' needs and their CPD. What is often argued is that the norms of the school, its structures and practices, both enable and constrain teachers' learning (Rutter et al. 1979; Galloway et al. 1982; Pollard 1985; Mortimore et al. 1988; Woods et al. 1997). For example, Pedder (2006) that investigated school-level factors that supported teachers' learning and found a statistically significant relationship between the school-level factors – communicating a clear vision, support for professional learning, auditing expertise and supporting networking – and teachers' levels of enquiry and learning. On the other hand, Hollingsworth's (1999) longitudinal study of primary mathematics teachers' professional development demonstrated that unsupportive school conditions that prohibited the implementation of new practices included:

- a lack of coordination and leadership;
- little collegial activity;
- no obvious commitment to professional development in mathematics.

Characteristics of effective CPD can include having a sustained and intensive professional development, a coherent programme for teacher learning and opportunities for "hands-on" work integrated into the daily life of the school (Garet et al., 2001). Opfer and Pedder (2010) summarize

the most effective features for professional development activities most often identified in the literature including:

- . being applicable to school and classroom settings
- . having clearly shared aims and objectives
- . being provided by people with expertise
- . taking account of prior knowledge and experience
- . modelling effective teaching and learning strategies

Earley and Porriitt (2009), funded by the Training and Development Agency (TDA), examined the Effective Practices in Continuing Professional Development (CPD). They found that effective practices in Continuing Professional Development consist of:

- clarity of purpose at the outset in CPD activity;
- a specific focus and goal for CPD activity aligned to clear timescales;
- a focus on pupil outcomes;
- participants' ownership of CPD activity;
- engaging with a variety of CPD opportunities;
- time for reflection and feedback;
- collaborative opportunities for CPD.

However, as Day and Gu (2007) highlight fundamental to the effectiveness of CPD is teachers' sense of commitment, which influences their capacities for and attitudes to professional learning. Similarly, Hopkins and Harris (2001) demonstrate that the effectiveness of CPD depends on the degree to which it matches appropriately professional development provision with particular professional needs. For this, reason both individual and organisational goals need to be taken into consideration and their different needs should be equally assessed (Day, 1991). There is, though less empirical research regarding how teachers' views on pupil learning and their own learning impact on teachers' CPD or affect their engagement with professional development activities. For example, research associated with those early in their teaching career shows that large proportions are not

having their needs met (Hodkinson 2006; ICM 2006), nor are they being prepared for tasks that require specific skills needed for new responsibilities (ICM 2006).

Goodall et al. (2005) investigated in a 2 year project the evaluation of the impact of continuing professional development. Teachers and CPD Leaders in 1000 randomly selected schools were asked about their involvement in, use of and concerns about CPD, in terms of its impact and evaluation. Furthermore, *in depth interviews* were conducted across a wide range of schools. It was also evident that many teachers' experiences of CPD are heavily dependent on their school and the LEA in which they work. Their findings showed that the most effective types of CPD were considered to be those that directly met individual needs, as well as responding to school based needs. What is more, CPD was understood by staff to meet a variety of needs: personal needs, policy needs and organisational needs. There were, also, sometimes tension between these three types of needs within a school as the resources available for CPD tend to be limited.

Another issue that has been related in the literature with ineffective CPD is teachers' appropriate access to it. Orfer & Pedder (2010) investigated issues pertaining teachers' access to continuous professional development in England highlighting that effective CPD varies significantly by individual and school contexts. For example, the teachers in schools with low pupil achievement appear to have particularly limited opportunities and access. Moreover, senior teachers may, often, set the tone and direction for CPD opportunities in schools although their interests and perceptions of learning can be different from those of colleagues at different career stages. Teachers' seniority can create perceptual barriers to CPD related to perceived school conditions, level individual interest and budget constraints. For this reason, the authors underscore the need of strategically development of CPD to ascertain that is accessible to all teachers.

Finally, Day et al. (2007) based on the VITAE research project presented longitudinal data on factors affecting teachers' development, learning and effectiveness. Moreover, two broad groups of teachers were identified in the VITAE project: teachers who had sustained commitment and those whose commitment was declining. The combination of factors mentioned most frequently as

contributing to teachers' sustained commitment were leadership support, colleagues' support, and personal support (e.g. family). On the other hand, the combination of pressures identified most frequently as challenging teachers' sustained commitment were workload, pupil behaviour and poor leadership.

Apart from this, the VITAE project examined teachers' views on CPD across their professional life phases in response to questions about their interests in and experiences of CPD. Their findings show that teachers in all professional life phases associated CPD with building their emotional, health and intellectual capacities. However, it was also acknowledged that heavy workload, a lack of time and financial constraints were important inhibitors in teachers' pursuit of professional development. Overall, CPD alone is unlikely to exert a major influence on teacher effectiveness. Indeed, CPD experiences are likely to be limited in their effects if they focus predominantly upon updating professional and managerial knowledge and skills. Furthermore, teachers need to have regular opportunities to experience a broad range of informal and formal CPD appropriate to their individual concerns and needs in addition to those of the school and national policies. Collaborative learning with colleagues within and across schools is a highly effective form of CPD. For this reason, Day et al. (2007) recommend that policy-makers, organisations concerned with initial teacher and in-service training and schools themselves need to review their provision so that is relevant to the specific needs of teachers who work in these contexts.

Additionally, Day et al. (2007) explored the ways that teachers sustain and manage their motivation and commitment in times of change, by examining the role of resilience in enabling teachers to respond positively to challenging circumstances which they may face over the course of their career. In this context the degree to which sudden changes will be perceived as adverse conditions depends on one's scope of experience at the time of change, perceived competence and confidence in managing the emerging conditions, views on the meaning of the engagement, and the availability of appropriate support within the context of change. Indeed, the stories of three resilient teachers from the VITAE project support the notion of resilience as a dynamic construct which varies

from person to person and is influenced by environmental, work specific and personal factors. Overall, Day et al. (2007) draw two significant conclusions with regards to teacher work lives, commitment and effectiveness. The first one is that teachers' sense of positive professional identity is associated with well-being and is a key contributory factor in their effectiveness. Specifically, Day et al. draw attention to the fact that effective teachers need to bring reserves of emotional energy to their work in order to engage with all their students; while their own sense of well-being depends on how others and they define their professionalism. The second one is that sustaining and enhancing teachers' commitment and resilience is a key issue for teachers' retention. Therefore, the VITAE project by focusing on teachers' needs in continuous professional development it, also, sets the case for quality retention. It focuses on teacher retention in terms of building and sustaining teacher quality and effectiveness over the whole of their careers and it involves the maintenance of teacher' motivation and commitment. *"It is the retention of teachers' hearts and minds, enthusiasm and morale. This form of retention is less easily observed but more closely related to teachers' sense of purpose, self-efficacy, levels of commitment and effectiveness"* (p. 254). Their findings are in accordance with arguments for creating more expansive environments for the professional learning of teachers which would be characterized by:

- 1) Close collaborative working
- 2) Colleagues (being) mutually supportive in enhancing teacher learning.
- 3) Supported opportunities for personal development that go beyond school or government priorities.
- 4) Out of school educational opportunities including time to stand back, reflect and think differently
- 5) Opportunities to integrate off the job training into everyday practice.
- 6) Opportunities to extend professional identity through boundary crossing into other departments, school activities, schools and beyond (Hodkinson & Hodkinson, 2005: 124)" (p.249)

C.5) Summary

This section presented a review of research in aspects of teachers' work-lives that can address their perceptions of job resources. Educational research has examined a wide variety of such aspects of teachers' work that can meet the generic definition of job resources and add to our understanding of teacher professional needs.

Research in teachers' motivation and well-being shows the importance of addressing the perceptions that teachers' hold about their workplace in understanding teachers' needs. Research in schools, though, as learning organization can provide a greater insight in aspects of teachers' work that stimulate personal growth, learning and development. However, the majority of the literature in teachers' perceptions of their professional development focuses more on the effectiveness of professional development activities than their congeniality with individual needs.

Therefore, the present study will draw from these to explore teachers' perceptions of job resources that can describe teachers' needs and how their school context can support them.

2.6. Research Questions

The present study had one research question and one sub-question. The main research question was:

“Which are teachers' perceptions of job resources?”

The study's sub-question was:

“Do they (teachers' perceptions of job resources) differ under perceived job demands?”

2.7. Research purposes

The present study aims to explore teachers' perceptions of Job resources. The above literature review identified three gaps in the literature that the present study aims to address:

- the generic definition of job resources
- the complex relationship between Job resources and personal resources
- educational research in aspects of teachers' job that stimulate growth and development

For this reason, based on the generic definition of Job resources it focuses on certain aspects of the concept of Job resources in order to construct a definition of teachers' perceptions grounded on their answers.

2.7.1. Generic definition of Job resources

The first aim of this research was to explore teachers' perceptions of job resources focusing in particular in the third part of its generic definition "...aspects of the jobs that may stimulate personal growth, learning, and development". For this reason, the literature review had two purposes. The first purpose was to identify instruments that measure factors that could meet conceptually this part of the definition of job resources. The second purpose was to identify specific aspects of the jobs in secondary-school teachers in UK that are expected to stimulate their personal growth, learning, and development.

Bowen et al.'s (2007) assessment of the "action" and "sentiment" component of schools as learning organizations could best meet this part of job resources' definition. In particular, the "action" component of a learning organisation reflects employees' approach to work that provides

opportunities for learning and the demonstration of shared responsibility and collective competence in addressing organizational goals. On the other hand, the “sentiment” one reflects the “softer” side of organizational functioning expressed as the collective expressions of positive regard, emotions and attitudes among employees that support and reinforce internal integration and social harmony.

Furthermore, the literature review showed that aspects of their work that support their personal growth, learning, and development are often part of their collaborative work with other teachers, and opportunities for their professional and leadership development. The literature review in job resources in the teaching profession showed that psychological research hasn’t addressed directly such aspects of teachers’ work, while educational researchers have extensively done (e.g. research in teachers’ continuous professional development) so but without defining them as teachers’ job resources (e.g. supportive school context). Moreover, it has been noted that research emanating from stress models, such as psychological research in job resources, focuses on a limited pool of resources found in individuals’ psychosocial work-environment and by doing so often fails to identify the value of perceived resources in a meaningful way for people’s day-to-day lives at work (e.g. Kira & Eijnaten, 2009). For this reason, the present study accessed teachers’ perceptions of those aspects of teachers’ jobs using the definition of job resources but allowing participants to reflect on them in order to construct a definition based on their own perceived experiences.

2.7.2. Job resources and personal resources

The second aim of this research is to examine the role of Positive Psychological Capital (PsyCap) as a core construct of personal resources. Both Positive Psychological Capital and the concept of Job resources as antecedent of work-engagement are an outgrowth of the developments in Positive Organisational Behaviour (POB). Furthermore, recent research shows that positive psychological capital as a core construct is also related to psychological well-being (Avey et al. 2010),

while its state-like nature means that it can be open to targeted development but at the same time show little stability over time (compared to personality traits). Furthermore, a key difference between Positive Psychological Capital and other more trait-like personal resources is that it can be of value for both research and practice due to its implicit management-driven view. For this reason, the present study will explore potential relationships between teachers' Positive Psychological Capital and teachers' perceptions of Job resources.

2.7.3. Job resources under perceived change demands

The third aim of the present study is to explore teachers' perceptions of Job resources under perceived change demands. A common argument in work-engagement/burnout research is that job resources gain their salience when they are under threat. Empirical research in teachers' job resources confirms this argument but researchers have focused on teachers' work-related well-being and have used mainly quantitative methodology. For this reason, the present study will assess teachers' perceptions of job resources through their reflections on their sources of support at an event of a demanding change in their work-lives. The goal is to examine whether such a reflection impacts substantially on their perceptions of job resources.

2.8. Overview

This chapter presented a literature review of the concept of job resources and areas of psychological and educational research related to its definition. Those areas included psychological research on the concept of job resources and employee engagement as well as educational research in schools as learning organizations and teachers' professional development. For this reason, the present study will explore:

- a) Teachers' perceptions of their schools as learning organisations,
- b) Teachers' perceptions of their sources of engagement support,
- c) Teachers' perceptions of supportive school activities/arrangements,
- d) The complex relationships with individuals' Positive Psychological Capital, and
- e) The perceived influence that school contexts may have had on teachers' perceived sources of support

Teachers' perceptions of their schools as learning organisations were selected because they focus on aspects of teachers' jobs that are related with growth and development. Similarly, teachers' perceptions of school activities/arrangements meet the third part of the definition of job resources as the purpose of such activities (e.g. mentoring/coaching, participation in decision-making) is to support teachers' professional growth and development. Furthermore, due to the links between the definition of job resources and the definition of employee engagement an analysis of what supports teachers' engagement in their work could potentially highlight teachers' job resources. Moreover, addressing the perceived influence that teachers' school context may have had on their perceived sources of support can offer an analysis on the ways in which a school fulfils (or not) the professional needs of its teachers. Finally, aspects of job resources could be highlighted through potential

relationships between Job resources and Positive Psychological Capital due to the conceptual communalities between the concepts of Job resources and personal resources.

These areas shaped the present study's research question and led to the decision of developing a mixed methods research design to address those questions and meet its purposes.

3.0) CHAPTER 3: METHODOLOGY INTRODUCTION

This chapter is an overview of key issues related to this study's methodology. Those issues involved researcher's positionality, the differences between theory-driven and data-driven qualitative research, the application of mixed methods research, sampling, and sample size in statistical analysis. A discussion of the literature around those issues will be presented in the following sections as an introduction to the study's methodology addressing their implications for this study's research design.

3.1. Positionality

Hopkins (2007) describes positionality as a complex phenomenon that may include aspects of identity (race, class, gender, age and sexuality) and personal research experience (e.g. research training and previous projects etc). In this sense, all research is shaped by the "positions" and "identities" of the researcher (Dixson & Dodo-Seriki, 2012) which inform a researcher's standpoints on the research process, context and content. In a review of the literature, Tulett (2010, p.4) mentions that Steinar (2007), for example, suggests that "it is important to show how the researcher's geographical location, social status, ethnicity, and gender fundamentally shape the questions asked, the information collected, and interpretation of that information.

3.1.1. The Insider/Outsider continuum

A key issues in the literature of positionality is the location of the researcher within the Insider/Outsider continuum and refers to the degree to which a researcher is considered as an "insider" or "outsider" in a certain context.

Mullings (1999) talks about the politics of self-representation as an important part of the research that forms shared positional space. This process involves the decisions that a researcher takes with regards to how he or she is self-represented and, consequently, located within the insider/outsider boundary. Those decisions can make a difference on the degree to which a researcher gains access to an organisation and gain a status of “temporary insider” by demonstrating a sound knowledge of the discourse of a specific industry. Such a status could give them the access to the information they need, although there will always be an interplay between among this status and other aspects of researchers’ positionality.

As a researcher, I presented myself as a white, female, Greek doctoral student with an academic background in occupational psychology. I expected that my psychology training and academic interests could form a key challenge to my research emanating from the fact I am an outsider in relation to the teaching profession.

What I considered as the main impact of my position on my research is my “choice of words”. This included my phrasing of research questions and statements as well as the research material that I shared with my participants. Coming from a psychology background I was used to approach concepts through clearly defined constructs most often measurable. Very quickly, though, I realised that educational researchers and teachers often use words like “engagement”, “resources”, “leadership” differently from occupational psychologists mainly because lots of research in occupational psychology has taken place in business settings. Research in schools may address the same concepts but the way educational researchers approach school contexts often create constructs whose quantitative or qualitative characteristics are not always easily compatible with the research methods occupational psychology would employ to address the same research area. As my research was theory-driven I tried to use words that were understood within my research context and by my participants but, also, were compatible with my theoretical context. For this reason, I needed to understand how I was situated in my department much before I constructed any research questions or negotiate access to schools.

The most significant sources of influence on my final “wording” of my research material were informal conversations with research students and academics within and outside my department, comments that I gathered through my piloting material with teachers, and questions that usually Head-teachers’ PA’s asked me about my research. As many students at WIE have had teaching experience or have worked closely with teachers in UK I reflected a lot on my interactions with them, I tried to use the term “job resources” as little as possible and sometimes I often felt that I was communicating with potential research participants. Given the PhD life-style and the differences in academic and personal interests it was fairly easy to maintain the required distance. This experience was really enlightening as it informed different parts of my research design and it greatly benefited my communication with my research participants in different stages of my research. As I did not carry out any field-work I had focused interactions with my research participants around my research and online interactions with Head-teachers’ PA’s negotiating access to schools distribute my call for participants. In all those cases, my reflections over the way certain words are used within educational setting and/or by educational researchers made sure that we understand each other.

3.1.2. Reflexivity

Reflexivity refers to the situatedness of knowledge creation. This means that it focuses on the spaces that knowledge is created (“inwards” and “outwards”) and it had been often examined as a way to address researchers’ positionality. A key argument around discussions regarding reflexivity is that knowledge creation depends on the makers of the knowledge (Rose, 1997). Moss (1995) says that ‘by reflexivity I mean those introspective aspects of thought that are self-critical and self-consciously analytical’; secondly, she says that the researcher must also reflect on ‘how her research is accepted into the scientific community and then becomes part of the known’ (Moss, 1995: 445). England (1994: 82) describes reflexivity as a process of ‘self-discovery’, and she quotes

Stanley and Wise (1993: 157) as saying that 'our consciousness is always the medium through which the research occurs'. This emphasis on the conscious analysis of situatedness suggests that the researcher's self is understood as transparently visible to analysis, since apparently nothing need remain hidden. Heidi Nast's (1994: 214) words reflect this understanding 'in all cases, we carefully choose and give meaning to our 'spaces', our actions, our words, and our contexts'.

The context of my interviews were 10 schools in an area of the midlands of UK but my survey participants were employed in those ten schools as well as in other schools located in the same area. What I consider, though, as elements of my reflexivity is:

- a) my approach to the interpretation of the data
- b) the placement of my research questions and findings within the discourse of relevant literature in educational research

My reflexive approach to the data interpretation involved my previous knowledge of my research topic and the fact that I was more interested into individuals' perceptions of job resources rather than the actual resources and their purpose or their context. For this reason, I took specific methodological decisions that would facilitate the integration of the results of my surveys with the results of interview results. Those decisions involved the use of the same open-ended question (*what supports your engagement in your work?*) in the surveys and in the first round of interviews and the development of interview questions that would test specific research statements (*e.g. "Perceiving that these aspects of the work can also support one when he/she faces change demands, will significantly support him/her*). The first methodological decision was that the qualitative data would complement the quantitative data by offering a description of interviewees' perceptions of job resources grounded on their answers. The advantage of this approach is that it offers alternative ways to address the generic definition of job resources in the teaching profession. The second decision was that the mixed methods data would integrate through the examination of a set of statements.

As far as the placement of my research within the discourse of relevant literature is concerned I tried to situate my discourse within literature that was directly related to my research purposes. Thus, broad areas of literature that could be relevant to the overall concept of “job resources” had to be excluded. Those areas included literature that was neither primarily developed in educational (or at least organisational settings) addressing teachers’ work-perceptions, nor directly related to the third part of job resources definition nor directly related to my empirical findings. For the same reason, I tried to keep my interactions with my participants and their schools as focused as possible and never used the term “job resources” in my interactions neither with the teachers that participated in my research nor with their schools.

3.2. Qualitative research: theory-driven Vs data-driven approaches

Qualitative research involves an amalgam of research methods and approaches. What they share in common is that they adopt a rather interpretive approach towards the phenomena they study and they look much less for cause-effects relationships in the way that quantitative approaches do in the positivist paradigm. Conversely, the methodology of the positivist paradigm is the scientific method (Lather, 1991; Habermas, 1972) whose purpose is to test theory through case study approach, experimental and control group experiment. However, both quantitative and qualitative research may utilize the same research technique to study a phenomenon (e.g. participant observation) in order to create meaning but through difference means. As Arghode (2012) notes quantitative research will follow a detached observer stance, whereas qualitative research will co-create meaning by involving the participants.

3.2.1. Deductive approach in qualitative research

Qualitative research methods are most often used to generate or elaborate theory through the induction process. However, there is, also, theory-driven research that aims to extend existing theory (Lee et al. 1999). In that case the research question and research design is formed within the context of an existing theory and the research aims to offer insight on complex phenomena that are not easily revealed by quantitative data. The present research is an example of such a study as its research design was primarily formed within the theory of job resources, while its qualitative component aims to access teachers' perceptions that are not easily accessed by quantitative research.

Lee et al. (1999) discuss ways to organize and describe qualitative research based on their purpose and research design. The purpose of qualitative studies refers to the value of theory in the study's research design with that being to generate, elaborate, or test theories. The difference among them is the existence or not of formal hypotheses. *Generating theory* involves a research design that allows a complete induction of theoretical propositions. *Theory elaboration* begins from preexisting conceptual ideas or a preliminary theoretical model based on which researchers induce a fully-developed model. Finally, *theory testing* calls for a deductive approach to research and occurs when the study's research design is determined by formal hypotheses. The present study took adopts a rather deductive approach to research as it is a clearly theory-driven research but it incorporated opportunities for the participants to reflect on their answers and, thus, elaborate on themes constructed earlier in the study.

Bitekhtine (2005) argues that adopting a deductive approach in qualitative research may be vulnerable to positivist criticism of the validity of their hypotheses but case study researchers have shown ways to alleviate those limitations. Lee et al. (1999) discuss Lee and Mitchell's (1994) work on volitional quitting that drew from theory and research on cognition decision making and social processes. They applied Yin's (1994) case study method to test seven hypotheses that were deduced

from their turnover theory. Those hypotheses were corroborated by their data offering to their model preliminary empirical support (that was further supported by a subsequent quantitative replication). In particular, their primary data derived from semi-structured interviews of 44 former nurses that were designed to assess a different portion of their model and test the study's hypotheses. In addition, they sent surveys to their participants after their interviews that, also, served as reliability and validity checks on the qualitative interview responses. Furthermore, Bitekhtime (2005) suggest that the limitation of qualitative methods in deductive theory can be alleviated by using a prospective longitudinal case study design and the pattern matching technique (Campbell, 1966; Trochim, 1989). Such designs can include hypotheses, follow-up times and evaluation criteria established in advance. Those hypotheses not only can function as "predictions" of future outcomes but can generate important insights on the reasons and processes that lead to the failure of a prediction. Their design involved two major steps: the "baseline" case study (where the elements of the case study are formulated) and the follow-up research that will evaluate the case outcomes vs. the formulated propositions/hypotheses. They, also, support that this design can be further broadened by alternate template strategy (Langley, 1999), where two competing theories can be tested at the same time.

Thus, the approach that a researcher will adopt towards the research question and the research data largely depends on his/her epistemological stance which will be reflected in the research design and the analysis techniques.

3.2.2. Issues surrounding common qualitative research designs

The most widely used qualitative research methods include case study research, ethnography, and grounded theory. The present study may not have followed explicitly one of these but there were certain parts in the research design that were informed by discussions around key issues in relation to case study research and grounded theory.

Case study research has been used extensively by qualitative researchers seeking to generate, elaborate, or test theory. A case study research design can be utilized to answer questions found in experimental setting but its key difference is that the variables are not as tightly controlled and manipulated. Yin (1994) has offered a complete presentation of case study research including discussion of design issues (e.g. case study protocol), data collection techniques, standards for reliability and validity, methods of analysis, and modes for case reports. The present study's research design was, also, informed by the use in the literature of case study research designs. Especially the development of a case study protocol for research that seeks to test hypotheses was taken in consideration for the development of the study's research statements and the subsequent interview questions.

As the concept of job resources was developed within the quantitative paradigm, allowing for a qualitative approach requires careful planning and the development of a research design that is clearly tailored to its generic definition and can explain how the interpretations of the findings are linked to it. For this reason, a key purpose of the research design was to examine the degree to which a set of theoretical statements constructed based on the generic definition of job resources can describe supportive aspects of teachers' work using both quantitative and qualitative research methods. Both the surveys and the interviews targeted certain groups of perceptions and the focus was on the degree they support the study's research statements. For the same reason, the same open-ended question was asked in both methods and interviewees' were asked to reflect on their survey answers.

Two, also, widely used research designs involve ethnography and ground theory. Those research designs, though, were rejected as they would require a substantial interaction with the research participants and their contexts which would counteract with the theory-driven approach of this study. They could generate theory on teachers' perceptions of job resources and substantially contextualize them at the expense, though, of the distance between the researcher and the content of the research.

Ethnography, as a research design, requires the researcher to spend a substantial amount of time and energy interacting with the research context. Lee (1999) identified four kinds of researcher involvement. At one end of a continuum is the researcher as "complete observer" and at the other end of the continuum is the research as a "complete participant", while in-between these two ends, the researcher might be either a "participant-observer" or an "observer-participant". In all cases, though, the research context drives the research rather than a pre-existent theoretical context. An ethnographic approach on teachers' perceptions of job resources would require an in-depth investigation of perceived sources of support within a school and adequate involvement to assess both the actual resources and individuals' perceptions of them. In that case, though, the priority would be given to the data gathered through field-work rather than through to pre-existent theoretical assumptions.

Another widely used qualitative method is grounded theory and it focuses on developing plausible and useful theories that are closely informed by actual events and interactions among people (Holloway & Todres, 2003). Grounded theory, also, gives priority to the characteristics of a research context over any pre-existent theoretical assumptions. For this reason, a research design abiding by the guidelines of grounded theory research was not possible but to the degree that individual interviewees are concerned their profiles were constructed based on themes grounded on their own survey and interviews' responses. Glaser & Straus (1967) introduced grounded theory in order to label the research method that is designed to produce theory by systemically gathering and analyzing data, and working back and forth between data and theory. For this reason, data rather

than literature review is what primarily drives the researcher that conducts grounded theory research. Furthermore, its processes can be incorporated into diverse qualitative research designs and as other qualitative methods it results in the generation or elaboration of explicit theory and it can include any data collection method (e.g. questionnaires, interviews, observation etc).

Thus, an advantage of grounded is that it can incorporate a variety of data collection methods and, thus, analytical processes. This complex nature of grounded theory triggered discussions on whether grounded theory should be considered as a method or as complete methodology (e.g., Bryant & Charmaz, 2007; Charmaz, 2011). For example, Charmaz (2000) suggested that two versions of grounded theory can be distinguished by their epistemological “foundation”: an objectivist and a constructivist grounded theory. In objectivist grounded theory the researcher stands outside the researched phenomenon; while in constructivist grounded theory the researcher sees the studied phenomenon from “inside”. Greckhamer & Koro-Ljungberg (2005) highlight that this distinction between those two types of grounded theory research signifies key differences on the analytical procedures and the emerged theory in each of one of them. In objectivist grounded theory research the emerged theory is grounded on empirical data and the data are treated as objective facts about the observable world. Therefore, analytical procedures that aim to identify specific concepts, discover categories and integrate/refine them may be more consistent with this theoretical stance. That is an approach that matches the way data analysis progressed in the present study from the analysis of the open-ended survey questions to interviews’ analysis and the construction of interviewees’ profiles. On the other hand, in constructionist grounded theory, the emerged theory is grounded on researchers’ constructions and the researcher focuses on creating meaning. The data reflect their multiple locations (including those of the researcher) and reality is considered to be socially constructed. Thus, any analytical procedures do not aim to elicit objective data but rather impact the nature of the constructed data.

In conclusion, the present study is a theory-driven research that shows a rather deductive approach to research as it aims to answers its research questions primarily by testing certain

theoretical propositions. However, it has, also, been influenced by discussions surrounding case-study research and grounded theory. This influence was further manifested through the second round of interviews in which context-related information was gathered that gave further meaning to interviewees' responses.

3.3. Mixed methods application: an overview

Mixed methods research had been increasingly recognised as a major research paradigm along with quantitative and qualitative research. Johnson et al. (2007) asked (via e-mail) 36 methodologist to share their definitions of mixed methods research. They gathered 19 definitions and provided this way a thorough review of issues related to mixed methods research such as “what is mixed”, “when or where”, the ‘breadth of mixed research’, “why mixing is carried out” and the “orientation of mixed methods research”. Overall, there is a strong agreement that mixed methods research involve both quantitative and qualitative research. The mixing can occur in either or both the data collection and data analysis stage or it can entail the mixing of methodological worldviews and language. With regards to the purposes of the mixing they can be breadth and/or corroboration. Breadth refers to achieving a more complete understanding and corroboration refers to the provision of data triangulation, while the combination of both purposes included a wider variety of purposes: (a) validate and explicate findings from another approach and produce more comprehensive, internally consistent, and valid findings;(b) provide more elaborated understanding and greater confidence in conclusions; (c) handle threats to validity and gain a fuller and deeper understanding; and (d) provide richer/more meaningful/more useful answers to research questions. Other purposes included: (a) meet the aims of the research project and (b) achieve social justice and avoid oppression. Finally, the “orientation of the mixed methods” refers to what drives the research, wherein the majority of definitions focused on the research question, while a few focused

on the researcher's quest to conduct research on the lives and experiences of marginalized persons or groups.

3.3.1. Data integration in mixed methods research

Designing a mixed methods research involves steps similar to those taken in traditional single method based on the following decisions:

- 1) Whether to use a specific paradigm
- 2) How data collection will be implemented and prioritised?
- 3) Which data analysis and integration will occur?

Therefore, key procedures of mixed methods research designs, involve their rationale, the type of implementation process, stage of integration of approaches, the priority of the methodological approach and the methods' function. Researchers' decisions over those procedures are important because they will guide more specific decisions regarding the type of data that can address the research questions, the selection of data collection methods as well as the process of analysing and interpreting data gathered through different methods. In the present study all decisions were taken based on the requirements of the research question, thus, adopting a pragmatic approach to this study.

The processes through which a researcher can reach a decision have been discussed extensively in the literature due to the different ways in which the two paradigms understand scientific research (epistemology) and the world in general (ontology) in relation to the purpose of a study. As Guba and Lincoln (1989) mention "questions of method are secondary to questions of paradigm, which we define as the basic belief system of world view that guides the investigator".

The quantitative paradigm is based on positivism according to which scientific research is characterised by empirical research and objective reality is independent of human perception. On the other hand, the qualitative paradigm is based on interpretivism and constructivism according to which reality is socially constructed and constantly changing. Therefore, the two paradigms approach phenomena differently as qualitative researchers focus on an external referent, while qualitative researchers refer to a personal meaning that is attached to the researched phenomenon.

Those differences are, also, echoed in the arguments regarding the purposes for which quantitative and qualitative methods can be combined and how it can be achieved. Casebeer and Verhoef (1997 , p. 132) argue that rather than engaging in a philosophical debate, it is more instructive to see qualitative and quantitative methods as part of a continuum of research techniques, “ all of which are appropriate depending on the research objective”.

Denzin (1978), Jick (1979) and Morse (1991) were among the first that discussed issues related to data integration in mixed methods research focusing on the triangulation of the methods as the purpose of using different methods. Triangulation involves the use of two different methods and assessing the degree of agreement in order to enhance the validity of findings. The second type of data integration proposed in the literature is complementary or complementarity designs (Greene et al., 1989; Sale et al., 2002; Morgan, 1998). A key difference between those two purposes is that triangulation views methods as interdependent, while complementarity sees them as being independent. Johnson and Onwuegbuzie (2004) summarized five major purposes for combining qualitative and quantitative techniques:

- seeking convergence and corroboration of results,
- for the purpose of complementarity (i.e., seeking elaboration and clarification of the results from one method with results from another method),
- for the purpose of initiation (i.e., discovering contradictions that can lead to a reformulation of the research problem)

- for the development of methods (i.e., using the findings from one method to help improve the other method).
- for the purpose of expansion (i.e., seeking to expand the breadth of the research by using different methods to investigate different components of the research problem).

The present research study follows a complementary research design in which a quantitative study is followed by qualitative research. This design was selected because it allows data from both the survey and interview method to be equally used in order to answer the same research question. In particular, the survey method addressed certain groups of participants' perceptions about how the teachers work in their schools and what supports their engagement in their work, while the interviews partially addressed the same groups of perceptions but they, mostly, examined them further. What is important, though, is that findings from both methods were used to explore teachers' perceptions of their job resources. Complementary designs demonstrate an iterative approach to both data collection and analysis using the findings of one method to elaborate on or modify questions examined in another method. Arguments supportive of the combination of methods to achieve complementarity include the use of the strengths of one method to enhance the other (Morgan, 1998, Sale et al, 2002) and address different facets of the same phenomenon (Greene et al., 1989; Clarke, 2009).

Greene et al (1989, p.262) suggested a conceptual framework for mixed method inquiry according to which a combination of methods is both appropriate and constructive when the two strategies "overlap in their intent, yet also capitalize on the strengths of one or both methods to secure additional information". They, also, argue that a mixed-method approach is particularly appropriate when similar research techniques are used (e.g. a scaled quantitative questionnaire and a structured qualitative interview). Sale et al. (2002) summarize arguments often found in the literature for integrating quantitative and qualitative methods in a single study: both approaches aim

to understand the world and improve the human condition; disseminate knowledge for practical use and share a commitment for rigorous critique in the research process; and they are required to study complex phenomena that need data from a large number of perspectives.

In the present study, a key difference between the two methods was that each one was, also, able to access separate groups of perceptions. In particular, the surveys focused on certain types of participants' perceptions (e.g. teachers' perceptions of their schools as learning organisations) that were not directly addressed through the interview method. On the other hand, the interviews were able to address teachers' perceptions of job resources at an event of a change and, thus, answer the study's research sub-question as well as explore the perceived influence of school contexts on teachers' perceptions of their sources of support. However, the overall construction of themes that described teachers' perceptions of their job resources began with the surveys' analyses and was completed with the interview analyses.

The sequencing, though, of the qualitative and quantitative components is informed by the research question (Morgan, 1998). For this reason, it has been often brought up and criticized that mixed methods researcher show a pragmatic approach to research focusing on "what it works". This means that researchers apply the best combination of methods and modes of analysis that answer the posed research question(s) thus the research processes are driven by the question of utility (Biesta, 2010; Creswell & Plano Clark, 2007; Feilzer, 2010; Hannes& Lockwood, 2011; Morgan, 2006). That is, also, the case in the present study. As the majority of research in job resources has been within the quantitative paradigm a survey was selected to take place first so that it could address certain groups of perceptions and initiate a qualitative research in teachers' perceptions. Semi-structured interviews were selected to follow the survey method in order to extend in a greater depth the surveys' research findings as well as address specific facets of teachers' perceptions of their sources of support that were not addressed by the survey-method (e.g. perceived sources of support at an event of a demanding change)

Creswell (1995) describes four mixed method designs: sequential studies, parallel/simultaneous studies, equivalent status designs and dominant- less dominant studies, whilst Tashakorri & Teddlie (2006, April) define a fifth one that of multilevel use of approaches. A similar description of multi method research designs was provided by Miller & Crabtree (1994) identifying concurrent designs, nested designs, sequential designs and combination designs.

In all those cases, though, one component will typically be dominant whose theoretical perspective will, therefore, drive the supplemental component (Morgan, 2006 ; Morse et al. 2006). “Therefore, a mixed-method design *never* has two components of *equal* weighting” (Morse et al., 2006 , p. 68.). In the present study, the qualitative component was slightly more dominant as it was present not only in the interviews but in the surveys as well. Furthermore, the final depiction of teachers’ perceptions of job resources was through the construction of individuals profiles through the interview method.

Finally, it has been highlighted that the implications of paradigm emphasis should be taken under careful consideration when designing such complementary mixed-methods designs (Johnson & Onwuegbuzie, 2004; Morgan, 1998). However, Sale et al. (2002) highlight that quantitative and qualitative research methods address different phenomena but they can still complement each other if the phenomenon that each method examines is clearly labelled. This solution differs from that of using the strengths of each method to counteract the weakness of the other or examining different aspects of the same phenomenon as it implies an additive outcome through the research process. For this reason, in the present study the two methods took place separately while there set certain analytical processes through which the findings from each method would complement each other.

3.4. Sampling

Sampling is an important part of the research process as it determines the quality of the inferences that a researcher draws. Thus, choosing a sampling strategy is among the most important decisions a researcher is called to make.

Sampling schemes available for quantitative and qualitative researchers fall into two main categories: random sampling and nonrandom sampling. Cohen et al. (2011) discuss extensively the two types of sampling. In probability sampling all members of the wider population have equal chance to be part of the sample whereas in non-probability sampling this is not the case as the researcher selects only a particular section of the wider population. Non-probability sampling- and especially convenience sampling-is most relevant to this study as not only is common to small scale research but adequate as well in a research that do not intend to generalize beyond the sample in question or aim to pilot a questionnaire. Furthermore, they present the different types of probability and non-probability sampling. Among the non-probability sampling strategies convenience sampling and volunteer sampling reflect the sampling strategy that was, also, followed for this study. In particular, convenience sampling is the sampling strategy often met in case-studies in which the researcher chooses among the nearest individuals to serve as respondents till obtaining the required sample size. Its characteristic is that as a group it represents only itself and it doesn't seek to generalize in the wider population which is, also, the case in this study. Similar to convenience sampling is volunteer sampling in which the sample is comprised of volunteers that may be friends or people that happened to be interested from a particular school, organization or classroom. Again, there cannot be made claim for generalizability or representativeness as sample members may have a range of different motives for volunteering to participate in the study

Non-probability sampling is often met in qualitative research due to the characteristics of qualitative sampling. Curtis et al. (2000, p. 1002) summarise those features:

1). the method of drawing samples is not based on theories of the statistical probability of selection, but on other sampling criteria;

2) samples are small, are studied intensively, and each one typically generates a large amount of information;

3) samples are not usually wholly pre-specified, and instead selection is sequential;

4) sample selection is conceptually driven, either by the theoretical framework which underpins the research question from the outset, or by an evolving theory which is derived inductively from the data as the research proceeds;

5) qualitative research should be reflexive and explicit about the rationale for case selection, because there are ethical and theoretical implications arising from the choices which are made to include particular cases and exclude others;

6) qualitative samples are designed to make possible analytic generalizations but not statistical generalizations

However, qualitative sampling can have its own value. For example, Miles & Huberman (1994, pp. 27-18) citing Firestone (1993) argue that qualitative sampling can provide highlight generic processes that can add to our understanding of new or existing theory about a phenomenon that is being studied. This means that theory drives the selection of cases whose careful examination can lead to an elaboration of the theory. What is more Curtis et al. (2000) interpreting Miles & Huberman (1994) work present six different attributes that can evaluate sampling strategies:

1. The sampling strategy should be relevant to the conceptual framework and the research questions addressed by the research. This may imply consideration of whether sampling is intended to provide cases in categories which are pertinent to a pre-existing conceptual framework for the research, or how far the choice of cases might affect the scope for developing theory inductively from the data.

2. The sample should be likely to generate rich information on the type of phenomena which need to be studied. Miles and Huberman (1994, p. 34) phrase this in terms of whether the phenomena of interest in the research are likely to 'appear' in the observations.

3. The sample should enhance the 'generalizability' of the findings that in qualitative research refers to analytic generalizability.

4. The sample should produce believable descriptions/explanations (in the sense of being true to real life). One aspect of the validity of qualitative research relates to whether it provides a really convincing account and explanation of what is observed.

5. The researcher may consider whether the method of selection permits informed consent where this is required

6. The researcher should consider feasibility in terms of the resource costs of money and time, the practical issues of accessibility and whether the sampling strategy is compatible with the researcher's work style.

The present theory-driven study took into consideration the above discussions on sampling in qualitative research as the purpose was to design a mixed methods research that did not aim to generalize to a greater population beyond its sample members.

Collins et al. (2006) formed a two-dimensional mixed methods sampling model according to which mixed methods sampling designs can be categorized based on the (1) the time orientation of the components, and 2) the relationship between the two components. Time orientation refers to whether the two components take place at the same time (concurrently) or the one following the other (sequential). Johnson and Onwuegbuzie (2004) note that the characteristic of sequential designs is that the data collection of one method informs the data collection of the second phase. The present study adopts a sequential design. The interviews followed the survey-method, while certain parts of the survey analyses informed interviews' analyses.

According to Collins et al. (2006) the second dimension of mixed methods sampling is the relationship that exists between the quantitative and qualitative sampling. Those relationships can

be identical, nested or multilevel. An identical relationship means that the sample members of both methods are the same. A parallel relationship means that the sample members of the two methods are different although they are drawn from the same population. A nested relationship implies that the sample members of one method have been selected to represent a subset of the participants of the other method. Finally, a multilevel relationship means that the samples for each method are selected from different levels of the study (e.g. different populations). In the present study, an identical relationship exists between the quantitative and qualitative sample as the same sample members that participated in the interviews were, also, included in the survey-study.

3.5. Sample size in statistical analysis

Sample size is always an important element for any statistics analysis and is a key dimension especially for factor analysis. For example, Borg and Gall (1979) focusing on correlational research note that it requires no fewer than 30 cases per variable and survey research, in general, should have no fewer than 100 cases in each subgroup and 20 to 50 in each minor subgroup.

However, there is a much broader range of recommendations regarding sample size available for factor analysis. These guidelines refer to either the minimum necessary sample size or the minimum ratio of N to the number of variables being analyzed (Arrindell and van der Ende, 1985; Velicer and Fava, 1998; MacCallum et al. 1999).

With regards to sample size, the recommendations vary from $N=100$ as the minimum sample size to $N=1000$. Gorsuch (1983) and Kline (1979, p. 40) recommend that it should be at least 100 and no sample should be less than 100. Hatcher (1994) recommend that the number of subjects should be 5 times larger the number of variables. Lawley and Maxwell (1971) suggest that there should be 51 more cases than the number of variables. Hutcheson and Sofroniou (1999) recommendation is at least 150 - 300 cases, more toward the 150 end when there are a few highly correlated variables.

Guilford (1954) argues that N should be at least 200, and Cattell (1978) claimed the minimum desirable N to be 250. Finally, a rough rating scale is proposed by Comrey & Lee (1992) for adequate sample sizes in factor analysis according to which 100=poor, 200=fair, 300=good, 500=very good, 1.000 or more=excellent.

On the other hand, Cohen et al. (2011) considering recommendations for the N:p ratio note that they often offer limited value to empirical researchers. For example, Cattell (1978) believed this ratio should be in the range of 3 to 6. Other ratios proposed by researchers is “no less than 5” (Gorsuch, 1983; Bryant and Yarnold, 1995) , and “at least 10” (Everitt, 1975; Nunnally, 1978; Marascuilo & Levin, 1983). Cohen et al. (2011), though, highlight that a number of important references on factor analysis make no explicit recommendation at all about sample size.

However, it is not a matter whether absolute sample size or the STV is more important in factor analysis as the quality of the analysis and the minimum level of N depends on other aspects of the factorial design such as the level of the communalities, the degree of overdetermination and the size of the loadings. MacCallum et al. (1999) suggest that communalities should be greater than .6, or the mean level of communality to be at least .7 (p. 96). Overdetermination refers to the factor-to-variable ratio. MacCallum et al. (1999) conclude that six or seven indicators per factor and a rather small number of factors is considered as high overdetermination of factors if many or all communalities are under .50. Generally, a minimum of 3 variables per factor is critical. As Costello & Osborn (2005) note that a factor with fewer than three items is generally weak and unstable, while Fabrigar et al. (1999) suggest that four variables need to be measured per factor and perhaps as many as six.

Finally, item loading magnitude accounts for significant unique variance and Osborn & Costello (2004) found that in most cases it is the strongest unique predictor of congruence between sample and population. 5 or more strongly loading items (.50 or better) are desirable and indicate a solid factor (Costello & Osborne, 2005, p. 5). If components possess four or more variables with loadings above .60, the pattern may be interpreted whatever the sample size used. Similarly, a

pattern composed of many variables per component (10 to 12) but low loadings (= .40) cannot be an accurate solution for the lowest sample sizes ($N < 150$). Guadagnoli & Velicer (1988), also, note that if a solution possesses components with only a few variables per component and low component loadings, the pattern should not be interpreted for sample sizes below $N=300$.

However, there is not much systematic research in establishing a minimum desirable level of sample size for factor analysis in the fields of Education and Behaviour Science. Barrett and Kline (1981, in MacCallum et al, 1999) used two large empirical data sets to investigate this issue. They drew sub-samples of various sizes from the original full samples and performed factor analysis with each sub-sample to compare the results of sub-samples with the result of full samples. They obtained good recovery from a sub-sample of $N = 48$ for one data set that had 16 variables (STV ratio: 3.0) and from a sub-sample of $N = 112$ for another data set that had 90 variables (STV ratio: 1.2). Arrindell and van der Ende (1985) used two large empirical data sets that had 1104 cases and 960 cases respectively to examine the minimum sample sizes and STV ratios that can produce stable factor structure. Their findings showed that for the first data set (76 variables) the minimum STV ratio was 1.3 and the sample size (N) was 100; while for the second data set, which had 20 variables, its minimum STV ratio was 3.9 that corresponded to a sample size $N=78$. MacCallum et al. (1999) conducted a Monte Carlo Study on sample size effects. They obtained an excellent recovery (100% convergence) of population factor structure with a sample size (N) of 60 and 20 variables. However, this result was obtained only when both the communalities (over .7 in average) and overdetermination (3 loaded factors) were high.

In the present study, the sample size was a critical issue in the pilot-study as a principal-axis factor analysis was to be performed. The pilot study's sample size was $N=109$ but the final sample size for the final cases that were included in the analysis was $N=106$. However, the ratio of N to the number of variables was 8 and the communalities and overdetermination were high.

3.6. Overview

This chapter provided an introduction of the methodology that was developed for this study. For this reason it presented a review of the literature on issues related to the study's methods and analysis and what this means for the methodology followed. Its purpose, though, was not only introductory to the study's methodology but mandatory for a complete understanding of the main challenges that the researcher faced upon designing this study and how key methodological decisions were reached.

Those key issues involved the researcher's positionality, differences between theory-driven and data-driven approaches in qualitative research, application of mixed-methods research, sampling, and the sample size in statistical analysis. Each of those issues played a unique role in the approach followed to explore teachers' perceptions of job resources. For example, researcher's positionality provided the starting point of this study that influenced greatly all the following steps and up to a degree many interpretations. Similarly, designing a theory-driven research gave an initial direction to the survey-analysis that was counterbalanced by the construction of interviewees' profiles that will be analytically presented in the next chapters. Thus, addressing such key issues is imperative for the reader to understand how this study evolved.

4.0) CHAPTER 4: METHODOLOGY

4.1. Introduction

This chapter will present the methodology that was followed to explore teachers' perceptions of job resources. All parts of the generic definition of job resources were taken under consideration but the study's main focus was on the third part of the definition of job resources as those "*aspects of the job that stimulate personal growth, learning, and development*".

The presentation of this study's methodology consists of seven sections that discuss and summarise different elements of the research design and research analysis. The first section will present the study's research propositions. Those statements guided the development of the study's research design that tested them in order to answer the study's research questions. The second section will present the study's sampling criteria and describe the samples' characteristics. The third section will present the rationale of the study's mixed methods research design. The fourth section will present the ethical considerations of this study. The fifth section focuses on the study's research procedures and describes in greater detail the survey-method and the interview-method. The sixth section focuses on the study's analysis and describes the different stages of the analysis process. Finally, the seventh section summarises the study's methodology and signposts the content of the analysis chapters that will present the study's finding and discuss them in relation to relevant literature.

4.2. Research Propositions

Based on the generic definition of job resources and the extended literature that was reviewed for the purposes of this research, a set of research propositions were developed:

Statement 1: Perceiving aspects of one's work as supportive will support one's engagement in his/her work

Statement 2: Perceiving that these aspects of the work can also support one when he/she faces change demands, will significantly support him/her.

Statement 3: Perceiving having enough resources (irrespective of their source) during change is important for one's engagement in his/her work.

These statements were based on the literatures of organisational learning in schools and teachers' work-lives and development and guided the construction of the study's interview questions. According to the literature it is important for teachers to perceive that they have adequate learning opportunities in their school that meet their needs (Rosenholtz, 1989; Day et al., 2007) as well as perceive that their school cares for them (Bowen et al., 2007; Collinson & Cook, 2007). Furthermore, as students' engagement is often linked to positive educational outcomes (Shelley et al., 2011) it was expected that teachers would be familiar with the term "engagement". The initial screening of the question "what supports your engagement in your work" supported this view as teachers had no problem understanding it, while their responses were relevant to the concept of job resources.

The purpose of the interview questions was to construct a theoretical framework in order to test those statements. As the term "*job resources*" was never used in any part of the research material, teachers' perceptions of job resources were approached through a process of themes' construction that allowed the following:

1) Description of one's perceptions of available school activities/arrangements.

2) *Description of what one identifies as his/her available resources.*

3) *Description of what one perceives that supports his/her engagement in his/her work.*

Similarly, this theoretical framework described the purposes of the interview questions regarding teachers' perceptions of job resources under perceived change demands:

Description of what one perceives that supports him/her when dealing with perceived change.

A key purpose, though, of the interview-questions was to be able to compare the above statement with the rest of the theoretical framework in order to answer the study's research sub-question:

Description of what one perceives that supports him/her when dealing with perceived change.

Vs

Description of one's perceptions of available school activities/arrangements.

Description of what one perceives as his/her available resources.

Description of what one perceives that supports his/her engagement in his/her work

Finally, those themes, that described interviewees' perceived sources of support, were further explored through their perceptions of school contexts' influence on those perceived sources of support:

Description of perceived school contexts' influences on one's perceived sources of support

4.3. Research design rationale

The present study it's a theory-driven research that followed a sequential mixed methods research design (quantitative enquiry that is followed by qualitative enquiry), adopting a rationale of complementarity. This means that the quantitative and qualitative methods employed were combined to use results from one method to elaborate on results from the other method.

The aim was to construct an analysis that explored teachers' work-perceptions, through surveys' and interviews' analyses, based on the definition of job resources, allowing inferences from one data collection method to the other. Thus, analysis was not only able to be initially built on a specific definition, such as that of job resources, but was, also, further grounded on participants' responses. This approach was the most appropriate as it had the potential to access teachers' perceptions of job resources through their reflections about their work-lives. Most of previous research in job resources has been carried out within the quantitative paradigm using large-scale surveys. Thus, a mixed-methods explorative research design could improve our understanding of the concept of job resources. In sum, quantitative and qualitative data were gathered to address the main research question "what are teachers' perceptions of job resources?" On the other hand, only qualitative data were used to answer the sub-question "Do they (teachers' perceptions of job resources) differ under change demands?"

In particular, the survey method and the interview method were used to access teachers' perceived job resources and certain questions and items were developed in order to allow

inferences from one method to another. The survey method used previously validated measures, that met the generic definition of job resources, as well as certain items and questions developed for the purposes of this research that were further explored through the interview method. On the other hand, the interview method consisted of questions developed based on the definition and literature of job resources and their purpose was to allow inferences from the interview questions to survey answers, as well as add to the definition of job resources grounded on interviewees' responses.

4.3.1. Research process

The study's mixed-methods sequential research design assured that the data analysis for each method was kept separate to the other but it, also, allowed the findings of each method to complement the others so that common inferences could be drawn.

Overall, the study's research design comprised of three parts. The first part of the research design involved the processes that were followed for the development the surveys and interviews. At this stage, those processes influenced one another as they, also allowed the development of the processes through which inferences were able to be drawn. The surveys' development included the design of the questionnaire and questionnaire testing, while interviews' development included a case study protocol and the interview schedules.

The second part of the research design involved the pilot-study, the surveys and the interviews that took place at separate times and a second round of interviews.

The third part involved the surveys' findings, the interviews' interpretations and the inferences drawn from one method to another. Surveys' findings and interviews' interpretations took place at separate times but the research design allowed them to complement each other. Finally, the fourth part involved the discussion of the study's findings in relation to the literature and its key conclusions with regards to teachers' perceptions of job resources (table 1).

Table 1: Sequential mixed methods research design

<p>A.1) Survey-method design</p> <ul style="list-style-type: none"> - Design the questionnaire • Purposes • Scales selection • Items development 	<p>A.2) Interview-method design</p> <ul style="list-style-type: none"> -Case study protocol • Research questions • Hypotheses • Propositions • Theoretical framework - Design the interview schedule • Purposes • Interview questions development
<p>B.1) Surveys</p> <ul style="list-style-type: none"> - Piloting procedures • Screening test • Pilot study • Data analysis • Pilot study results • Data reduction • Questionnaire Revision • Screening test - Survey 	<p>B.2) Interviews</p> <ul style="list-style-type: none"> -Interview pilot -Pilot Results -Interviews 1st round 2nd round
<p>C) Data analysis</p> <ul style="list-style-type: none"> • Survey findings • Interview interpretations • Inferences from one method to another <p>D) Discussion</p>	
<p>E) Conclusions</p>	

4.3.2. Survey method rationale

The aim of the survey method was two-fold. First of all, it aimed to assess the relationships between teachers' perceptions of certain ways of working and their perceptions regarding school activities/arrangements that may be available to them. For this reason, a number of items were developed and a literature review was carried out in order to identify instruments whose items assess employees' perceptions in a way that meet job resources' definition.

Psychological research into job resources has taken place as part of the research in employees' wellbeing at work, testing psychological models that emanated through research in stress at work and employing quantitative research methods. For this reason, the literature review was extended beyond psychology to research in education that approached teachers' work-perceptions in ways that meet the generic definition of job resources.

A literature review of organisational learning research in school-organisations showed several concepts and research approaches that could be useful in job resources research in general. Among them, Bowens' et al. (2007) assessment tool of schools as learning organisations included scales that assessed specific positive perceptions that teachers hold about certain aspects of the way they work in their schools. For this reason, certain items of Bowen's instrument were adapted and used in the present research in teachers' perceptions of job resources. Also, to a lesser extent this research touched upon the complex relationship between one's job resources and personal resources.

A common finding in burnout/work-engagement research is that job resources and personal resources, as well as their interplay, is crucial for one's well-being at work (Xantholoulou et al., 2009a). The present research acknowledges personal resources that are open to development and such resources were measured by the construct of positive psychological capital.

Secondly, the survey-method aimed to allow inferences between the surveys' and the interviews' analyses. For this reason, a number of open-ended questions and close-ended items

were developed that examined relationships with previously validated scales and initiated a qualitative approach to teachers' perceptions of job resources that was further constructed through their interviews.

4.3.3. Interview method rationale

The interviews had five goals. The first one was to explore teachers' work-perceptions in such a way to allow the construction of themes reflecting teachers' job resources grounded on teachers' answers. Their second goal was to assist to draw inferences between surveys' and the interviews' analyses through participants' responses on "*what supports your engagement in their work*". For this reason, this question was posed in both surveys and in the first round of interviews. The third goal of the interviews was to address teachers' perceptions of job resources under high job demands. Finally, their fourth goal was to explore school contexts' influence on teachers' perceptions of job resources.

Previous research

A key theoretical assumption, which is supported by empirical findings in work engagement/burnout research, is that job resources gain their salience when they are under threat. This means that when employees face high job demands that may be hazardous for their well-being at work then their job resources buffer the effects of job demands, while the more resources individuals have the less susceptible they are to burnout (e.g. Bakker et al., 2007; Bakker et al., 2005; Bakker et al., 2003).

For this reason, in the present study a group of interviewees was asked to reflect on a recent time that they experienced a demanding change in their work-environment and what supported them at that time. Moreover, they were encouraged to reflect on whether sources of support that they identified earlier in the interview provided them with support at that time. The

purpose was to examine teachers' perceptions of their sources of support in relations to a change event and compare them with their perceptions of other sources of support (e.g. sources of engagement support).

On the other hand, educational research has shown repeatedly the importance of school conditions for teachers' professional development. Such conditions may involve the way teachers' development opportunities are organised and supported by leadership initiatives (e.g. Louis & Kruse, 1995; Harris & Muijs, 2005; Leithwood et al., 2009), the degree to which they meet individual teacher' needs (e.g. Goodall et al., 2005; Day et al., 2007) or the school culture and the ways teachers collaborate with each other (e.g. Hargreaves 1994; Voulalas & Sharpe, 2005; Bell et al., 2006). For this reason, interview questions were, also, directed to explore such conditions and explore their perceived influence on interviewees' perceptions of their job resources.

4.4. Section B: Sample

Participants in this research were teachers employed in secondary-schools in an area in the Midlands of the UK. There were no school-based selection criteria, and although the kind of schools that exist in this geographical area was taken into consideration, a convenience-sampling was used based on two criteria:

- a) teachers employed in schools within or nearby one county in the midlands.
- b) a sample size adequate for the analysis required to answer the research questions

183 teachers participated in this research project: N=10 for the screening test of the questionnaire, N=109 for the pilot survey-study, N=64 for the main survey-study, and N=10 for the interviews (first round of interviews N=10, second round of interviews N=5)

Survey participants reported on five types of data:

- a) Staff development activities and arrangements that they can find in their school.

- b) The degree to which they think that such activities influence their professional learning, impact on their school improvement and support their engagement in their work.

- c) The degree to which they think that teachers in their school work in certain ways.

- d) The degree to which they think in certain ways about themselves at work.

The interview participants were teachers that completed the survey and agreed to participate in a follow-up interview. Interviewees needed to have completed the survey beforehand because the interview questions were constructed to ask participants about the school activities/arrangements they selected in the survey, as well as reflect on their answers on survey's open-ended question "*what supports your engagement in your work*".

Furthermore, teachers could only participate in the second round of interviews if they had both completed the survey and participated in the first interview. This was imperative as the focus was on the perceived influence of interviewees' school contexts on their sources of support that emerged earlier in the analysis.

4.5. Section C: Ethics

An ethical approval form was submitted and approved by the regulations from the Institute of Education (see appendix 1). The main ethical considerations for this study included the safeguarding of the participants in the current study and the protection of their anonymity.

All participants in all parts of this research study were informed of the purposes of this research and its safeguards for themselves as each questionnaire was followed with the relevant information regarding the purposes of this research, its methods, and participants' protection. Participants were, also, informed about the study's purpose of exploring teachers' work-perceptions about various aspects of their work-lives. Furthermore, they were notified about the fact that their responses would be confidential and would only be used for research purposes, while the only person that would have access to the full transcripts would be the researcher. Moreover, they were reminded that participation was completely voluntary and that they could withdraw whenever they wanted to do so.

What is more, every measure was taken to protect participants' anonymity. In particular, the pilot-study involved completely anonymous surveys, while the survey-study involved surveys that were reported anonymously. In particular, the survey-study asked participants' for their email-address and signature only in case they wanted to participate in the interviews, while for those participants that did not want to sign in for the interviews, no identifiers were gathered. Participants that agreed to participate in the interviews needed to provide an e-mail address so that they could be contacted to arrange an appointment for the interview and, also, in order to be able to match their survey-responses with their interview responses.

Furthermore, interviewees provided a signature in order to sign in for the interviews. The space for their signature was at the end of the consent form that was attached to their survey. This consent form included information about who was conducting the research, the purpose of the interviews and information regarding participants' protection. Specifically, they were informed that

they should not anticipate any harm for themselves from participating into this study but if they feel distressed at any point of the interviews they can take a break or terminate the sessions. Furthermore, they were informed that there will be no costs for them as well as that they will not receive any personal gain from participating in this research, while they were reminded that their participation is voluntary and they may decide to not begin or stop at any time.

Finally, interviewees were informed exactly about the procedures and what will happen to their answers. Those research procedures included the fact that a tape recorder would be used in the interviews and that the interview will take place in their school premises in a convenient time for them. As far as their interviews are concerned, interviewees were informed about the fact that their records would be confidential and as individuals they would remain anonymous and that they would not be identifiable in any reports or publications resulting from this study.

4.6. Section D: Procedure

Taking into consideration the type of state secondary-schools that exist in an area in the Midlands of the UK, all schools in this area were contacted from June 2010 till December 2011 in order to find teachers to volunteer in a pilot-study, a survey and a follow-up interview. The researcher contacted directly the schools and talked with the Head's PA in each school explaining the purpose of my research and what it is needed. With the exception of one school in the pilot-study that agreed to distribute questionnaires to all members of the staff the vast majority was reluctant to participate as they did not want to burden their staff members with additional surveying. In most schools staff members are already being over-researched and overly evaluated.

To the schools, though, that agreed to distribute questionnaires to members of their staff an envelope with 15-20 questionnaires was handed in by the researcher. In three cases, though, the schools asked for an electronic copy of the questionnaire to forward it to teachers themselves. In this questionnaire (approx. 10 minutes to complete), as mentioned in the ethics section, the

necessary information about this research-project was provided and participants were asked to sign a consent form if they were willing to participate in a follow-up interview and provide an e-mail address in order to be contacted to arrange a meeting with the researcher about the follow-up interview.

It's important, though, to note that as the research questions focused primarily on individuals' perceptions the research procedure and the research material was not formed to allow the detection of differences among schools or other school specific characteristics. For the pilot study, half of Warwickshire schools were contacted. Six schools agreed to distribute questionnaires to members of their staff and finally 110 questionnaires were returned, 109 of which were adequately completed by teachers in four schools. The response rate per school for the pilot-study was 10, 12, 18, 70 teachers.

With regards to the survey-study all schools in the area were contacted and also secondary school teachers-students at WIE that were employed in schools in the same area were also approached. Ten schools agreed to distribute questionnaires to their teachers and in the end 38 questionnaires were returned completed by teachers in six schools (the response rate per school was 18, 2, 2, 1, 6, and 9) and 26 questionnaires were completed by teachers-students at WIE.

D.1. Survey-method

D.1.1. Purposes

The questionnaire-design had two purposes. The first one was to allow a description of teachers' perceptions of physical, social or organizational aspects of the job that stimulate personal growth and development (the 3rd part of the job resources definition) (Demerouti et al., 2001). The second purpose of the questionnaire was to allow inferences between the survey and interview method. For this reason, previously validated scales from the literature were selected and a number

of close-ended and open-ended questions were, also, formed. Specifically, the questionnaire included 3 types of survey items:

- 1) close-ended previously validated items
- 2) close-ended literature-based developed items,
- 3) open-ended questions.

The first type of close-ended items was used to examine their statistical characteristics and their relationships with certain survey variables. The other two types of survey questions were developed in order to allow the conceptual mix of the quantitative and qualitative element of this research and allow inferences between them.

Furthermore, the questionnaire aims to begin an exploration of what supports teachers' engagement in their work that will be further explored through the interviews. Finally, as the concept of job resources in principle addresses aspects of the psychosocial work-environment, the survey's design was also informed by the guidelines for assessment instruments for work-related wellbeing research:

“the survey instrument should be as short as possible and focused. It should be presented in a format and using language that will be easily understood by the assessment group. The various questions and items that comprise the instrument should be simply constructed, unambiguous and have meaning in relation to the assessment group and organisation. The question, items and scales should be designed in accordance with good psychometric practice, and appropriately tested for reliability. The data from each assessment group should also be examined for sensitivity and for evidence of bias” (Cox et al. 2000).

D.1.2. Scales selection

a) Job resources

The first aim of this research was to focus on the definition of job resources as those aspects of the jobs that stimulate personal growth, learning, and development. For this reason, a literature review was carried out in order to identify instruments that assess teachers' work-perceptions in ways that meet conceptually this definition and show statistical characteristics similar to scales used in job resources.

Bowen et al.'s (2007) assessment of the "action" and "sentiment" component of schools as learning organisations has the potential to provide such a valid measurement of factors that meet the definition of job resources and potentially be useful to modelling teachers' job resources.

Thirteen items that belong to five sub-scales of the initial instrument were extracted (appendix 2) for three reasons:

- 1) they best meet the definition of job resources
- 2) the factors that they measure can be more informative in understanding teachers' perceptions of job resources joint with the other factors and groups of perceptions that the present research aims to address.
- 3) Compared with the rest of the items of the original instrument they meet the above two reasons and keep the questionnaire as short as possible.

The factorial structure of the original instrument supports a 2-factor solution of "action" and "sentiment" component of learning organisations. The action component refers to purposeful behaviours and patterns of interaction in organisational members' approaches to work that provide

opportunities for learning and the demonstration of shared responsibility and collective competence in addressing organizational goals. In the original instrument six dimensions are associated with the action domain: team orientation, innovation, involvement, information flow, tolerance for error, and results orientation. The present study will assess the action component of schools as learning organisations using scales extracted from Bowen et al.'s (2007) assessment tool of schools as learning organisations (see appendix 2). Overall, nine items (appendix 3, 4) were selected from the "action" component assessing:

- a) innovation,
- b) involvement, and
- c) information flow.

Three items measured participants' perceptions of innovation in their school. They asked participants to indicate the degree to which they agree in a 6-point Likert scale that teachers in their schools "welcome and appreciate new ideas", "keep an open mind about new ways of doing things", "are willing to experiment with new practices". Indeed, the third part of the definition of job resources is that they involve physical, psychological, social or organizational aspects of the job that may stimulate personal growth, learning, and development (Demerouti et al., 2001)

Three items measured participants' perceptions of involvement in their school. They asked participants to indicate the degree to which they agree in a 6-point Likert scale that in their schools they "seek ideas and opinions from students", "work with parents as partners in the educational process", "engage and collaborate with community agencies and organisations". This is in line with the first part of the definition of job resources according to which job resources involve physical, psychological, social or organizational aspects of the job that may be functional in achieving work-related goals (Demerouti et al., 2001).

Three items measured participants' perceptions of information flow in their school. They asked participants to indicate the degree to which they agree in a 6-point Likert scale that teachers

in their schools “share ideas and information with one another about how to make this school more effective”, “feel comfortable sharing our learning experiences with one another”, “maintain open lines of communication”. This matches the third part of the definition of job resources is that they involve physical, psychological, social or organizational aspects of the job that may stimulate personal growth, learning, and development (Demerouti et al., 2001)

On the other hand, the sentiment component of schools as learning organisations reflects the collective expressions of positive regard, emotions, and attitudes among organizational members, that arise through their interactions and interpersonal connections, that encourages, support, and reinforce internal integration and social harmony. In the original questionnaire six dimensions are associated with the sentiment component: common purpose, respect, cohesion, trust, mutual support, and optimism. The present study will assess the sentiment component of schools as learning organisations using two scales extracted and, in one case, adapted from Bowen et al.’s (2007) assessment tool of schools as learning organisations (appendix 2, 3, 4):

- a) mutual support,
- b) respect

Three items measured participants’ perceptions of mutual support in their school. They asked participants to indicate the degree to which they agree in a 6-point likert scale that teachers in their schools “show kindness and thoughtfulness to one another”, “offer care and support for one another in times of personal and family need”, “treat one another as both colleagues and friends”. This more closely aligned to the second part of the definition of job resources is that they involve physical, psychological, social or organizational aspects of the job that may reduce job demands and the associated physiological and/or psychological costs (Demerouti et al., 2001).

It was expected that interview questions would give more opportunities to teachers to describe the support they perceive they have from ways of working such as perceiving being mutually supported. However, as research findings show that “social support”, along with

autonomy, are the main job resources in the teaching profession (e.g. Prieto et al., 2008; Llorens et al., 2005) the sub-scale of “mutual support” was selected to be used for the purposes of the present study.

Finally, in the original instrument there were three items measuring participants’ perceptions of respect: “value and acknowledge one another as individuals”, “treat one another as competent professionals”, “respect and appreciate individual differences”. Based on those three items one item was developed for the purposes of the present research: “value the opinions of all staff” that asked participants to indicate the degree to which they agree in a 6-point likert scale that teachers in their schools “value the opinions of all staff”.

Teachers’ perceptions of respect meet the definition of job resources but a one-item adaptation was preferred for two reasons. The first one was to keep the questionnaire as short as possible. The second reason was that interviews’ questions were expected to provide more opportunities for participants to describe the support they perceive they have from way teachers’ work in their schools such as the perception that they are being respected.

b) Positive Psychological Capital

The survey-study acknowledged the complex relationships between job resources and personal resources by measuring positive psychological capital as a core construct of personal resources. PsyCap is defined as “an individual’s positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals, and when necessary redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success” (Luthans et al. 2007, p. 3).

Therefore, PsyCap can be operationalised as a “personal resources”. Personal resources, like the ones measured by Positive Psychological Capital, refer to positive self-evaluations that are linked to resiliency and are important antecedents of work engagement helping people to control and impact upon their work environment successfully (e.g. Luthans et al. 2008).

PsyCap was measured using the PCQ-24 (the validity analysis can be found in Luthans, Avolio, et al., 2007a). PsyCap is a higher order construct, consisting of four subscales, each comprised of six items each for a total of 24 items (appendix 5,4). The subscales include hope, efficacy, resilience, and optimism. All items are measured using a 6-point Likert ranging from 1 _ *strongly disagree* to 6 _ *strongly agree*. Those items were drawn from established scales previously published and tested.

c) *Work-engagement*

Research in job resources has been linked with employees’ well-being and especially with their levels of work engagement. For this reason a measurement of participants’ work-engagement was also included in the survey. Work engagement is defined as “. . . a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption” (Schaufeli et al. (2002), p. 74).

Work-engagement was measured using the 9-item version of Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006a) (appendix 6, 4). The UWES items reflect three underlying dimensions, which are measured with three items each: *Vigour* (e.g., “At my work, I feel bursting with energy”), *Dedication* (e.g., “My job inspires me”), and *Absorption* (e.g., “I get carried away when I am working”) on a seven point scale, ranging from (0) “never” to (6) “always”. High scores on all three dimensions indicate high work engagement. Seppälä et al.’s (2009) examination of the construct validity of the UWES scale in a three-year longitudinal study using five Finnish occupational samples (health care, young managers, managers, education: teachers at elementary, secondary and

vocational schools; support staff; administrative workers, dentists) showed that its factorial structure remains relatively unchanged and confirmed previous findings according to which the three-factor structure fits the data better than a one-factor solution.

D.1.3. Items development

Initially, twenty-two close-ended items and two open-ended survey questions were developed for this part of the research design (appendix 3, 4) as a means to facilitate the conceptual mix between the two methods and, therefore, make inferences about the teachers' perceptions of job resources and what supports their engagement in their work. Indeed, all surveys' close-ended questions were developed after extensive reading on literature areas related to organisational learning in schools and teachers' development, work-lives and overall school improvement; while the generic definition of job resources was taken under consideration for the development of the open-ended question. On the whole, the development of the surveys' close-ended items and open-ended questions had three aims:

- 1) Create a short list of professional development opportunities, collaborative work opportunities and staff development opportunities that can be found in UK secondary schools and ask respondents if any of these support their engagement in their work
- 2) Ask respondents to indicate the degree to which they agree or not with 13 statements about those resources (e.g. professional development activities that take place in the school, professional development activities that take place outside the school, collaborative work with other teachers and participation in activities that improve aspects of their work-lives)

3) Ask them what supports their engagement in their work.

Furthermore, they were constructed to facilitate the conceptual mix between the two methods by:

- a) allowing further exploration of teachers' perceptions of job resources through participants' perceptions of available school activities/arrangements, and
- b) complementing the knowledge gathered through the interviews.

For this reason, all close-ended survey items and open-ended survey questions after passing a screening test with a group of 6 teachers were examined in a pilot-study in a sample of 109 teachers employed in four secondary schools in Warwickshire.

D.1.4. Piloting

The piloting procedures of the questionnaires that were used in the present study involved a screening test, the pilot-study and a screening test of the questionnaire prior to the survey-study.

a) Screening test

A screening test of the questionnaire took place in a group of seven secondary-school teachers that were students at WIE. It included 33 close-ended items and two-open ended questions followed by evaluation questions about the instrument (e.g. time to complete, difficulties in understanding items-questions). Overall, there were no significant concerns regarding the whole questionnaire. The main outcome of this screening test was that the question: "what supports your engagement in your work" elicited more appropriate information to the research questions set than the question "what maintains your engagement in your work". Furthermore, there were a few

comments that the initial categorization regarding school activities/arrangements seemed confusing. For this reason, one of the purposes of the pilot-study was to test what items could be re-organised or dropped from the main survey-study.

b) Pilot study

This pilot study had two goals (appendix 3). The first goal was to identify how five scales of perceived school characteristics as a learning organisation could be operationalised as job resources. The second goal was to explore the relationships among the extracted and newly developed items and examine the degree to which they can be used in a survey study to explore teachers' perceived job resources. For this reason, the aim of this study was to carry out different set of analyses: factor analysis of the extracted/adapted items of Bowen's et al. (2006), reliability analysis of the newly developed items, correlations among the formed continuous and categorical variables, and an analysis of participants' answers on the open-ended question "what supports your engagement in you work". In total data was collected from 109 teachers half of whom gave background information about their gender (19 males; 46 females, age (M=37,7), and years of teaching experience (M=11,8) and organisational/managerial responsibilities (M= 6,2).

The analysis of the pilot study showed that the extracted scales could be further used in a survey-study and it also led to a data reduction as items in the first part of the questionnaire were re-organised and some items in the second part were deleted.

c) Screening test

A screening test of the questionnaire as it would be used in the survey-study took place among five secondary-school teachers followed with questions similar to those in the first screening

test. Compared with the screening test before the pilot-study there were no comments about items or questions being confusing.

The survey questionnaire consisted of 59 items that were separated in five sections: 4 items regarding schools activities/arrangements that participants could find in their schools, 9 items regarding teachers' perceptions of such activities, 13 items extracted from Bowen et al. (2006) assessment instrument of schools as learning organizations, 24 items measuring Positive Psychological Capital, and nine measuring work-engagement. It also included one open-ended question: "what supports your engagement in your work?"

D.2. Interview-method

Two rounds of semi-structured interviews were designed for this study. Their purpose was both to complement the survey study by exploring further teachers' perceptions of job resources but also allow a description of teachers' perceived sources of support grounded on participants' answers. However, the group of interviewees that participated in the interviews had to be treated as a separate focused piece of research that would aim to construct a definition of interviewees' perceptions of job resources grounded on their own responses and taking into consideration individual characteristics. For this reason, taking into consideration Yin's (2009) guidelines on case study research procedures, certain research statements were set along with a theoretical framework that aimed to test them based on:

- 1) the psychological literature of job demands and job resources
- 2) the literature regarding teachers' professional and leadership development
- 3) addressing situational factors in an assessment interview in a systematic manner (Cox et al., 2000).

D.2.1. Research questions

The research questions that the interviews addressed were the same two that this research addressed:

- 1) Which are teachers' perceptions of job resources?
- 2) Do those differ under perceived change demands?

In the present research study, both surveys and interviews were used to answer the first research question but only interviews for the second.

D.2.2) Interview-questions development

The interview questions for this research study were developed based on the theoretical framework described in the beginning of this chapter. The aim of the first round of the interviews was to complement the knowledge gathered through the surveys in order to answer the first research question and provide an appropriate analysis to answer the second research question. The aim, though, of the second round of the interviews was instrumental as it aimed to give a better understanding of teachers' perceptions of job resources by exploring interviewees' perceptions of the way their school contexts have influenced their views on what they need to do their job.

D.2.3. Interview-pilot

The first interview was also a pilot of the interview-schedule with a secondary school teacher employed in a school in the same geographical area as the participants in the survey, who was also a student at WIE. This first interview-pilot showed that questions generally were easy to

understand and able to elicit information that matched the content of the designed theoretical framework. However, it also showed that a variety of probes may be more appropriate with regards to the fourth question depending on the sources of support, school activities/arrangements or the change event that each interviewee chooses to reflect on.

D.2.4. Interview schedule

Two different interview schedules were designed for this study. The first one was developed after the first pilot-study and upon the beginning of the survey-study. The second interview schedule was designed after the completion and the completion of the analysis of the survey-study.

a) 1st round of interviews:

Initially four interview questions were constructed. Those remained the same throughout the first-round of the interviews but after the first interview, which was also the pilot, one more question was constructed (appendix 7):

- 1) What supports your engagement in your work?
- 2) Could you select the most important activities for you from those you ticked in the questionnaire that you can find in your school?
- 3) I'd like you to describe to me a change that you experienced recently in your current workplace. What did it involve and how did you experience it? - What helped you more to adjust?

Also, interviewees were asked to reflect on their answers in the survey's question "what supports your engagement in their work" and on their available school activities/arrangements with regards to what supported them at a time that they faced a change in their work-lives:

- 4) Do you think that any of the previously discussed activities provided you with help at the time?

Finally, after the first interview a need was identified to form one additional question each interviewee held different position in the school and it was expected their perceptions of job resources and leadership support may differ substantially.

5) How would you define leadership support for you?

b) 2nd round of interviews:

Five questions were constructed for the second round of interviews that focused on interviewees' perceptions of the influence of their school contexts on their sources of support.

Those questions remained the same throughout those interviews:

1) What do you think you need to do your job?

2) How have the schools you have been in during your career influenced your perceptions of what you need to do your job?

3) How have the departments you have been in during your career influenced your perceptions of what you need to do your job?

4) How have the colleagues you have had in your career influenced your perceptions of what you need to do your job?

5) How have the leaders you have had in your career influenced your perceptions of what you need to do your job?

4.7. Section A: Analysis

The analysis process of the present study had three stages:

a) Data analysis

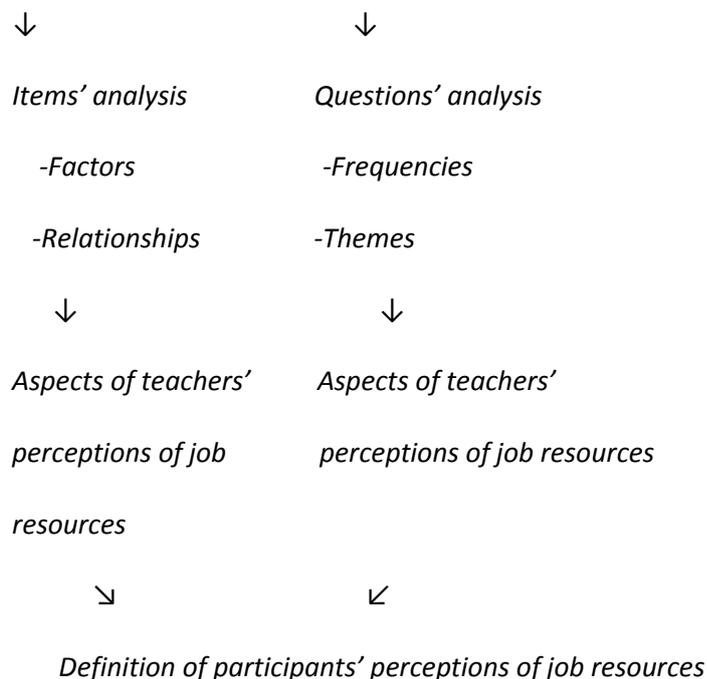
b) Aspects of teachers' perceptions of job resources

c) Definition of participants' perceptions of job resources

The first stage involved the data analysis of the survey-items and questions as well as the interview questions that were developed for the purposes of the present study. The second stage involved the surveys' findings and interviews' interpretations in relation to the generic definition of job resources. The third stage involved the construction of a definition of participants' perceptions of job resources based on the inferences drawn from the two methods in relation to the generic definition of job resources. Those stages and their contents are shown in the following diagram (table 2):

Table 2: Analysis diagram

Generic definition of job resources: Physical, psychological, social or organizational aspects of the job that may do any of the following: (a) are functional in achieving work-related goals; (b) reduce job demands and the associated physiological and/or psychological costs; (c) stimulate personal growth, learning, and development (Demerouti et al., 2001)



E.1. Data analysis

The first stage of the analysis included the data analysis procedures of the pilot-study, the survey-study and the one-to-one semi structured interviews. They were used to explore teachers' perceptions of their job resources as well as their perceptions of job resources under perceived change demands.

Both surveys and interviews were used to identify factors and significant relationships that can describe teachers' job resources. Surveys explored statistical relationships among those factors and drove interview analysis and they helped to construct a definition of teachers' perceptions of job resources. On the other hand, interviews explored certain aspects of teachers' perceptions of their job and the influence of the school context on them drawing from interviewees' own experiences and complementing surveys' findings.

Quantitative analysis (items' analyses) and qualitative analyses (questions' analysis) took place separately using analytical methods and tests appropriate to each kind of data (table 3)

Table 3: Data analysis diagram

<i>Survey analysis</i>	<i>Interviews' analysis</i>
<i>Items analysis</i>	<i>Questions analysis (survey open-ended questions & interview questions)</i>
↓	↓
<i>Factor analysis</i>	<i>Frequencies</i>
<i>Reliability analysis</i>	<i>Themes development</i>
<i>Descriptive statistics</i>	<i>Interview profiles</i>
<i>Parametric tests:</i>	
<i>Pearson r</i>	
<i>T test</i>	
<i>Non-parametric tests:</i>	
<i>F test</i>	
<i>Spearman rho</i>	
<i>Kruskal-wallis test</i>	
<i>Fischer exact test</i>	
<i>McNemar test</i>	
<i>Mann-Whitney U-test</i>	

E.1.1) Items' analysis: pilot-study data analysis and data reduction

Items' analysis involves a) the data analyses procedures of the close-ended questions in the pilot- and survey-study and b) certain data reduction procedures followed in the pilot study.

a) Data Analysis procedures

The items used in both surveys explored certain work-perceptions that conceptually could meet the generic definition of job resources. For this reason, in each survey those statistical tests were selected for each group of that could explore the different types of teachers' work-perceptions and the relationships among them. In particular, five types of statistical processes were followed:

- 1) Principal Factor analysis
- 2) Reliability analysis
- 3) Descriptive statistics
- 4) Parametric tests
- 5) Non parametric tests

A factor analysis was carried out in the pilot-study in order to examine the latent structure of the items that assessed teachers' perceptions of their schools as learning organisations. Based on its results, a reliability analysis of its scales and subscales was carried out in order to use them in further analysis.

What is more, the descriptive statistics of the study's scales were examined among the groups of participants in the pilot- and the survey- study for two reasons. The first reason was to describe teachers' perceptions of job resources and select the appropriate statistical tests. Pearson r correlations were used in order to examine the relationships among the study's scales that showed

normal distribution (Kolmogorov test >0.05) and Spearman rho one for those that didn't have normal distributions (Kolmogorov test <0.05). The second reason was to examine the statistical characteristics of the study's scales in each group of participants (pilot-study participants, survey-study participants, interviewees).

Based on those findings, parametric and non-parametric criteria were used to explore the relationships between the study's scales and teachers' identification of available school activities/arrangements in their schools and their study's background variables. Specifically, F tests were used to compare participants' mean score in normally distributed scales with their age and Kruskal-Wallis tests to examine the relationship between the distribution of participants scores in normally distributed scales and their years of teaching experience and their years of managerial responsibilities. Furthermore, t tests were used to examine the relationship between participants mean score in normally distributed scales and their gender.

Moreover, Mc Nemar and Fisher exact tests were used to explore the relationships among participants' identification of school activities/arrangements that were nominal variables. In addition, t tests were used to examine the relationships between school activities/arrangements and normally distributed scales and Mann Whitney U tests to explore the relationships between participants' identification of school activities/arrangements and non-normally distributed scales. Finally, Pearson r correlations were used to examine the relationships between normally distributed scales and Spearman rho correlations to examine the relationships among non-normally distributed ones.

b) Data Reduction procedures

Data reduction procedures involved a certain part of data analysis of the pilot-study that led to the re-organisation of some items and the exclusion of others from the survey-study. This section

will analytically discuss those procedures showing the differences that they created in the survey-instrument used in the survey-study.

Those items included the analysis of pilot-study's close-ended questions that asked participants to identify school activities/arrangements in their schools and the piloting of 13 statements about those activities/arrangements that asked participants to indicate the degree to which they agree with them in a 6-point likert scale.

b.1) Available school activities/arrangements

Nine items were developed and tested in the pilot-study and coded into 23 nominal variables and one open-ended question. They asked participants to indicate:

- a) If professional development activities take place inside or outside their school.
- b) which school activities/arrangements they can find in their school from a list of collaborative school activities/arrangements and a list of staff development activities. Those items were developed for the purposes of this research and referred to activities/arrangements that were identified from the literature to often exist in UK secondary schools in order to support teachers' professional and leadership development.
- c) if those activities/arrangements are departmental or school-wide.
- d) if they think that those school activities/arrangements can support their engagement in their work and, if yes, explain why they think so.

The pilot-study's analysis suggested that the questionnaire would be improved if the items were re-organised into four items with the same content.

b.1.1) Professional development activities

Two items referred to whether or not professional development activities take place inside and outside participants' school. 103 teachers answered that professional development activities take place inside their schools, while 90 teachers answered that professional development activities take place outside their schools. This finding showed that in most cases participants identified professional development activities both inside and outside their school but the current construction of those items did not reflect that. For this reason, those items were re-coded for the survey-study into one item that asked participants to indicate if their professional development activities take place inside their school, outside their school, or both. Indeed, in the survey-study 8 teachers answered that professional development activities take place inside their schools and 55 answered that they take place both inside and outside their school.

b.1.2) School activities/arrangements: frequencies and relationship between binomial relationships

The pilot-study tested seven items that asked participants to indicate if they can find certain school activities/arrangements in their schools. Those activities/arrangements were organised into two lists: collaborative school activities/arrangements and staff development activities. Those items were coded into twelve nominal variables and the relationships among them were examined the relationships.

One variable referred to whether participants identified any of the collaborative activities/arrangements listed in the survey, while seven items referred to whether or not participants identified each of the school activities/arrangements presented in this list:

- Induction, Mentoring and Coaching for new teachers
- Action-research and/or teacher enquiry
- Co-teaching/Team teaching
- Peer-review of teaching practices

- Interdepartmental collaborations among teachers
- Funding for graduate or postgraduate courses for professional development
- Other

Two variables referred to whether or not participants believed that the above school activities/arrangements were departmental or school-wide. Moreover, one variable referred to whether or not participants identified any of the staff development activities listed in the survey. Six variables referred to whether or not participants identified each of the following school activities/arrangements:

- Participation in decision-making committees
- Curriculum development teams
- Work with other schools or agencies/organisations
- Workshops for leadership developments
- Parents involvement provision
- Funding for graduate or postgraduate courses for leadership development

Finally two variables referred to participants' identification of the above listed activities as departmental or school-wide arrangements.

The results showed that many of those relationships were such that it would be better if the activities were presented to participants in one list than two. For this reason, those seven pilot-items were re-organised into two items in the survey-study.

a) Pilot-study

1) Frequencies

Pilot-analysis focused on examining the frequencies and/or relationship between the variables regarding collaborative school activities/arrangement and staff development activities/arrangements. Indeed, participants answered that both collaborative activities/arrangements and staff development activities were more often school-wide organised. Specifically, 82 teachers answered that the listed collaborative activities/arrangements were departmentally organised, and 89 that are school-wide organised. Furthermore, 74 teachers answered that the listed staff development activities were departmentally organised and 83 that were school-wide organised. For this reason those four variables were re-organised in the survey-study that asked participants to indicate whether the arrangements for the listed activities were departmental, school wide or both. Indeed, 50 participants answered that there were both departmental and school-wide organisation of the listed activities, while 8 answered that there was only departmental organisation and five answered that there was only school-wide organisation.

2) Binomial relationships

Participants in the survey-study were presented with one list of activities instead of two as the analysis of the analysis of the binomial variables consisting of the collaborative activities list and the staff development activities' list of the pilot study showed significant relationships among participants' identification of certain activities across the two lists. Specifically, the crosstabs among those nominal variables of the pilot study showed several statistically significant relationships among the identified activities listed within the professional development group of activities and staff-development group of activities. Furthermore in four cases McNemar test confirmed that there is a

relationship among the proportions of people that selected those activities and those that did not. Those involved the relationship between co-teaching and curriculum development teams (Fisher's exact test: $p=.04$), co-teaching and working with other schools (Fisher's exact test: $p=0.01$), peer review and parents' involvement provision (Fisher's exact test: 0.01); and funding for professional development courses and parents' involvement provision ($p<0.01$) (table 4).

Table 4: Significant relationships among school activities/arrangements' selection

Fisher's exact test: co-teaching and curriculum development teams

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test				.039	.027
McNemar Test				.014	
N of Valid Cases	106				

Fisher's exact test: co-teaching and working with other schools

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test				.007	.004
McNemar Test				.041	
N of Valid Cases	106				

Fisher's exact test:peer review and patents' involvement provision

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test				.010	.007
McNemar Test				.047	
N of Valid Cases	106				

Fisher's exact test: Funding for professional development courses and parents' involvement provision

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fisher's Exact Test				.015	.011
McNemar Test				.004	
N of Valid Cases	103				

Those findings mean that participants that identified specific professional arrangements in their schools also identified certain staff development activities too. For this reason, school activities/arrangements were re-organised and used in the survey-study forming one list of activities:

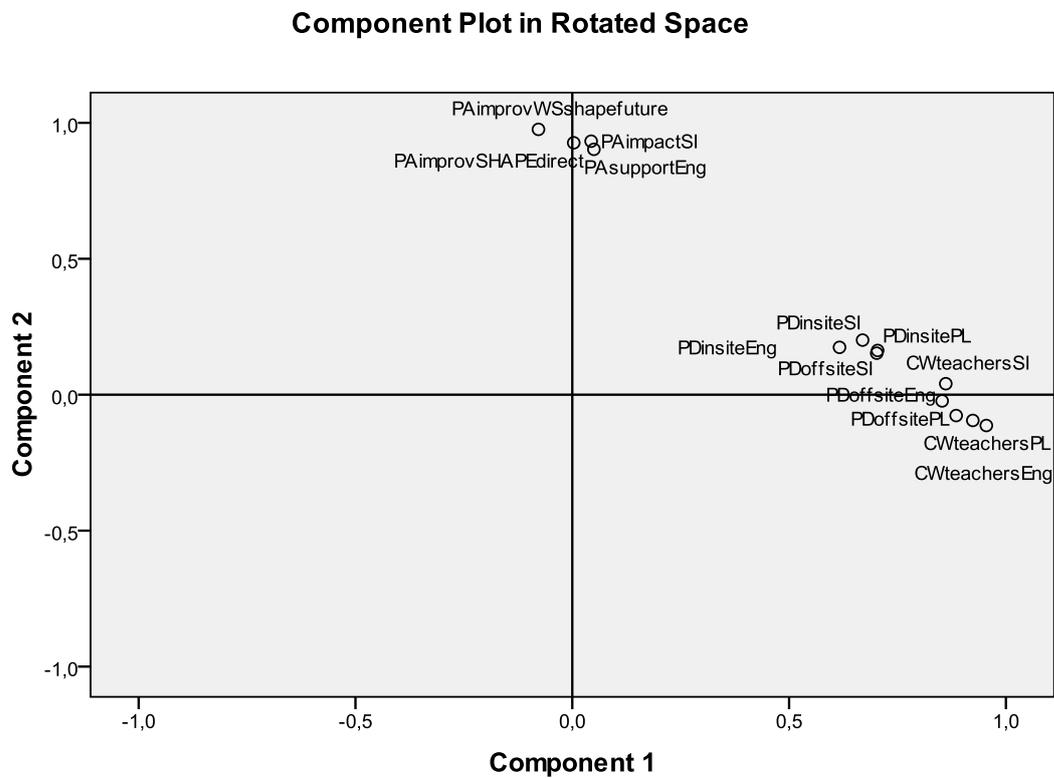
- Induction for newly qualified teachers and/or new staff members
- Mentoring/coaching
- Action research and/or teacher enquiry
- Co-teaching/Team teaching
- Peer review of teaching practices
- Interdepartmental collaborations among teachers

- Participation in decision-making committees
- Curriculum development teams
- Work with other schools or agencies/organisations
- Workshops for leadership development skills
- Parents involvement provision
- Funding for graduate or postgraduate courses
- Other

b.2.1) Item analysis and mean scores

Thirteen statements were developed regarding participants' school activities/arrangements' support. It was important, though to examine their statistical characteristics in order to select the ones that could operate better with the other scales of the study and especially the "action" and "sentiment" scales. The correlations among those items showed that there were too many significant positive correlations over .3 among them and it was not possible to draw any conclusions without reducing them. Furthermore, as a purpose of those items was to allow the examination of their relationship with the "action" and sentiment" component of schools as learning organisations any reduction method followed should be such to allow such a task. For this reason, a factor analysis was performed with promax rotation of the axes in order to see if all items tend to measure one factor or not (table 5).

Table 5: Items' loadings on the axes



The above component matrix, showed that the nine items (about on-site and off-site professional development activities support and collaborative work support) loaded differently from the other four (about participation in activities that improve your work-life). Furthermore, the correlations among the nine items showed that the “collaborative work support” items correlated over .90 whereas the “professional development” items” shared also among them positive significant correlations over .4. Those statistical figures mean that those nine items can measure a parameter of teachers’ perceptions of their school activities/arrangements support that is significantly different to what the other four items measure.

Therefore, only those nine items were used in further analysis and were also part of the survey-study as they were identified as most suitable for the purposes of the present study. After a screening test with a group of teachers, the survey study included a slight adaptation of the same

nine items. In particular, the pilot-study items asked participants to indicate their degree of agreement with nine statements regarding “Professional development activities that take place in my school”, “Professional development activities that take place outside my school”, and “Collaborative work with other teachers”. Furthermore, based on the results of the analysis two groups of items were formed. The first one involved the six items regarding teachers’ professional development activities inside and outside their schools. The second groups of items involved the three items regarding teachers’ collaborative work with other teachers. For this reason, the reliability co-efficients of those two groups of items were examined. Both groups of items yielded .90 and there was no significant improvement if any of the items were deleted (table 6).

Table 6: Reliability analysis of pilot-study’s school activities/arrangements’ support scales

Pilot-study	
Items’ analysis	Cronbach alphas
Professional development activities that take place inside my school: Influence my professional learning Impact on my school’s improvement Support my engagement in my work Professional development activities that take place outside my school: Influence my professional learning Impact on my school’s improvement Support my engagement in my work	.91
Collaborative work with other teachers: Influences my professional learning Impacts on my school’s improvement Supports my engagement in my work	.96

On the other hand, the survey-study’s questions were re-coded into “Developmental activities inside my school”, “Developmental activities outside my school”, and “collaborative work

with other teachers” each one consisting of three items. Furthermore, the correlation matrix among those nine items showed more clearly than the pilot-study that the three items under each heading showed higher correlations with each other than the rest of the items. For this reason, the reliability co-efficients of three groups of items were examined. Similarly to the pilot-study, all groups of items had high alpha values that didn’t show significant improvement if any of those items was deleted (table 7).

Table 7: Reliability analysis of survey-study’s school activities/arrangements’ support scales

Survey-study	
Scales	Cronbach alphas
Developmental activities/arrangements inside my school: Influence my professional learning Impact on my school’s improvement Support my engagement in my work	a=.90
Developmental activities/arrangements outside my school: Influence my professional learning Impact on my school’s improvement Support my engagement in my work	a=.88
Collaborative work with other teachers: Influence my professional learning Impact on my school’s improvement Support my engagement in my work	a=.93

Therefore, those items' analysis and data reduction processes offered certain suggestions that informed the items' development for the survey study. These suggestions allowed the inclusion of items that reflected best the purposes of the study and were a better match to other items and scales used in the overall study.

E.1.2. Questions' analysis

Questions analysis involved the data analysis procedures followed regarding two types of questions: the open-ended survey questions and the interview questions. Those questions, similar to the survey-items, explored certain work-perceptions that conceptually could meet the generic definition of job resources. For this reason, interview interpretations took into consideration surveys' findings and extended them in order to provide a more accurate description of participants' perceptions of job resources. In particular, three types of analysis were followed:

- 1) Frequencies
- 2) Themes development
- 3) Interview profiles

In both the pilot- and the survey-study there was an open-ended question (appendix 3,4) that gave participants the opportunity to identify school activities/arrangements that they perceive as supportive to their engagement in their work. The frequencies of those answers were assessed and seen in parallel to participants' responses regarding the support they perceived they had from available to them school activities/arrangements in other parts of the study.

Themes development had two parts. The first part involved the analysis of the open-ended question "what supports your engagement in your work" that was in both the pilot- and the survey-

study. The second part involved the themes that were developed through the interview analysis and added to the themes that emerged from the surveys' analysis.

Finally, the construction of interviewees' profiles involved individuals' answers on the open-ended survey questions and interview questions in order to compare individuals' answers on different parts of the study and draw further inferences from the survey method to the interview method.

E.2. Aspects of teachers' perceptions of job resources

The aspects of teachers' perceptions of job resources involve survey findings and interview interpretations in relation to the generic definition of job resources. In particular six aspects of teachers' perceptions of job resources were addressed in the present study that met different parts of the generic definition of job resources:

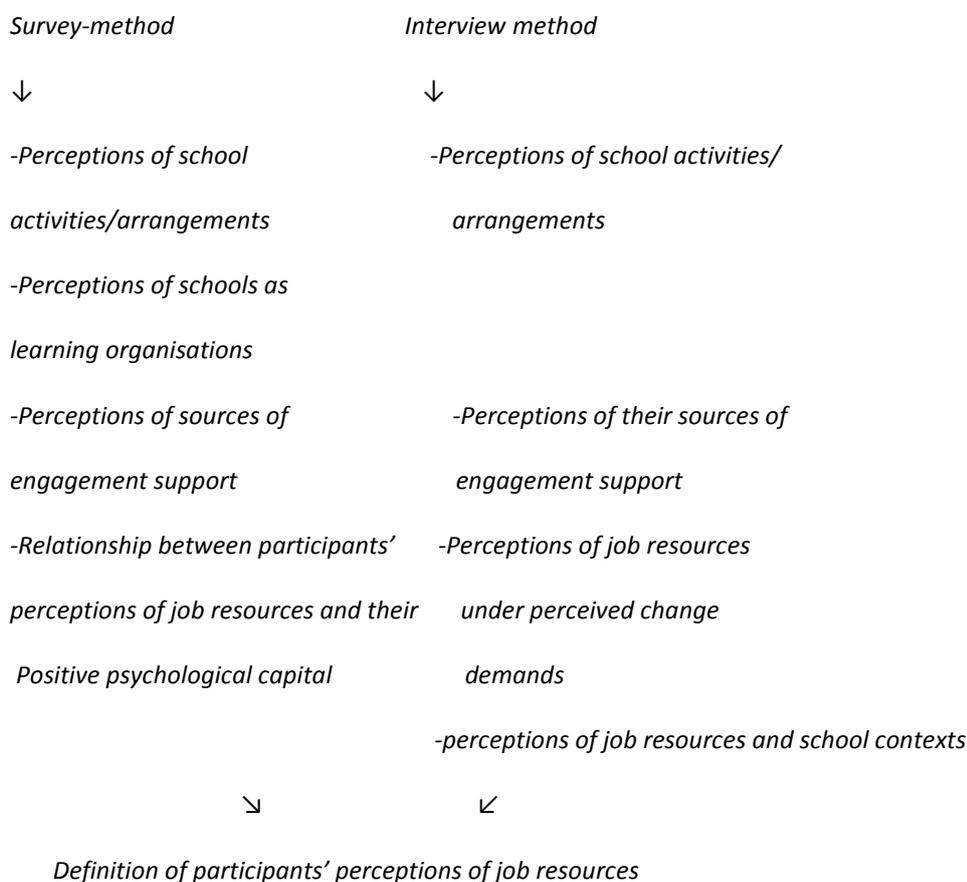
- 1) Teachers' perceptions of their schools as learning organisations.
- 2) Teachers' perceptions of their school activities/arrangements and their perceptions of their schools as learning organisations.
- 3) Teachers' perceptions of their sources of engagement support.
- 4) The relationships between teachers' positive psychological capital and teachers' perceptions of job resources
- 5) Teachers' perceptions of their job resources under perceived change demands
- 6) The perceived influence that school contexts may have had on teachers' perceived sources of support

E.3. Inferences

The last stage of the analysis involves drawing theoretical inferences from one method to another that allowed the conceptual mix of the survey findings and interview interpretations provided by the key role of job resources as being instrumental and supportive to one's work and personal resources as individual's feeling of control over his/her work-environment. The process that the present study will follow to draw inferences from the surveys to interview is shown in the following diagram (table 8).

Table 8: Inferences diagram from survey and interview data.

Generic definition of job resources: Physical, psychological, social or organizational aspects of the job that may do any of the following: (a) are functional in achieving work-related goals; (b) reduce job demands and the associated physiological and/or psychological costs; (c) stimulate personal growth, learning, and development (Demerouti et al., 2001)



Certain aspects of teachers' perceptions of job resources were addressed in the pilot-study, the survey-study and the interviews whereas others were addressed only by some of them. Analytically, the pilot-study not only tested items and questions that were re-organised in the survey-study, but it was, also, able to explore teachers' perceptions of job resources in a different way than the survey-study did. The survey-study explored certain relationships between teachers' perceptions of job resources and their personal resources, while the pilot-study did not explore such relationships. Finally, the interviews were able to address interviewees' school contexts and their influence on their perceptions of job resources, as well as their job resources under perceived change demands that none of the surveys did. However, the conceptual mix was allowed by certain survey-questions that were further explored in the interviews, while the construction of interviewees' profiles brought together those questions in the analysis-stage in order to elicit information regarding interviewees' perceptions of their job resources.

4.7. Overview

The purpose of the present study is to explore teachers' perceptions of job resources. For this reason a mixed methods research design was developed to allow various aspects of those perceptions to be addressed. This chapter described the research procedures, methods, types of data collection that were used and highlighted the avenues through which the results from each method complemented the results of the other.

Overall, a pilot-study, a survey-study and interview schedules for two rounds of semi-structured interviews were developed (one at the time of the survey-study and the second after the completion and analysis of the first round of interviews) in order to address the first research question "what are teachers' perceptions of job resources". However, only the analysis of the semi-structured interviews was able to address the second research question "do they (teachers' perceptions of job resources) differ under perceived change demands". For this reason, both the

survey-method and the interview method are considered to have equal value in this study. Moreover, teachers' perceptions of their sources of engagement support was the most important avenue through which the results of the survey-method will complement the results of the interview-method so that equally both addressed the research questions of the present study.

Both surveys and interviews followed an explorative research design and addressed the first research question of the present study: "what are secondary-school teachers' perceptions of job resources" in such a way that would allow inferences to be drawn between the survey- and interview-method. The first round of interviews' analysis, though, also focused on the present study's research sub-question: "are they (teachers' perceptions of job resources) differ under perceived changed demands?" while the follow-up interviews provided an insight of teachers' perceptions of the influence that their school context may have had on their sources of support.

Discussion chapters

Six discussion chapters will explore six aspects of teachers' perceptions of their job resources and several relationships among them. The first chapter will focus on teachers' perceptions of their schools as learning organisations and includes the findings of the pilot- and the survey study.

The second chapter will focus on teachers' perceptions of their available school activities/arrangements. It includes surveys' findings and interviews' interpretations and inferences drawn from the survey-method to interviewees' interpretations.

The third chapter will highlight the complex relationship between teachers' personal resources and job resources and presents findings of the survey-study.

The fourth sub-chapter will focus on teachers' perceptions of their sources of engagement support and will present surveys' findings, interviews' interpretations and certain inferences drawn from one method to another.

The fifth chapter will focus on teachers' perceptions of their sources of available support and will present interviews' interpretations and certain inferences will be drawn from the survey-study and the interviews through the construction of interviewees' profiles.

Finally, the sixth chapter will focus on interviewees' school contexts and their perceptions of how the schools, colleagues and leaders they have had in their career have influenced their perceptions of what they need to do their job. This is, also, a chapter that will test further the themes that emerged earlier in the analysis showing more clearly the links between teachers' perceptions of their job resources and their perceptions of their school contexts.

5.0) CHAPTER 5: TEACHERS' PERCEPTIONS OF THEIR SCHOOLS AS LEARNING ORGANISATIONS

5.1. Introduction

This chapter will analyse teachers' perceptions of their schools as learning organisations. It will present the data-analysis of the pilot- and survey-studies and will then explore the key issues associated with the study's findings in relation to existing job resources research.

The data analyses consisted of factor analyses procedures, reliability analysis, descriptive statistics and parametric and non-parametric statistical tests. The pilot-study's analysis was the only one that was able to examine the statistical characteristics of the factors that described teachers' perceptions of their schools as learning organisations. However, both the pilot-study and the survey study examined the scales' distributions in order to select the appropriate statistical criteria to explore potential significant relationships among the surveys' variables.

5.2) Section A: An explorative factor analysis of teachers' perceptions of their schools as learning organisations

One purpose of the pilot study was to examine teachers' perceptions of their schools as learning organisations based on the generic definition of job resources. The majority of psychological research examines job resources through the construction of latent statistical models usually as a means to examine their relationships with work-related well-being through advanced statistical analyses (e.g. structural equation modelling techniques). Taking this into consideration, analysis focused on exploring the statistical characteristics of five scales that described teachers' perceptions of the way teachers work in their school as a means to explore teachers' perceptions of their schools as learning organisations.

As discussed in the methodology chapter, 13 items were extracted from the original instrument that measured three aspects of the “action” component (innovation, involvement, information-sharing), and two aspects of the “sentiment” component of schools (mutual support, respect) as learning organisations. Those scales were selected because:

- 1) They best meet the definition of job resources,
- 2) The factors that they measure can be more informative in understanding teachers’ perceptions of job resources together with the other factors and groups of perceptions that the present research addressed,
- 3) To keep the questionnaire as short as possible.

A.1. Factor Analysis: Procedures

The factor analysis procedures consisted of the examination of the factorability of the thirteen items used and the selection of the appropriate factor analysis method. A review of the research procedures of factor analysis showed several well-recognised criteria for the factorability among correlations (Costello & Osborne, 2005). Those criteria were followed in order to determine whether the correlations among the items were such that a factory analysis could be performed. They involved the strengths of the correlations among the items, the Kaise-Meyer-Olkin measure of sampling adequacy, Bartlett’s test of sphericity and the diagonals of the anti-image correlations matrix

Those tests showed that the statistical characteristics of the 13 items adopted from Bowen et al. (2007) original instrument allowed the execution of a factor analysis. Specifically, they all correlated at least .3 with all items, demonstrating high factorability. Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .88, well above the recommended value of .6 and Bartlett’s test of sphericity was significant ($\chi^2(78) = 905.46, p < .05$). The diagonals of the anti-image

correlation matrix were all above .8, supporting the inclusion of each item in the factor analysis. Finally, the communalities were all above .4, further confirming that each item shared some common variance with other items. Given these overall indicators, the best factor analytic solution was sought.

With regards to the appropriate factor analysis method, its selection was based on the fact that a purpose of this pilot-study was to identify and compute composite scores for the underlying factors and then identify their factor structure as a latent construct. For this reason, a principal axis factoring was preferred over a principal components analysis because its result could be used to guide the construction of a latent model.

According to the literature for such an analysis, both the sample size and the ratio of observations/variables are important (each one becoming more important when the other is weaker in the analysis). For example, Tabachnick and Fidell (2001, page 588) cite Comrey and Lee's (1992) advice regarding sample size: 50 cases is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good, and 1000 or more is excellent. They, also, note that as "a rule of thumb" 10 observations per variable are considered to be good in order to avoid computational difficulties. The pilot-study's sample size (N=106) is not large enough to address those completely but there is an 8:1 ratio of observations per variable which is good enough as the main purpose of this analysis is to produce a factor analysis that could guide a confirmatory factor analysis of job resources.

A.2. Principal Factor analysis: Results

A principal factor analysis was performed using the 13 adapted items from the SSLO instrument in order to define their factorial structure. The initial instrument is comprised of 36 items and aims to assess schools as learning organisations. Nine "action" items and "four" sentiment items were used to explore if they can be used as part of an assessment of teachers' perceived job resources. A promax rotation of the axes was performed because it gathered the most theoretical

and statistical support (table 5, 6). The original instrument was also constructed through exploratory and confirmatory analyses that allowed the two factors to relate with each other (“action” and “sentiment”) (Bowen et al., 2007). Indeed, allowing the factors to correlate with each other gave a better definition of their factorial structure as it had less computational difficulties. The factorial structure matched the original instrument while only two items had secondary loadings over .3 and only the item “feel comfortable sharing our learning experiences with one another” had a primary loading to the second factor (“sentiment”) instead of the first factor (“action”).

Furthermore, the item “we offer care and support in times of personal need” caused some computational difficulties due to its relationship with the first factor as it showed a value over .1 in the pattern matrix (table 9). The structural matrix resolved this issue as it showed that this item’s coefficient on the second factor was similar to those that were exhibited by the other three items that formed the second factor (table 10). Finally, the item “we value the opinions of all staff” that was an adaptation of the original items did not interfere with the items’ loadings. However, those computational difficulties may have been due to our sample size or its homogeneity (the final valid cases subjected to factor analysis involved 70 teachers from one school and only 36 from three different schools).

Table 9: Pattern matrix for 2-factor solution with promax rotation

Table: Pattern matrix (factor loadings)	Factor	
	1	2
Welcome and appreciate new ideas	.730	
Keep an open mind about new ways of doing things	.763	
Are willing to experiment with new practices	.730	
Seek ideas and opinions from students	.575	
Work with parents as partners in the educational process	.728	
Engage and collaborate with community agencies and organisations	.689	
Share ideas and information to make school more effective	.849	
Feel comfortable sharing our learning experiences with one another	.376	.419
Maintain open lines of communication	.480	.311
Show kindness and thoughtfulness to one another		.832
Offer care and support for another in times of personal need	-.170	1.030
Treat one another as both colleagues and friends		.954
Value the opinions of all staff		.535

Table 10: Structure matrix for 2-factor solution using promax rotation

	Factor	
	1	2
Welcome and appreciate new ideas	.830	.619
Keep an open mind about new ways of doing things	.814	.563
Are willing to experiment with new practices	.782	.544
Seek ideas and opinions from students	.594	.394
Work with parents as partners in the educational process	.692	.403
Engage and collaborate with community agencies and organisations	.661	.392
Share ideas and information with one another about how to make this school more effective	.716	.327
Feel comfortable sharing our learning experiences	.641	.657
Maintain open lines of communication	.677	.614
Show kindness and thoughtfulness to one another	.585	.869
Offer care and support for one another in times of personal need	.482	.923
Treat one another as both colleagues and friends	.489	.882
Value the opinions of all staff	.620	.713

5.3. Section B: “Action” and “sentiment component of learning organisations: reliability analyses and scales’ distributions.

The pilot-study showed that the thirteen items extracted from Bowen’s et al. (2007) instrument of schools’ assessment as a learning organisations should be best treated as two factors that are related with each other. For this reason, both in the pilot-study and the survey-study the internal consistency of those factors was examined using Cronbach’s alpha.

Reliability analyses in both surveys gave similar results for the nine items that formed the action component of the school as learning organisations and the four items that formed the sentiment component of schools as learning organisations (table 11). Specifically, each one demonstrated high reliability co-efficients that were considerably higher than the .70 threshold commonly specified as minimally acceptable in the literature. The “action” and “sentiment” components in the pilot-study both had an alpha co-efficient of .89., while in the survey study “action” had an alpha co-efficient of .93 and “sentiment” a co-efficient of .89. Furthermore, in both surveys no improvement in reliability was found if any of the “action” items was deleted but the reliability of the second factor was found to increase ($\alpha=.91$) if the item “we value the opinions of all staff” was deleted. That is in accordance with the theoretical underpinning of the items of the “sentiment” factor as three of them are supposed to measure the dimension of “mutual support”, while the fourth one is an adaptation to measure a different dimension (“respect”). However, as the correlation matrix of the factor analysis in the pilot-study supported a two interrelated factor solution whose loadings matched those of the original instrument, individual “action” and “sentiment” scores were computed.

Table 11: Reliability analysis of the “action” and “sentiment” component of schools as learning organisations

	Pilot-study	Survey-study
Factors	Cronbach alphas	
Action	.89	.93
Sentiment	.89	.89

Moreover, in both surveys the correlation matrix of the nine “action” and four “sentiment” actions was examined. In both cases, all items correlated positively significantly with each other but the highest correlations were found among four groups of items that were in accordance with the four subscales of innovation, involvement, information flow and mutual support that were extracted from the original instrument.

Indeed, a reliability analysis of all four sub-scales in both surveys showed co-efficients over .70. However, the innovation and mutual support sub-scales had the higher co-efficients over .90, while the involvement and the information flow sub-scales had lower co-efficients in the pilot-study than the survey-study (table 12).

Table 12: Reliability analyses for the “action” and “sentiment” sub-scales

Reliability analysis	Cronbach alphas	
	Pilot-study (N=106)	Survey-Study (N=63)
Innovation	a= .90	a=.95
we welcome and appreciate new ideas		
keep an open mind about new ways of doing things		
are willing to experiment with new practices		
Involvement	a=.78	a= .89
we seek ideas and opinions from students		
work with parents as partners in the educational process		
engage and communicate with community agencies and organisations		
Information sharing		
share ideas and information with one another about how to make this school more effective	a=.76	a=.89
feel comfortable sharing our learning experiences with one another		
maintain open lines of communication		
Mutual support		
show kindness and thoughtfulness to one another	a=.91	a=.95
offer care and support for one another in times of personal need		
treat one another as both colleagues and friends		

B.1. Scales' characteristics

Following the above reliability findings, composite scores of the “action”, sentiment”, “innovation”, “involvement”, “information sharing” , “mutual support” and “respect” for three groups of teachers were computed. The first group of teachers was the pilot study’s participants, the second group was the survey study’s participants and the third group was the much smaller group of teachers that participated both in the survey-study and the interviews. Furthermore, the mean scores that those scales had among the three groups were computed along with their descriptive statistics in order to examine more closely differences in their distributions. Those statistical characteristics showed how participants’ values in the study’s scales were distributed and therefore determined the selection of statistical tests that were most appropriate for them in this study. However, for the purposes of this study only the scores of the two groups of teachers’ that participated in the pilot study and the survey study were further examined regarding their relationships with the rest of the continuous and categorical variables assessed in this study.

a) Action

Participants’ scores showed that they slightly agreed that work in their schools can be described by the action component of schools as learning organisations. In particular, the mean action score among all participant groups was $M=38.16$. However, pilot-study participants showed the lower score $M=36.28$ which means that perceived the less that work in their schools is described by “actions” defined by Bowen et al. (2007) as opportunities for learning demonstrating of shared responsibility and collective competence in addressing organisational goals. Participants, though, of the survey-study ($M=41.98$) and the interviews ($M=42.20$) agreed more that their work offered them some “actions” as they showed similar levels of action mean score.

With regards to the distribution of participants' values, the distribution of action scores was normally distributed within all groups of teachers (Kolmogorov test for normality $>.05$). Furthermore, the action scale was negatively skewed in all three groups of participants and had positive kurtosis values only among the participants in the survey study (table 13). This means that both distributions had a longer tail in the negative direction but only the values of survey participants showed a leptokyrctic distribution (kurtosis >3) with values concentrated around the mean action score.

Table 13: Descriptive statistics for the "action" component

	N	Mean	Std	Skewness	Std	Kurtosis	Std	Kolmogorov test for normality
Group 1	101	36.28	5.48	-.84	.24	-.15	.47	.69
Group 2	62	41.98	8.25	-1.38	.30	3.21	.59	.19
Group 3	10	42.20	9.41	-.59	.68	-.59	1.33	.99
Mean group score	105	38.16	5.55	-.54	.23	.19	.46	.32

b) Sentiment

Participants strongly agreed that work in their school can be described by the sentiment component of their schools as learning organisations. In particular, the mean sentiment score among all groups of participants was $M=18.90$. The mean sentiment score among the participants in the

pilot-study was M= 18.68, among the participants in the survey-study was M=19.1, and among the participants in both surveys and interviews was M=19.

Regarding, the distribution of participants' values, sentiment scale was non-normally distributed (Kolmogorov test for normality <.05) both among the participants' in the pilot-study and those in the survey study. Therefore, non-parametric statistic criteria were adopted to explore its relationship with other variables in this study. Furthermore, the sentiment scale was negatively skewed in all three groups of participants (skewness<0) and had negative kurtosis values among the participants' of the pilot-study and the interviews (table 14). This means that participants' values in all groups were concentrated on the left side of the distribution. Participants values were, also, scattered from the mean sentiment score in a way that formed platycurtic (kurtosis<3) distribution (kurtosis<3), while the survey group was the only one that had values closer to forming a normal distribution with values nearer the mean sentiment score (kurtosis=2.15)

Table 14: Descriptive statistics for the "sentiment" component

	N	Mean	Std	Skewness	Std	Kurtosis	Std	Kolmogorov test for normality
Group 1	101	18.68	3.21	-.26	24	-.70	.47	.03
Group 2	61	19.1	4.80	-1.52	30	2.15	.60	.03
Group 3	10	19	3.88	-.52	68	-1.58	1.33	.81
Mean group score	105	18.90	3.15	-.52	23	-.34	.46	.32

c) Innovation

Participants' mean innovation scores showed that they agreed that work in their schools provides them with innovation opportunities. In particular, the mean innovation score among all groups of participants was $M=13.89$. The mean innovation score among the participants of the pilot study was $M=13.6$, among the participants in the survey-study was $M=14.51$ and among the participants of both the survey-study and the interviews $M=14.40$.

With regards to the distribution of participants' values, innovation was also among the scales that showed a non-normally distribution (Kolmogorov test for normality $<.05$) both among the participants in the pilot-study and those that participated in the survey-study. Therefore, non-parametric criteria should be used to examine its relationship with the rest of the study's variables. Furthermore, innovation was negatively skewed among all groups of participants, while it had negative kurtosis values among the groups of participants that participated in the pilot-study and those that participated both in the survey study and the interviews (table 15). This means that that all participants' values had a slight longer tail in the left side of their distribution and they were platykurtic ($Kurtosis < 3$). However, the group of participants in the survey-study was the only one whose distribution was the closest to a normal (mesokurtic) distribution as it had a slight peak towards the mean innovation score ($kurtosis=2.17$).

Table 15: Descriptive statistics for the innovation sub-scale

	N	Mean	Std	Skewness	Std	Kurtosis	Std	Kolmogorov test for normality
Group 1	105	13.6	3.64	-.24	.23	-.45	.46	.03
Group 2	62	14.51	3.22	-1.32	.30	2.17	.59	.05
Group 3	10	14.40	3.83	-.91	.68	-.24	1.33	.49
Mean group score	106	13.89	2.41	-.70	.23	.33	.46	.03

d) Involvement

Participants' scores showed that they slightly agreed that work in their schools provides them with involvement opportunities. In particular, the mean involvement score among all three groups of participants was M=13.50. The involvement mean score among the participants in the pilot-study was M=13.60, among the participant in the survey-study was M=13.27, and among the participants of both the survey-study and the interviews was M=13.20.

With regards to its distribution, involvement showed a normal distribution (Kolmogorov test for normality $>.05$) among all group of participants. Therefore, parametric statistic criteria will be used to examine its relationship with the other variables in the present study. The involvement scale was, also, slightly negatively skewed among all three groups. Furthermore, participants' values formed a platykurtic distribution (kurtosis <3) with low positive kurtosis values among the participants that participated in the pilot-study and the survey-study (table 16).

Table 16: Descriptive statistics for the involvement sub-scale

	N	Mean	Std	Skewness	Std	Kurtosis	Std	Kolmogorov-Smirnov test
Group 1	103	13.60	2.33	-.01	.68	.15	.47	.06
Group 2	62	13.27	3.05	-.80	.30	1.06	.59	.36
Group 3	10	13.20	3.99	-.01	.68	-1.49	1.33	.66
Mean groups score	106	13.50	2.21	-.19	.23	-.20	.46	.36

e) Information sharing

Participants' scores showed that they agreed that work in their schools provides them with opportunities to share information. In particular, the mean score for the information sharing among all three groups was M=13.71. The mean information sharing score among the participants of the pilot-study was M=13.41, among the participants of the survey-study was M=14.2, and among the participants of both the survey-study and interviews was M=14.7.

With regards to its distribution, information sharing was normally distributed (Kolmogorov test for normality $>.05$) both among the participants of the pilot-study and the survey-study and, therefore, parametric statistic criteria were used for this scale in the rest of this study. Furthermore, the information flow scale was negatively skewed among all groups and had positive Kurtosis valued among all groups but the participants of both the survey-study and the interviews (table 17). This means that all distributions had a slight tail towards the negative direction, also, showing a platykurtic distribution ($kurtosis < 3$). However, survey-participants' was the only group whose values were the closest to a normal (mesokurtic) distribution.

Table 17: Descriptive statistics for the information flow sub-scale

	N	Mean	Std	Skewness	Std	Kurtosis	Std	Kolmogorov-Smirnov test of normality
Group 1	105	13.41	2.24	-.41	.23	1.07	.46	.14
Group 2	62	14.2	3.08	-1.38	.30	2.6	.59	.06
Group 3	10	14.7	2.62	-.32	.68	-1.25	1.33	.86
Groups mean score	106	13.71	1.93	-.51	.23	.30	.46	.01

f) Mutual support

Participants' mean mutual support scores showed that they agreed that their schools function in ways that allow teachers to show mutual support to one another. In particular, the mean score for the mutual support scale among all three groups was $M=14.28$. The mean mutual support score among the participants of the pilot-survey study was $M=14.03$, among the participants of the survey-study was $M=14.59$, and among the participants of the interviews was $M=14.70$

With regards to its distribution, it had a normal distribution (Kolmogorov test for normality $>.05$) among the participants of the survey-study but it was not normally distributed (Kolmogorov test for normality $<.05$) among the participants in the pilot- study. Therefore, non-parametric criteria would be used to explore its relationship with other variables in the pilot-study and parametric ones to explore such relationships with survey-study variables. Moreover, the distribution of mutual support scale was negatively skewed within all three groups showing a platykurtic distribution with positive kurtosis values within all groups of participants but those that participated both in interviews (table 18). This means that, although, all distributions had a longer tail towards the negative direction, the survey-participants' distribution included values that were the closest to a normal distribution with kurtosis values almost 3.

Table 18: Descriptive statistics for the mutual support sub-scale

	N	Mean	Std	Skewness	Std	Kurtosis	Std	Kolmogorov-Smirnov test for normality
Group 1	103	14.03	2.78	-.91	.23	1.57	.47	.00
Group 2	61	14.59	3.45	-1.69	.30	2.96	.60	.06
Group 3	10	14.7	2.79	-.34	.68	-1.47	1.33	.34
Mean group score	106	14.28	2.44	-.76	.23	.50	.46	.12

g) Respect

Participants mean scores show that they agreed that their schools function in ways that allow teachers to show respect to one another. In particular, the mean respect score among the three groups of participants was $M=4.47$. The mean respect scores among the participants in the pilot-study was $M=4.41$, among the participants in the survey study it was $M=4.51$, and among the participants that participated both in the survey study and the interviews was $M=4.30$.

This one item sub-scale was non-normally distributed (Kolmogorov test for normality $<.05$) for the two largest groups of participants: the participants in the pilot-study and the participants in the survey-study. What is more, participants' values were skewed towards the left side of their distribution in all three groups of participants and they formed platykurtic distributions ($kurtosis < 3$) (table 19).

Table 19: Descriptive statistics for the respect sub-scale

	N	Mean	Std	Skewness	Std	Kurtosis	Std	Kormogorov-Smirnov test for normality
Group 1	105	4.41	1.11	-.69	.23	.19	.46	.00
Group 2	61	4.51	1.49	-1.00	.30	.13	.60	.00
Group 3	10	4.30	1.33	-.33	.68	-.85	1.33	.82
Mean groups scores	106	4.47	1.02	-.48	.23	-.50	.46	.00

B.2) Scales' scores and participants' background variables

The examination of the distribution of the action and sentiment scales allowed the exploration of the relationships between teachers' perceptions of their schools as learning organisations and the study's background variables in both the pilot-study and the survey-study. A correlation matrix among those variables showed various significant correlations among both the scales with normal distributions and the study's background variables, as well as among the scales with non-normally distributed values and the study's background variables.

For this reason participants' scores were compared to their age, years of teaching experiences and years of managerial/organisational responsibilities using parametric criteria for the scales that were normally distributed and non-parametric ones for the ones that were not normally distributed.

B.2.1) Pilot study participants

a) Normally distributed scales

With regards to the participants of the pilot study a correlation matrix showed that their action, involvement, information flow and mutual support scores were positively related to many of the study's background variables. However, a comparison of participants' mean scores in those scales with the study's background variables showed that there were statistical significant differences on participants' mean action ($F=2.37$, $p<0.01$) and information flow ($F=2.12$, $p<0.05$) scores based on participant's age. Indeed, the older participants ($M=38.9$) were the higher their mean scores in both scales, also, were ($M_{\text{action}}=41.9$, $M_{\text{information sharing}}= 14.2$) (table 20). This means that participants' perceptions of the action component of their schools as learning organisations, and especially their perceptions of the information flow in their schools, are related to their age maybe due to differences in the situations they face in their work-lives.

Table 20: Participants' age and their perceptions of schools as learning organisations

	Means:	F	Sig.
action * age	Mean action score: 41.9	2.37	,006
	Mean age: 38.9		
Information sharing * age	Mean information sharing score:14.2	1.96	.036
	Mean age: 38.9		

b) Non-normally distributed scales

A correlation matrix, also, signalled several positive relationships among teachers' sentiment, innovation and respect scores and the study's background variables. However, only significant differences were found in the distribution of teachers' respect scores based on teachers' years of teaching experience (Kruskal-Wallis test, $p=0.01$) and their years of managerial/organisational responsibilities (Kruskal-Wallis test, $p=0.02$). This shows that the more experience and responsibilities teachers hold in their schools the more they perceive that their schools' function allow teachers to show respect to one another.

B.2.2) Survey-study participants

a) Normally distributed scales

Similarly to the participants' scores in the pilot study a correlation matrix showed several significant relationships among the study's scales and background variables of age, years of teaching experience and years of organisational/managerial responsibilities. However, a comparison between participants' mean scores in those scales and those variables did not show any significant relationships. Indeed, the only significant relationships that were found were between participants' gender and their action scores ($M=35.7$, $F=42.9$) ($t=-2.67$, $p<0.05$) and involvement ($M=11.00$, $F=13.60$) ($t=-2.69$, $p<0.01$) scores (table 21). This means that teachers' perceptions of the action component of their school may be related to their gender as females scored significantly higher in the action scale and its involvement sub-scale. Such a difference, though, may reflect gender differences on the way teachers seek and find the support they need in their work-lives.

Table 21: Participants' gender and their perceptions of their schools as learning organisations

T-test: Action scores and participants' gender

Gender	N	Mean	t-test	p
Males	11	35.7	-2.67	0.01
Females	44	42.9		

T-test: Involvement scores and participants' gender

Gender	N	Mean	t-test	p
Males	11	11.00	-2.69	0.01
Females	44	13.60		

b) Non-Normally distributed scales

A correlation matrix among the study's background variables and participants' scores in the non-normally distributed scales showed some significant relationships. However, an examination of participants' scores in those subscales based on the study's background variables did not show any statistical significant difference based on participants' gender.

B.3. Overview

This chapter presented the study's findings on teachers' perceptions of their schools as learning organisations in order to discuss key issues relevant to psychological research in job resources. Overall, the results showed that the best description of the factorial structure of teachers' perceptions of their schools as learning organisations can be provided by a factor analysis (principal axes factoring) with a promax rotation of the axes. The results of this factor analysis supported showed that the 13 items extracted and partially adopted from Bowen et al. (2007) assessment tool of schools as learning organisations could be used for the development of a 2-factor latent model of job resources following the commands of psychological research.

Bakker & Demerouti's (2007) review of the literature of psychological research in the job demands and job resources shows that structural equation modelling analyses is the most frequent analysis in job resources research. In those models, job resources are represented by factors (latent variables) that are measured by scales that meet the definition of job resources as well as have specific statistic characteristics. Bowen's et al. (2007) conceptualisation of the action and sentiment component of schools as learning organisations was selected as its factors demonstrated certain conceptual similarities with the definition of job resources and was followed also by a validated assessment instrument that measured them.

In the present study, thirteen items measured three sub-scales of the “action” component: innovation, involvement and information flow and two of the “sentiment” component: mutual support and a 1-item adaptation of the respect sub-scale. The “action” component of a learning organisation reflects employees' approach to work that provides opportunities for learning and the demonstration of shared responsibility and collective competence in addressing organizational goals. On the other hand, the “sentiment” component reflects the "softer" side of organizational functioning expressed as the collective expressions of positive regard, emotions and attitudes among employees that support and reinforce internal integration and social harmony. Therefore, teachers' perceptions of their schools as learning organisations may also reflect aspects of teachers' jobs that reduce job demands and the associated physiological and/or psychological costs and stimulate personal growth, learning, and development (Demerouti et al., 2001).

An explorative factor analysis supported a 2-factor solution using a promax rotation of the axes. The first factor that was extracted explained 32% of the variance, while the second factor explained 27% of the variance; therefore the two factors were able to explain 50% of the variance. This finding was in accordance with factorial structure of the original instrument and the rotation method that its authors had followed. Therefore, the extracted Bowen's scales could be used to construct a two-factor latent structure of job resources.

Both the “action” and the “sentiment” factors had reliability co-efficients over .80 in both surveys, while its sub-scales had reliability co-efficients over .70. For this reason their relationship with the study's background variables were examined adopting parametric criteria for the scales that showed normal distributions and non-parametric ones for the scales that were not-normally distributed. Indeed, analysis showed that most distributions showed a tail towards the negative direction and some had a peak towards the distribution's mean value. However, only some of them passed the kolmogorov test for normality (Kolmogorov test > 0.05). In particular, the “action” factor and its “involvement” and “information sharing” were normally distributed for participants in both surveys; the “sentiment” factor, its “respect” sub-scale and “action's” innovation sub-scales were

non-normally distributed for both groups of participants; while mutual support was normally distributed only for participants in the survey-study.

Surveys' analyses showed that participants' age, gender, and years of teaching and their years of organizational-managerial experience may be related with their perceptions of their schools as learning organizations. Significant differences were found, though, on pilot-study's participants' mean action and information sharing scores based on their age, as well as on their respect scores based on teachers' years of teaching experience and their years of managerial/organisational responsibilities. In particular, older teachers and more experienced ones had higher mean scores in those scales that assessed teachers' perceptions of their schools as learning organisations.

Finally, in the survey-study, gender made a significant difference on participants' scores as female participants' had significantly higher action and involvement scores. Educational research findings suggest that individual factors, such as teachers' experience, are related to their job satisfaction because it determines the issues that they encounter in their job (e.g. Van Maele Ugent & Van Houette Ugent, 2012). Maybe such individual characteristics, also, determine teachers' perceptions of their schools as learning organisations showing differences based on teachers' gender, age, or experience such as the ones found in the present study.

6.0) CHAPTER 6: TEACHERS' PERCEPTIONS OF AVAILABLE SCHOOL

ACTIVITIES/ARRANGEMENTS

6.1) Introduction

This chapter will examine teachers' perceptions of available school activities/arrangements as a source of information regarding their perceptions of job resources. It consists of three sections: surveys' analyses, interview analysis and individuals profiles that will present the study's finding and discuss key issues with relevant job resources research. All three parts of this analysis address "aspects of the job that may stimulate personal growth, learning, and development" (Demerouti et al., 2001). However, each section approaches them differently and discusses the significance of examining teachers' perceptions of school activities/arrangement as shown in the relevant literature. Both surveys and the one-to-one interviews explored those teachers' perceptions, while surveys also explored their relationship with teachers' perceptions of their schools as learning organisations.

Psychological research on teachers' job resources has focused on various aspects of teachers' jobs (e.g. autonomy, supervisory support, information, innovative climate) that may be important for their well-being or related with desirable outcomes (Hakanen et al., 2006; Bakker et al., 2007; Prieto et al., 2008). The present study also focused on such aspects of teachers' jobs but addressed them differently. On the other hand, a literature review on educational research on areas related to "aspects of their job that may stimulate personal growth, learning, and development" (Demerouti et al., 2001) showed that researchers have focused on such aspects of teachers' because they are assumed to support their professional and leadership development. For example, Muijs & Harris (2003) cite two studies (Leithwood and Jantzi, 1998; Helm, 1989) that provide descriptions of how school leaders provide opportunities for teachers to participate in decision-making and lead in school development highlighting the following possibilities:

- distributing the responsibility and power for leadership widely throughout the school;
- sharing decision-making power with staff;
- allowing staff to manage their own decision-making committees;
- taking staff opinion into account;
- ensuring effective group problem solving during meetings of staff;
- providing autonomy for teachers;
- altering working conditions so that staff have collaborative planning time
- ensuring adequate involvement in decision-making related to new initiatives in the school
- creating opportunities for staff development

In the present study, two groups of items explored participants' perceptions of school activities/arrangements in the pilot-study and the survey-study. Those items explored participants' perceptions of their available school activities/arrangement and their perceptions regarding the support they have from them.

a) Available school activities/arrangements:

This group of items involved a list of school activities/arrangements that are often available to secondary schools in UK.

b) Available school activities/arrangements' support:

This group of items involved a number of statements regarding the support that these school activities/arrangements may offer to teachers. The aim was to explore participants' answers and scores in those questionnaire sections and examine their relationship with participants' "action" and "sentiment" scales. The purpose was to both get a better understanding of teachers' job resources as well as to be able to use this knowledge in the interviews-analysis. The main difference

between the two surveys was that the second one included five less items as some of the initial items used in the pilot-study were dropped and others were re-organised into different group items.

Finally, interview questions were constructed to allow inferences to be drawn from the surveys' analysis to interview analysis so that both of them can equally add to the construction of a definition of teachers' perceptions of job resources. Indeed, interviews' analysis explored further teachers' perceptions of their available school activities arrangements. However, it was the individuals' interview profiles that addressed participants' perceptions of their school activities/arrangements through both their individual surveys' and interview answers.

6.2) Section A: Surveys' analysis

Both the pilot- and the survey- study focused on participants' perceptions of school activities/arrangements that they can find in their schools. They focused on participants' identification of the school activities/arrangement they can find in their schools and whether participants think that those school activities/ arrangements can support their engagement in their work or explain why they do not do so.

6.2.1) Available school activities/ arrangements

As discussed earlier in the methodology chapter nine items were developed and tested in the pilot-study and coded into 23 nominal variables and one open-ended question. First of all, these items asked participants to indicate if professional development activities take place inside or outside their school. Secondly, they asked participants to indicate which school activities/arrangements they can find in their school from a list of collaborative school activities/arrangements and a list of staff development activities. Those items were developed for

the purposes of this research and referred to activities/arrangements that were identified from the literature to often exist in UK secondary schools in order to support teachers' professional and leadership development. Thirdly, teachers were asked to indicate if those activities/arrangements are departmental or school-wide. Finally, teachers were asked if they think that those school activities/arrangements can support their engagement in their work and explain why they think as they do so. After the analysis of the pilot-study those items were re-organised into four items.

6.2.2) Engagement support

One item in both the pilot study and the survey-study asked participants to indicate if they think that any of the listed activities/arrangements support their engagement in their work and allowed them to list the ones that do so or explain the reasons why they think that none does so.

With regards to pilot-study participants, all but seven teachers answered that those activities support their engagement in their work. Furthermore, they identified a variety of those activities as supportive to their engagement in their work. The most frequent answers were curriculum development teams (N=14), followed by mentoring/coaching (N=8), peer-review of teaching practices (N=8), work with other schools or agencies/organisations (N=7), interdepartmental collaborations (N=7), workshops for leadership development (N=6), funding for graduate or postgraduate courses (N=6), co-teaching/team-teaching (N=5) (table 22).

Table 22: Pilot-study participants' selection of school activities/arrangements

School activities/arrangements-Engagement support	Frequencies
Professional development activities inside the school	1
Professional development activities outside the school	2
Induction	2
Mentoring/ Coaching	8
Co-teaching/ Team teaching	5
Peer review of teaching practices	8
Interdepartmental collaborations	7
Participation in decision-making committees	2
Curriculum development teams	14
Work with other schools and organisations	7
Workshops for leadership development skills	6
Funding for graduate or postgraduate courses	6
Other: being more creative with regard to teaching	1
Other: share good practice	3
Other: all of them would provide support	5
Other: furthering my professional development	1
Other: class teaching	1
Other: coaching of PGCE students	1
Other: training	1
Other: postgraduate research	1

Similar were the answers of survey participants in this question. Specifically, only one participant answered that the school activities/arrangements listed in the survey did not support his/her engagement in his/her work. Most frequently (N>3) participants answered that the following activities support their engagement in their work: mentoring/coaching (N=14), participation in decision-making committees (N=11), interdepartmental collaborations (N=10), peer review of teaching practices (N=9), curriculum development teams (N=6), work with other school agencies (n=6), workshops for leadership development skills (N=5), 4 action research, funding for postgraduate courses (N=4), and co-teaching (N=4) (table 23).

Table 23: Survey-study participants' selection of school activities/arrangements

School activities/arrangements-Engagement support	Frequencies
Co-teaching	1
Interdepartmental collaborations	10
Participation in decision-making committees	11
Curriculum development teams	6
Work with other schools/agencies	6
Workshops for leadership skills	5
Parents involvement provision	2
Mentoring/coaching	14
Induction for newly qualified members of the staff	3
Action research	4
Funding for graduate or postgraduate courses	4
Peer-review	9
Co-teaching	4
Other: subject specific areas and personal development	1
Other: all	10
Other: any form of networking and sharing practice	1
Other: gives ideas to lessons and personal development as a teacher	1
Other: training	1

However, participants in both surveys, and especially those in the pilot-study, explained why such activities/arrangements do not support their engagement in their work. In particular, eight participants in the pilot-study and two participants in the survey-study explained those reasons. In the pilot-study one participant explained that those school activities/arrangements do not support his/her engagement in his/ her work because “engagement comes from within”. One participant noted that is the students’ engagement and classroom teaching that support his/her engagement in his/her work rather any other school activities/arrangements. Finally, five participants noted that those school activities/arrangements do not support their engagement in their work due to limitations in school resources (time, opportunities, and financial constraints). In the survey-study, one participant explained that “some do not support engagement they are merely tick box exercises for time” and another one noted that “activities are often concerned with non classroom issues/philosophies” (table 24).

Table 24: Pilot-study participants’ explanations for non-supportive school activities/arrangements.

School activities/arrangement- not engagement support	Frequencies
Engagement comes from within	1
Students’ engagement and classroom teaching support my engagement in my work	1
Limitations in school resources (time, opportunities, financial constraints)	5
They are merely tick box exercises for time	1
Activities are often concerned with non classroom issues/philosophies	1

6.2.3) Teachers' perceptions of school activities/arrangements support

The second group of items that explored teacher' perceptions of their school activities/arrangements included a number of statements referring to the support they perceive that those activities/arrangements offer. Those statements asked participants to indicate the degree to which they agree with them in a 6-point Likert scale. A goal of the pilot-study was to select from a pool of items the ones that would be more useful in exploring teachers' perceptions of job resources. The groups of items that were selected from this pilot study and after a slight adaptation, that was tested in a screening test with a small group of teachers, they were used in the survey study. Based on the items' analysis earlier discussed composite scores of participants responses were computed in order to examine their relationships with the rest of the studies' scales.

a) Pilot-study

Pilot-study participants agreed with those statements as the mean score for the "professional development activities support" group of items was $M=27$ and for the "collaborative with other teachers" group of items was $M=13.95$. Both distributions were negatively skewed and participants' values showed a platykurtic distribution, while the distribution of the "collaborative work" groups of items had positive kurtosis values and it was not normally distributed (table 25).

Table 25: Pilot-study's school activities/arrangements' support descriptive statistics

	N	Mean	Skewness		Kurtosis		Kolmogorov-Smirnov test for normality
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
Professional development activities	100	27.00	-.323	.241	-.202	.478	.52
Collaborative work with other teachers	103	13.95	-.606	.238	.127	.472	.00

b) Survey-study

Survey-study participants agreed with those statements and, especially, with the ones describing support from collaborative work with other teachers (table 26). The mean score for “developmental activities inside my school” group of items was M=14.02, the mean score for the “developmental activities outside my school” groups of items was M=13.16 and the mean score for the “collaborative work with other teachers” group of items was M=14.94. All distributions were

negative skewed and had positive kurtosis values. Furthermore, participants' on the "developmental activities inside my school" and the "developmental activities outside my school" (kurtosis<3) showed a platykurtic distribution, while their values on the "collaborative work with other teachers" showed a leptokurtic distribution (kurtosis>3). Finally, only the distribution of the "professional development activities outside my school" was normally distributed. This means that parametric criteria will be used only for this group of items and non-parametric ones for the other two groups of items.

Table 26: Survey-study's school activities/arrangements' support descriptive statistics

	N	Mean	Skewness		Kurtosis		Kolmogorov-Smirnov test for normality
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
Developmental activities inside my school	63	14.02	-1.435	.302	2.870	.595	.00
Developmental activities outside my school	63	13.16	-1.063	.302	1.781	.595	.12
Collaborative work with other teachers	63	14.94	-1.895	.302	8.855	.595	.00

c) Interviewees' sub-group

Interviewees' scores on those scales were also examined in order to examine their distributions in parallel with the other two groups of participants (table 27). Interviewees agreed with those statements and, especially, with the ones regarding the support from collaborative work with other teachers.

The mean score for the "Development activities inside the school" group of items was M=13.4, the mean score for "developmental activities outside the school group of items was M=11.3, and the mean score for the "collaborative work with other teachers" was M=15.1. All distributions were negatively skewed and had negative Kurtosis values and they were all normally distributed.

Table 27: Interviewees' school activities/arrangements' support descriptive statistics

	N	Mean	Skewness		Kurtosis		Kolmogorov Smirnov test for normality
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	
Dev.inside	10	13.40	-.44	.68	-1.28	1.3	.90
Dev.outside	10	11.30	-.69	.68	-.90	1.3	.76
Collaborative work	10	15.10	.18	.68	-.16	1.3	.71

6.2.4) Available school activities/arrangements and participants' perceptions of school activities/arrangements support

The survey study gave the opportunity to examine the relationships between participants' identification of school activities/arrangements in their school and their level of agreement with each of the nine statements regarding the support that those activities may offer. As their distributions were normal (Kolmogorov test >0.05) the t-test criterion was used. However, a significant relationships was found only in the case of participation in decision-making committees as teachers that selected this activity agreed significantly more with the sentences: "developmental activities/arrangements inside my school: influence my professional learning" ($t=-2.28, p<0.05$), "impact on my school improvement" ($t= -2.96, p<0.01$), "support my engagement in my work" ($t=-4.09, p<0.001$) and "collaborative work with other teachers: influences my professional learning" ($t=-2.01, p=0.05$), "impact on my school improvement" ($t=-2.09, p<0.05$) (table 28).

Table 28: Participation in decision making committees and participants' perceptions of school activities/arrangements.

		N	M	Std	t	Sig. (2-tailed)
Developmental activities/arrangements inside my school influence my professional learning	No	15	4.20	0.29	-2.28	p<0.05
	Yes	46	4.93	0,12		
Developmental activities/arrangements inside my school impact on my school improvement	No	15	4.27	0.28	-2.96	p<0.01
	Yes	46	5,00	0.10		
Developmental activities/arrangements inside my school support my engagement in my work	No	15	4.00	0.25	-4.093	p<0.001
	Yes	46	4.93	0.10		
Collaborative work with other teachers influences my professional learning	No	15	4.73	0.18	-2.01	p=0.05
	Yes	46	5.15	0.10		
Collaborative work with other teacher impacts on my school's improvement	No	15	4.73	0.18	-2.09	p<0.05
	Yes	46	5.11	0.08		

6.2.5) Participants’ perceptions of school activities/arrangements’ and participants’ background variables

The survey-study allowed a better exploration of the relationships between participants’ perceptions of school activities/arrangement’ and the study’s background variables. Indeed, a correlations matrix showed some significant relationships between participants’ developmental activities inside the school and the study’s background variables, as well as between participants’ collaborative work with other teachers score and the study’s background variables. However, a comparison of participants’ mean scores and the study’s background variables showed only significant differences for participants mean “professional development activities” ($t=-3.06$, $p<0.01$) scores and “collaborative work” ($t=-3.32$, $p<0.01$) scores based on participants gender (table 29, 30)

Table 29: Professional development activities and participants’ gender

Gender	N	Mean	t-test	p
Males	12	11.9	-3.06	0.003
Females	44	14.57		

Table 30: Collaborative work with other teachers and participants’ gender

Gender	N	Mean	t-test	p
Males	12	12.92	-3.32	0.002
Females	44	15.34		

6.2.6) Teachers' perceptions of available school activities arrangements and their perceptions of their schools as learning organisations

Two types of relationships between participants' "action" and "sentiment" scales and their perceptions of school activities/arrangements was examined in both the pilot-study and the survey-study in order to explore further aspects' of teachers' job resources. Specifically, both the pilot-study and the survey-study explored the relationships between participants' "action" and "sentiment" scores and their school activities/arrangements perceived support scores using both parametric and non-parametric criteria.

The pilot-study had a larger sample size and for this reason it was able to examine a second type of relationships between participants' perceptions of school activities and their action and sentiment scores. This involved the relationships between participants' "action" and "sentiment" scores and their selection of school activities/arrangements using parametric and non-parametric criteria.

6.2.7) Teachers' perceptions of school activities/arrangements support and their perceptions of their schools as learning organisations

The first type of relationships regarding teachers' perceptions of school activities/arrangements that the present study examined was the relationships between teachers' perceptions of the support they have from school activities/arrangements and their "action" and "sentiment" scores.

a) Pilot-study

A correlation matrix among the pilot study’s participants’ scales scores and their degree of agreement with the developed sentences regarding their school activities/arrangements support was examined. In the pilot-study participants degree of agreement with professional development activities support correlated significantly with their action scores ($r=.59$, $p<0.01$), their involvement scores ($r=.54$, $p<0.01$) and information flow scores ($r=.44$, $p<0.01$) (table 31). This means that the more participants agreed that professional development activities offered support the more they, also, perceived that their schools functions as described by the action component of schools as learning organisations.

Table 31: Pilot-study participants’ perceptions of professional development activities support and the “action” component of schools as learning organisations

N=96		infoshare	involvem	action
Professional	Pearson Correlation	.443**	.546**	.599**
development activities	Sig. (2-tailed)	.000	.000	.000
support				

Similarly, participants’ degree of agreement with the collaborative work with other teachers support correlated significantly with participants’ innovation scores ($\rho=.52$, $p<0.01$), mutual support scores ($\rho=.51$, $p<0.01$), and respect scores ($\rho=.42$, $p<0.01$) (table 32). Therefore, the more participants agreed that collaborative work with other teachers offer them support, the more they, also, perceived that their schools provides them with opportunities for innovation and demonstration of mutual support and respect.

Table 32: Pilot-study participants' collaborative work and the "sentiment" component of schools as learning organisations

N=101		innov	mutualsupp	respect
Collaborative work	Correlation	.529**	.513**	.433**
	Coefficient			
	Spearman rho			
	Sig. (2-tailed)	.000	.000	.000

b) Survey-study

The findings were similar for the participants in the survey study. The strongest relationship was found between participants' degree of agreement with the developmental activities/arrangements inside the school support and their action ($r=.70$, $p<0.01$) and information flow ($r=.73$, $p<0.01$) scores. Furthermore, survey participants' degree of agreement with the developmental activities inside the school support also correlated significantly with participants' involvement ($r=.40$, $p<0.01$) scores and mutual support ($r=.59$, $p<0.01$) scores (table 30). Therefore, participants that had a high degree of agreement that professional development activities inside their schools supported them, also, agreed more that their schools operate as a learning organisation showing involvement and mutual support.

Moreover, participants' degree of agreement with the developmental activities outside the school support correlated significantly with teachers' action scores ($r=.39$, $p<0.01$), involvement scores ($r=.40$, $p<0.01$), information sharing scores ($r=.32$, $p<0.01$), and mutual support scores ($r=.40$, $p<0.01$) (table 33). Therefore, participants that had a higher degree of agreement that professional development activities outside their schools supported them, also, agreed more that their schools operate as learning organisations showing involvement, information sharing and mutual support.

Finally, participants' degree of agreement with the collaborative work with other teachers support, also, correlated significantly with their action scores ($r=.61$, $p<0.01$), involvement scores ($r=.49$, $p<0.01$), information sharing scores ($r=.55$, $p<0.01$), and mutual support scores ($r=.45$, $p<0.01$) (table 33). Thus, participants that had a higher degree of agreement that collaborative work with other teachers supported them, also, agreed more that their schools operate as learning organisations, showing involvement, information sharing and mutual support. These findings show that participants' perceptions of the support that they may have from school activities/arrangements may be related to their perceptions of their schools as learning organisations.

Table 33: Survey-study participants' perceived school activities/arrangements' support and their perceptions of their schools as learning organisations

N=62		action	involvement	Information flow	mutuals
inside	Pearson Correlation	.700**	.404**	.736**	.599**
	Sig. (2-tailed)	.000	.001	.000	.000
outside	Pearson Correlation	.394**	.406**	.327**	.402**
	Sig. (2-tailed)	.002	.001	.009	.001
collaborative	Pearson Correlation	.611**	.489**	.556**	.451**
	Sig. (2-tailed)	.000	.000	.000	.000

6.2.8) Available school activities/arrangements and participants’ perceptions of their schools as learning organisations

The pilot-study was more able than the survey-study to examine the relationships between participants’ action and sentiment scales and their selection of school activities due to its larger sample size using both parametric and non non-parametric criteria whenever appropriate. Overall, significant differences were found among the proportions of participants that selected co-teaching, interdepartmental collaboration, participation in decision-making committees and workshops for leadership development and participants’ action and sentiment scales.

a) Co-teaching and action scales

Parametric and non-parametric tests showed significant differences on the relationship between participants’ selection of co-teaching and their mean “information-flow” scores ($t=-2,36$, $p<0.05$), and innovation scores (Mann-Whitney U test, $p=0.02$). In particular, the proportion of participants that selected co-teaching had significantly lower mean “information” flow scores and significantly higher mean “innovation” scores (table 34, 35).

Table 34: T-test - Information flow and co-teaching

Co-teaching	N	Mean	t-test	p
Yes	62	12.78	-2.36	0.02
No	41	13.84		

Table 35: Mann-Whitney U test - Innovation and co-teaching

Co-teaching	N	Mean	p
Yes	63	14.12	0.02
No	42	12.85	

These findings show that some school teachers' may perceive that certain school activities/arrangements may be more related to their perceptions of their school as learning organisations than others. Therefore, our understanding of teachers' perceptions of job resources would be facilitated by focusing on teachers' perceptions on how different aspects of their work support their professional growth.

b) Interdepartmental collaborations and action scales

Parametric and non-parametric tests showed significant differences in the proportions of teachers that selected interdepartmental collaborations compared with those that did not select them in their mean involvement ($t=-2.69$, $p<0.05$), information flow ($t=-3.08$, $p<0.05$) and innovation scores (Mann-Whitney U-test, $p=0.00$) (tables 36, 37, 38).

Table 36: T-test - Involvement scores and interdepartmental collaborations

Interdepartmental collaborations	N	Mean	t-test	p
Yes	73	12.46	-2.69	0.00
No	32	13.83		

Table 37: T-test - Information flow scores and interdepartmental collaborations

Interdepartmental collaboration	N	Mean	t-test	p
Yes	73	12,83	-3.08	0.02
No	31	12.46		

Table 38: Mann-Whitney U test - Innovation scores and interdepartmental collaborations

Interdepartmental collaborations	N	Mean	p
Yes	73	14.28	0.00
No	32	12.09	

These findings show that participants that selected interdepartmental collaborations agreed more that employees' approach to work provides opportunities for innovation and information flow but agreed less that it gives opportunities for involvement. This means that teachers perceive that different school activities/arrangements may be related with different aspects of schools as learning organisations.

c) Interdepartmental collaboration and sentiment scales

The Mann-Whitney U test (as the sentiment scales were non-normally distributed) showed that there were significant differences between the proportions of teachers that selected interdepartmental collaborations, compared to those that did not do so, and their mean sentiment (Mann-Whitney U test, $p=0.02$) and respect scores (Mann-Whitney U test, $p=0.02$) (table 39, 40).

Table 39: Mann-Whitney U test- Sentiment and interdepartmental collaborations

Interdepartmental collaborations	N	Mean	p
Yes	60	19.02	0.02
No	32	17.93	

Table 40: Mann-Whitney U test-Respect scores and interdepartmental collaborations

Interdepartmental collaborations	N	Mean	p
Yes	73	4.52	0.02
No	32	4.16	

Therefore, participants that selected those activities agreed more that work in their schools is characterised by collective attitudes that express respect among their members.

d) Participation in decision-making committees and action scales

Similar comparisons showed significant differences between the proportions of people that selected participation in decision-making, compared with those that did not do so, (N=72) and their mean actions ($t=-3.92$, $p<0.001$), involvement ($t=-3.09$, $p<0.05$), information-flow scores ($t=-2.72$, $p<0,01$) and innovation scores (Mann-Whitney U test, $p=0.00$) (tables 41, 42, 43, 44).

Table 41: T-test- Action and participation in decision-making committees

Participation in decision making committees	N	Mean	t-test	p
Yes	71	37.53	-3.92	0.000
No	30	33.30		

Table 42: T-test-Involvement and participation in decision-making committees

Participation in decision-making committees	N	Mean	t-test	p
Yes	73	14.01	-3.09	0.00
No	30	12.53		

Table 43: T-test- Information flow and participation in decision-making committees

Participation in decision-making committees	N	Mean	t-test	p
Yes	73	13.76	-2.72	0.00
No	32	12.62		

Table 44: Mann-Whitney U test-Innovation and participation in decision-making committees

Participation in decision-making committees	N	Mean	p
Yes	73	14.02	0.00
No	32	12.68	

These findings show that participants that selected participation in decision-making committees agreed more that their approach to work provided more opportunities for collective competence in addressing organisational goals and especially involvement and information flow.

e) Participation in decision-making committees and sentiment scales

Two Mann-Whitney tests showed significant differences between the proportions of participants that selected participation in decision-making committees and those that did not on their mean sentiment (Mann-Whitney test, $p=0.02$) and respect scores (Mann-Whitney test, $p=0.02$) (table 45, 46).

Table 45: Mann-Whitney U test-Sentiment and participation in decision-making committees

Participation in decision-making committees	N	Mean	p
Yes	70	17.61	0.02
No	31	19.15	

Table 46: Mann-Whitney U test-Respect and participation in decision-making committees

Participation in decision-making committees	N	Mean	p
Yes	73	4.59	0.02
No	32	4.00	

Thus, participants that selected participation in decision-making committees agreed more that work in their schools is characterised by expressions of respect among its members.

f) Workshops for leadership development and action scales

A similar significant relationship was found between the proportions of teachers that selected workshops for leadership development, compares with those that did not do so, and their mean information flow score ($t=-2,00$, $p<0.05$) (table 47).

Table 47: T-test-Workshops for leadership development and information sharing

Workshops for leadership development	N	Mean	t-test	p
Yes	55	13.86	-2.00	0.04
No	50	12.96		

This means that participants that identified workshops for leadership development in their schools, compared with those that did not do so, agreed significantly more that their work in their schools showed information sharing.

g) Workshops for leadership development and sentiment scales

Finally, significant relationships were found between the proportions of people that selected workshops for leadership development, compared with those that did not do so, and their mean sentiment (Mann-Whitney U test, $p=0.004$), mutual support (Mann-Whitney U test, $p=0.013$), and respect scores (Mann-Whitney U, $p=0.000$) (table 48, 49, 50).

Table 48: Mann-Whitney U test-Sentiment and workshops for leadership development

Workshops for leadership development	N	Mean	p
Yes	53	19,56	0.004
No	48	17,70	

Table 49: Mann-Whitney U test- Mutual support and workshops for leadership development

Workshops for leadership development	N	Mean	p
Yes	53	14.73	0.013
No	50	1.,30	

Table 50: Mann-Whitney U test- Respect and workshops for leadership development

Workshops for leadership development	N	Mean	p
Yes	55	4.82	0.000
No	50	3.96	

These findings show that participants that identified workshops for leadership development in their schools, compared with those that did not do so, agreed significantly more that their work in their school allows them to show mutual support and respect to one another.

6.2.9) Overview

Analysis showed that both teachers' perceptions of their available school activities/arrangement as well as the support they perceive from them can be an important source of information regarding teachers' perceptions of job resources. Results showed that school activities that teachers identify in their schools may be related with other perceptions that teachers hold regarding the way they work and their school as a learning organisation.

Participants identified several school activities/arrangements in their schools but their perceived importance was a major issue describing teachers' perceptions of job resources. In particular, surveys' analyses showed that participants focused more on certain activities/arrangements than others and they attributed more importance to them. For example, in both surveys there were significant relationships between the proportions of participants that identified many of those school activities/arrangements and those that did not (e.g. parents' involvement provision and peer review). Furthermore, although participants agreed in both surveys that those activities/arrangements support their engagement in their work they focused on a smaller amount of activities to describe it. For example, in the pilot-study the most frequently mentioned school activity was curriculum development teams whereas the most frequently mentioned one in the survey-study was Mentoring/Coaching. Moreover, survey-participants that identified participation in decision-making committees agreed significantly more with various statements regarding the importance of available school activities/arrangements. Finally, the pilot-study's analysis showed that available school activities/arrangements may not support their engagement in their work if individual needs and priorities are not met appropriately.

Research in the conditions of organisational learning has drawn attention to the importance of teachers' perceptions of their work-environment and their available school activities/arrangement. For example, Mark and Louis' (1999) concluded that the provision of external resources (e.g. buildings, assessment programs, or student schedules) may prove inadequate to steer teachers' empowerment and school capacity for organisational learning if not accompanied with positive staff relationships, such as having mutual support, exchanging ideas and reaching consensus, and treating each other in professional ways. Moreover, Bowen et al.'s (2007) conceptualization of schools as learning organization focuses on perceptions that individuals hold regarding the degree to which teachers in their school operate in certain ways that characterise learning organisations. Finally, Collinson and Cook (2007) identify the provision for school members' self-fulfilment as a condition for organisational learning. They acknowledge this way of thinking as a requirement for successful organisational learning. Indeed, by linking teachers' professional development with their leadership development, they acknowledge that teachers' beliefs on the degree to which their school provides them with meaningful learning opportunities can determine the quality of the operation of schools as a learning organisations.

Therefore, a broader understanding of teachers' job resources may be also useful to understand how schools can support their members' self-fulfilment. Indeed, Rosenholtz's (1989) influential case studies, distinguishing between learning enriched and learning impoverished schools, showed that workplace conditions affect teachers' learning and commitment. In learning-enriched schools teachers perceived their own learning as being cumulative and developmental in nature. Furthermore, they perceived their colleagues as their major source of renewal and treated their professional growth as an ever-expanding process during which they continuously took on new skills and practices. Additionally, teachers in those schools also believed that their skills could be learnt and thus were able to develop and perfect them, as well as acquire new ones. On the contrary, in learning-impoverished schools teachers tended to be rather unsupportive to one

another viewing their professional growth as the mastery of unimaginative, routine practices and treated their skills as being largely instinctive and, thus, not open to development.

The present research study focused on such perceptions as they were able to address teachers' perceptions of "aspects of their job that may stimulate personal growth, learning, and development" (Demerouti et al., 2001). In particular, the pilot- and the survey-study explored the relationships among participants' identification of available school activities/arrangements, their perceptions of the support they get from them, their perceptions of their schools as learning organisations and participants' background variables. Pilot-study analysis showed that the proportions of teachers that identified certain activities listed within the professional development and leadership development groups of activities, also, tended to identify certain others within the same groups (e.g. co-teaching and curriculum development teams, co-teaching and working with other schools). However, survey-study analysis showed that teachers' identification of participation in decision making is important for the support that they perceive that their school activities/arrangements offer them. Finally, analysis showed differences in participants' perceptions of the support that they get from school activities/arrangements based on their gender.

Similarly, both the pilot- and survey results showed significant differences on teachers' perceptions of their schools as learning organisations based on their perceptions of certain activities/arrangements. Specifically, participants in the pilot- study that identified action research, participation in decision-making committees, interdepartmental collaborations and workshops for leadership development demonstrated had higher scores in the "action" and "sentiment" scales of schools as learning organisation. Furthermore, their degree of agreement with professional development activities support correlated significantly with their "action" scales, while their degree of agreement with the collaborative work with other teachers support correlated significantly with participants' innovation scores and "sentiment" scales. Finally, their degree of agreement with statements regarding the developmental activities in their schools and collaborative work with other teachers correlated significantly with their scores in the "action" scales and the mutual support sub-

scale of the “sentiment” scale. Those results suggest that the value that individuals place on activities/arrangements that aim to support their professional and leadership development may influence their perceptions of the degree to which their school operates as a learning organisation.

6.3) Section B: Interview analysis

Interviews’ analyses approached teachers’ answers based on the definition of job resources and their assumed motivation role (Demerouti et al., 2001) and interviewees’ reflections on why available school activities/ arrangements have been important for them. According to Demerouti et al.’s (2001) definition of job resources refers to those physical, psychological, social or organizational aspects of the job that may do any of the following: (a) are functional in achieving work related goals; (b) reduce job demands and the associated physiological and/or psychological costs; (c) stimulate personal growth, learning, and development. Such positive aspects of teachers’ jobs were identified in their answers related to their available school activities/arrangements.

Recent research in job resources focuses on the motivational processes that they trigger (see Bakker et al.; Annet et al.; Hakanen et al., *Work & Stress*, 22, 3, July_September, 2008). That assumed motivational role of job resources is echoed in job characteristics theory (Hackman and Oldham, 1980) according to which autonomy, feedback and task significance contribute to critical psychological states which in turn contribute to intrinsic motivation. This assumed role of job resources substantially influenced the process of themes analysis especially for why available school activities/arrangements are perceived as supportive to interviewees’ engagement. Apart from that, though, job resources can also be located at different levels within an organisation, such as the organizational level (e.g., pay), at the interpersonal level (e.g., social support, team climate), at the level of the organization of work (e.g., role clarity), and at the task level (e.g., autonomy, feedback, significance).

The categories of themes that emerged from the interview analysis and described teachers' perceptions of job resources were used to complement the themes and the conclusions drawn from the analysis of the pilot- and the survey- studies. Furthermore, the construction of individual profiles allowed a closer examination of the relationships among those aspects of teachers' perceived job resources and individual characteristics (gender, years of teaching experience, and years of organisational / managerial experience). Finally, both the process of the themes development and the comparisons of those themes per individual were able to address the present study's research sub-question "are they (teachers' perceptions of job resources) differ under perceived change demands"?

B.1) Analytical structure

B.1.1) Pilot-study themes

One category emerged from participants' answers to the question "what supports your engagement in your work" that described teachers' perceptions of their school activities/arrangements in both surveys. It was named "school resources" and it included four sub-themes in which teachers were focusing on the resourcefulness of their schools: care, time, positive/supportive environment, training, opportunities. However, those initial themes had to be re-organised as they didn't reflect the motivational role of job resources that is inherent in their definition. For this reason, pilot-study's participants' responses on the question "what supports your engagement in your work" were analysed alongside with survey-study's participants' responses on the same question in order to produce a better description of participants' perceptions of job resources (table 51).

Table 51: Pilot-study’s school activities/arrangements’ themes

Themes’ category	Sub-theme	Sub-theme	Sub-theme	Sub-theme	Sub-theme
School resources	care	time	Positive/supportive environment	training	opportunities

B.1.2) Survey-study themes:

Similarly to the analysis of the pilot-study participants identified their available school activities/arrangements as a source of engagement support in their work. However, the analysis of participants’ answers in both the pilot- and the survey-study question showed that the category of school resources described participants’ perceptions of their school activities/arrangements as a sub-category of the “school perceptions” category consisting of two themes: supportive environment, school activities/arrangements (table 52).

Table 52: Pilot-study's and survey-study's school activities/ arrangements' themes

School perceptions	Supportive relationships with leadership	
	Supportive relationships with colleagues	
	School resources	Supportive environment
		Supportive school activities/ arrangements

B.1.3. Interview themes:

As the interview analysis progressed the school perceptions category of themes that emerged earlier formed the “professional growth” category which became a separate category that included surveys’ and interviewees’ description of available school activities/arrangements and their perceived importance as significant sources of support for their careers. The advantage of this analytic approach is that it can support a definition of teachers’ perceived job resources focused on the third part of its generic definition: “physical, psychological, social or organizational aspects of the job that may (c) stimulate personal growth, learning, and development (Demerouti et al., 2001).

In particular, they included interviewees’ answers regarding those school activities/arrangement that they ticked in the survey list that they perceive as most significant for them. They also reflected, though, survey participants’ perceptions of school activities/arrangements as the theme “school activities/arrangements” had already emerged during surveys’ analyses. The construction of interview themes used the themes’ analysis that emerged from the surveys’ analysis as a template and developed them further as analysis progressed. This approach was able to give a description of a significant part of teachers’ perceptions of their school

activities/arrangements. However, it couldn't describe adequately the ten interviewees' responses in such a way that would enable inferences from the survey-method to the interview method due to certain short-comings within each category and their sub-themes.

The earlier emerged category of school perceptions provided a well-defined description of teachers' perceptions of the support they perceive they have from their school but it failed to define adequately teachers' perceived job resources for two reasons. The first reason was that its sub-categories "supportive relationships with colleagues" and "supportive relationships with leadership" were important for both their "professional achievement" and "professional growth". Those became two of the main themes' categories that emerged through further interview analysis as the "professional achievement" category described teachers' perceptions of their sources of engagement support and the category of "professional growth" described teachers' perceptions of their available school activities/arrangement. For this reason they got combined under the "interpersonal perspective" sub-theme (table 53).

Table 53: Interviewees' school activities/arrangements' themes

Theme	Professional growth
Sub-theme	Organisational perspective
Sub-theme	Interpersonal perspective
Sub-theme	Work-role perspective
Sub-theme	Task perspective

The first sub-theme was the “organizational perspective” and included interviewees’ descriptions of the way those activities/arrangements are organized within their schools and/or their perceived importance for interviewees’ presence in the organization. A key characteristic of this theme is it reflects teachers’ perceived sense of control over the developments in their school due to those activities as it includes interviewees’ perceptions of the importance of certain school activities/arrangements for their presence and influence in the organisation. Educational researchers have focused on the importance that teachers attribute to such activities/arrangements. For example, Day et al. (2007) discussing the value of the findings of the VITAE project regarding teachers’ retention agree with arguments that environments for the professional learning of teachers should be characterised by conditions such as close collaborative working, supported opportunities for personal development that go beyond school or government priorities, out of school educational opportunities including time to stand back, reflect and think differently, and opportunities to integrate off the job training into everyday practice. Moreover, Collinson & Cook (2007) view the provision of meaningful learning opportunities to teachers as a necessary requirement towards organizational learning. Such opportunities may involve sharing insights among staff members, job-embedded learning opportunities (collective learning or exploitation of what has been learnt) and create an environment that supports innovation.

The second sub-theme was the “interpersonal perspective” theme and included interviewees’ description of the way collaborative activities/arrangements are organized and/or the support that teachers perceive that they have from their colleagues due to those school activities/arrangements”. It refers to the interviewees’ description of the way collaborative activities/arrangements are organized and/or the support that teachers perceive that they have from their colleagues due to those school activities/arrangements. The key characteristic of this theme is that it includes interviewees’ perceptions of the importance of their interpersonal relationships through those available school activities/arrangements for their own development.

The third sub-theme was the “work-role perspective” that included interviewees’ descriptions of the way those activities/arrangements are organized as part of their work-role in the organization and/or their perceived importance for their work. Therefore, it links the support that interviewees perceived they had from their school activities/arrangements with their work-role in the organization.

Finally, the “task perspective” theme refers to the description of the ways school activities/arrangements are organized in relation to interviewees’ classroom work and/or the perceived importance of those activities for their job performance. Goodall et al.’s (2005) evaluation of CPD programmes draws attention to the importance of examining teachers’ perceptions of their school activities. Specifically, they note that the most important perceived feature of any type of CPD is to be practical and have direct application to individual’s daily work.

Those findings show that interviewees’ perceptions of school activities/arrangements can be a significant source of information regarding their job resources as long as the teachers’ perceptions of their involvement in them is examined, as well as their perceptions about what they actually gain from them and in which ways. Similarly, Day et al.’s (2007) presentation of longitudinal data on factors that affect teachers’ development, learning and effectiveness showed that teachers in all professional life phases associated CPD with building their emotional, health and intellectual capacities. However, any CPD experiences, though, should always be appropriate to teachers’ individual concerns and needs in addition to those of the school and national policies. Indeed, participants’ responses in the pilot study on why those school activities/arrangements do not support their engagement in their work also provided an insight on participants’ perceptions of job resources that were not revealed through the survey- or interview analysis (table 54)

Table 54: Participants’ perceptions of non-supportive school activities/arrangements

School activities/arrangements non-support	
Interviews’ analysis	Survey-question analysis
Organisational Perspective	School resources limitations
Task-perspective	<p>“engagement comes from within”</p> <p>“student engagement”</p>

B.2. Illustrative structure

An aim of the interviews was to examine teachers’ perceptions of job resources taking into consideration interviewees’ perceptions of the most significant school activities/arrangements available to them. For this reason, the second interview question was:

-Could you select the most important activities for you from those you ticked in the questionnaire that you can find in your school?

Interviewees selected up to four school activities/arrangements from the list and discussed about what they involved and/or their importance for them. In particular, interviewees adopted organisational, interpersonal, work-role and task-perspectives to provide a description of what those school activities/arrangements involve and their importance for them as individuals. Those perspectives are in accordance with Bowen's et al. (2007) definition of "action" and "sentiment" component of schools as learning organisations. Indeed, interviewees' organisational, work-role and task perspectives describe the ways in which those activities/arrangements are supportive to their further professional growth.

The action component of schools as learning organisations describe "employees' approach to work that provide opportunities for learning and the demonstration of shared responsibility and collective competence in addressing organizational goals" (Bowen et al., 2007). However, interviewees' perspectives were able to describe such approaches in different levels of analysis in the organisations. The interpersonal perspective that interviewees adopted to describe the support they perceive that they receive from their school activities/arrangement is also reflected by the sentiment component of their schools as learning organisations that refers to "collective expressions of positive regard, emotions and attitudes among employees that encourage, support, and reinforce internal integration and social harmony" (Bowen et al., 2007). Therefore, teachers' perceptions of their schools as learning organisations can also improve our understanding of teachers' Job resources.

Finally, Collinson and Cook (2007) identify schools' provision for their member's self-fulfilment as a requirement for organisational learning and that includes nurturing members' quest for meaningful values and goals. This refers to providing teachers with meaningful learning opportunities and to help them articulate their values and goals with a view to establishing shared understandings. Nurturing members' commitment and connections involves allowing individuals to think systemically and is tied to organisational development. Fostering members' commitment refers to encouraging positive member relationship, members' learning and well-being and

articulating values and aims with which members can identify. In a similar vein, opportunities to engage in knowledge creation through dialogue involves giving staff members opportunities to forge meaningful relationships, making a commitment to shared values and aims, while also changing structures and routines to support them. Finally, nurturing members' aspirations for growth means helping organisational members to develop through interdependent learning opportunities and setting clear recruitment criteria, while providing opportunities and expectations for staff members to undertake leadership roles and principal positions.

Interviews' analysis produced two categories of themes that described teachers' perceptions of school activities/arrangements that may support their professional growth: school activities/arrangements description and school activities/arrangements importance (table 55).

Table 55: Interviewees' perceptions of school activities/arrangements' support

Theme	School activities/arrangements description	School activities/arrangements importance
Sub-theme	Organisational perspective	Organisational perspective
Sub-theme	Interpersonal perspective	Interpersonal perspective
Sub-theme	Work-role perspective	Work-role perspective
Sub-theme	Task perspective	Task perspective

Similar to the findings of the survey-studies, teachers' perceptions of their school activities arrangements referred to both their relationships with other members of the organisation as well as perceived ways of working in their school. Those perceptions matched conceptually teachers' perceptions of their schools as learning organisations and reflected surveys' participants perceptions of their school activities/arrangements support (table 56).

Table 56: Teachers’ perceptions of school activities/arrangements’ support and schools as learning organisations

School activities/arrangements (interview analysis)		Perceptions of schools as learning organizations (surveys)
Description	Importance	Components
Organisational	Organisational	action
Interpersonal	Interpersonal	sentiment
Work-role	Work-role	action
Task	Task	action

B.2.1. Description of school activities/arrangements

The first category of themes that emerged from the analysis of interviewees’ responses on the second interview question was description of school activities/arrangements. It included interviewees’ descriptions of how those school activities/arrangements work in interviewees’ schools. Overall, interviewees referred to eleven school activities/arrangements that were also able to tick in their survey-list and three activities/arrangements that were not in the list:

- Induction for newly qualified teachers and/or new staff members
- Working with other schools and organisations
- Mentoring/coaching

- Participation in decision making committees
- Interdepartmental collaboration
- Team teaching
- Parents' involvement provision
- Action research
- Peer review of teaching practices
- Workshops for leadership development
- Other activities: subject association for religious studies, performance management activities and CPD programme.

Interviewees adopted four different perspectives to describe what the above school activities/arrangements involved:

- Organisational perspective
- Interpersonal perspective
- Work-role perspective
- Task perspective

a) Organisational perspective

The "organizational perspective" refers to interviewees' description of those activities/arrangements within their schools. In sum, five participants adopted an organisational perspective to describe six available school activities/arrangements. Among them interviewee 2 is most often quoted as he adopted an organisational perspective to describe three different activities/arrangements, followed by interviewees 8 and 9 that described two activities/arrangements.

Two interviewees described how induction for newly qualified teachers works in their schools.

Illustrative examples from the interviews:

“We have a good relationship with Warwick university... we are among the few schools that were chosen to be to that certain arrangement (interviewee 2)

-My department have PGCE students and I have shared results with them and share classes so I’m not involved in mentoring level but I meet on a day-to-day basis, so but also new teachers often say how well-received they’ve been form the interview process through to visits to the school to when they start” (interviewee 2)

I was a newly qualified teacher here 2 years ago and definitely the work that we did, the induction programme was excellent in terms of strategies, protocols about the school in general was really good” (interviewee 3)

Two interviewees described how parental involvement works in their schools and work.

Illustrative examples from the interviews:

“This has always been a very parent-friendly school... we have a high contact-ratio as far as parents-evenings reports and one-to-one mentoring with the parents sitting on at those meeting” (interviewee 2)

“We often directly e-mail staff and parents are very much more willing to have direct contact about problems with their children and we also do a group called “via a text-message” when there is a change in a school day or a reminder of one of those events” (interviewee 2)

“They [the parents] are very welcomed to criticize; they are welcomed to make constructive criticism. That we want them and we invite them for coffee mornings and for afternoon teas and

even cheese and wine evenings on top of all the parents evenings...we have lots of things going on for parents, parenting classes for parents that need to learn parenting skills, we've got support groups, we've got just for the parents that we want to invite because they've got something to bring to the school" (interviewee 6)

One interviewee described how involvement in decision-making works in his school:

Illustrative example from the interviews:

"Basically I feel that I can take part in decision making and everybody that works in my team are part of the decision making within the team as well and the children are part of the decision making at a different level" (interviewee 6)

One interviewee described how curriculum development teams work in her school.

Illustrative example from the interviews:

"I'm geography so we will work within humanities for instance so Geography, history, foreign languages" (interviewee 7)

One interviewee described how mentoring works in her school.

Illustrative example from the interviews:

"We have a GTP student at the moment who gets mentored, we have student teachers who come in and get mentored. It had weekly meetings making sure that they have weekly targets or long-term targets as well, making sure that everything is alright, problems with any specific groups and things are highlighted and hopefully overcome." (interviewee 9)

One interviewee described how team-teaching works in his school.

Illustrative examples from the interviews:

"I don't think enough value is actually placed on team teaching Formal team teaching no but informal yeah certainly..." (interviewee 8)

One interviewee described how working with other schools/agencies works in her school.

Illustrative example from the interviews:

“We have federation day, all the schools in the west of Coventry will get together so all the PE teachers from here, from Woodlands, from Westwood...we will all get together and do work together so either we do training, trampolining course, we will get together and discuss technology or we will discuss relevant stuff that it’s important for us in the departments” (interviewee 9)

Three interviewees described “other” (school activities/arrangements that were not covered in the survey-list) in their schools:

Illustrative examples from the interviews:

-“They introduced a kind of faculty system with a hierarchy of faculty heads, subject heads, subject leaders & so on down and they have a teacher-base within that where people meet and share resources with...there is an open-door policy, peer-observation and team-teaching and things like that are much more encouraged. The faculty system had also encouraged curriculum development...the communication lines are there, through the faculty leaders down to the subject leaders” (interviewee 2)

- “Subject association for religious education-It’s the national association of teachers of RE to which we subscribe as a department and they offer workshops, they have a local support group of other teachers, other heads of the departments” (interviewee 8)

“-We have a CPD program which NQT’s or new teachers attend like every Thursday which is all about behaviour and stuff like that and then CPD program performs as management so as head of departments or people who have responsibilities will oversee other people.” (interviewee 9)

-“The performance management we’re doing here, so we have at the beginning of the year performance management meetings and the main targets for the year, have meetings throughout the year and then lessons observations throughout the year...” (interviewee 9)

b) Interpersonal perspective

The “interpersonal perspective” theme refers to interviewees’ description of the way collaborative activities/arrangements are organized in their schools.

One interviewee described how team-teaching works in his school.

Illustrative example from the interviews:

“Often my colleagues would call me into their lesson... we can walk into any classroom” (interviewee 8)

c) Work-role perspective

The “work-role perspective” refers to interviewees’ description of the way those activities/arrangements are organized as part of their work-role in the organization. Five interviewees adopted work-role perspective to describe six school activities/arrangements. Among them interviewee 10 is most often quoted as he adopted a work-role perspective to describe three activities/arrangements followed by interviewee 1 that described two activities.

Two interviewees described how mentoring/coaching works as part of their work-role in the organization.

Illustrative examples from the interviews:

“ At the moment for example at the new school...I’m mentoring or coaching three different teachers so that involves: having a chat, finding out about them, then coming and see me teach and then I’d

go and see them teach and then we'd talk about what we've seen and then I've set them some targets, like what they can do to make their teaching better and then I'd give them a couple of weeks and then I'd go and see how they've getting on-it's more about dialogue and having that kind of support. I would be coaching different members of the staff that can work in terms of improving the teaching ability...(interviewee 1)

"Carol and I both of us act as mentors. It had weekly meetings with whoever the student is ehm...making sure that they have weekly targets or long-term targets as well..." (interviewee 9)

One interviewee described how team-teaching works as part of her work-role.

Illustrative example from the interviews:

"Team-teaching would involve me sitting down with somebody, mentoring or coaching to planning a lesson together and teaching it together so that I can show them how I would approach an activity and is beneficial for both parts because I can see how they would something and they would see how I would do something, it's like a happy medium, so it can be used. " (interviewee 1)

One interviewee described how involvement in decision-making works as part of her work-role.

Illustrative example from the interviews:

"Also in decision making, being involved in the decisions of the school, so we have a broad new performing arts centre when I was involved in decisions about... the building and the design and the play out with the architects I'm involved in decisions with the senior team about things happening in the curriculum" (interviewee 4)

Two interviewees described how working with other schools works as part of their work-role in the organization.

Illustrative examples from the interviews:

“Working with other schools and organisations certainly again it goes back to the IB really so...because I work with them like going to the other schools, I take the ideas of the other schools and bring them into here. And that really helps me” (interviewee 5)

“One of the things that I’m doing here is to do student voice, student counselling and those sorts of things. So I have spent quite a lot of time working with the city council democracy project and developing link with other schools in order to try to enhance young people’s awareness and skills in terms of participation” (interviewee 10)

One interviewee described how curriculum development teams work as part of his work-role in the organization.

Illustrative example from the interviews:

“In terms of curriculum development, again I’ve got an opportunity through citizenship programme for example to develop a whole new area of the curriculum at this school over the past eight years.” (interviewee 10)

One interviewee described how action research works as part of his work-role in the organization.

Illustrative example from the interviews:

“Some of these things I like to do... we get involved in action research. I do some of those things from time to time but they tend to be not very long projects, although things are set up, programs are set up, so that we do for example mentor new teachers, because of the demands of groups of students and the need to get their A-level result, those kind of initiatives tend to be placed on the teachers”... (interviewee 10)

d) Task perspective

The “task perspective” theme refers to the description of the ways school activities/arrangements are organized in relation to interviewees’ classroom work.

One interviewee described how team-teaching is organized in relation to classroom work.

Illustrative example from the interviews:

“I can sit next door for 10 minutes, see what D... is teaching and that won’t be an issue here and he would probably involve me in some way in the lesson: “On that was great, I really enjoyed it, have you thought about this” especially as I’m his boss as well but he’d happily sit in one of my A-level lessons and he would say I like that activity, I’ve got something to help you” (interviewee 8)

One interviewee described how “other” activity (subject review) is organized in relation to classroom work.

Illustrative example from the interviews:

“back in October we had senior leadership down, observations of everyone within one week...so they checked what made kids work and staff as well to make sure that we are working together as a department, our work is being marked and I think that’s really good program”(interviewee 9)

B.2.2) Importance of school activities/arrangements

The second category of themes that emerged from the analysis of interviewees’ responses on the second interview question was interviewees’ perception of the importance of school activities/arrangements. It included interviewees’ explanations on why those school activities/arrangements are important for them as well as some explanations on why the same

school activities/arrangements are not supportive enough. Overall, interviewees adopted four perspectives providing those explanations:

- Organisational perspective
- Interpersonal perspective
- Work-role perspective
- Task perspective

a) Organisational perspective

The “organizational perspective” refers to interviewees’ perceived importance of those school activities/arrangements for their presence in the organization.

Two interviewees mentioned that participation in decision-making supports their presence in the organization.

Illustrative examples from the interviews:

“Personally I like to be the mover and shaker of...I think I have lots of ideas about staff so I think that this...if I think that I’m participating in some decision making that gives me a kind of purpose to be here than just coming in doing a job and going...You are actually making a difference by building a legacy as well so I think you enjoy your work more if you feel that you have some control over it. Otherwise, why are you doing it? You’re just coming in, doing a job and going home, I could work at Mc Donalds and do that. If you are in a profession you need to have some sort of control over it and changing all the time and it’s never a still environment. You need to be involved in those changes and actually some of them you have to have control of your own environment” (interviewee 5)

- “You can only move forward as a place of work if there is that, if people have some kind of power in terms of decision.” (interviewee 6)

b) Interpersonal perspective

The “interpersonal perspective” theme refers to the support interviewees’ perceive that they have from their colleagues due to those school activities/arrangements.

One interviewee referred to the support that she perceived that she had from her colleagues through “working with other schools and agencies”.

Illustrative example from the interviews:

“Working with other schools and agencies, collaborative work with them, that’s always excellent in terms of getting new ideas and we had people that have come in and have given lectures and talks to us about different things...at the moment is teaching and learning which is the new massive area that’s something that an outside agency came to talk about I think that definitely boosted people’s opinions and ways of doing things” (interviewee 3)

Two interviewees referred to the support that they perceive that they had from their colleagues through the “induction of newly qualified teachers” in their schools.

Illustrative examples from the interviews:

“I think they are the new blood in the profession... they are the new people in the profession and they are what keeps us going and they change the school that they come in, they make a difference in the school we had five newly qualified teachers in the schools four years ago when we had 36 teachers, so 5 was a significant number and they are still here, we have retained them and their impact on the school has been really profound because they have come as a significant number.” (interviewee 7)

“It is very important ‘cause is the starting point. I’ve mentored over 20 trainee teachers and they like to know what their starting point is, behaviour policy, special education need policy, what to do if something goes wrong in the classroom. (interviewee 8)

Two interviewees referred to the support that they perceive they have had from their colleagues from their interdepartmental collaborations and mentoring.

Illustrative examples from the interviews:

"I think for me mentoring and coaching is important. Not only mentoring and coaching of new teachers and training teachers who we have here which I really enjoy doing but also among staff here and are prepared to help each other and that makes the day-to-day when you have school much easier when you have supportive colleagues so I think that it was one of the most important things."

(interviewee 4)

"Not just between departments but between teachers is as making them feel part of a team and team-building and developing people and developing their capacity, being able to identify someone's quality...is making that person flourish and grow within the responsibility they've got and it's the same with children, you teach a child and you think you are good at this we're going try to make it even better, you are not so good at that and we're going to try to compensate by teaching you this and it's about knowing yourself and knowing who is working with you and bring them on"

(interviewee 6)

One interviewee referred to the support that she has from her colleagues through curriculum development teams.

Illustrative example from the interviews:

"we will work together on putting things together.... as a team of geographers when we work together we spark ideas of each other we are far more creative than if we're trying to do it on our own" (interviewee 7).

"Every time that you work as a team you have more creativity and more ideas than when you work on your own so I think the teamwork aspect of it is really important...you get too close to something

yourself when you are working on it, where's somebody else has a fresh perspective so I think this is really important" (interviewee 7).

One interviewee referred to the support that she has from her colleagues through peer review of teaching practices.

Illustrative example from the interviews:

"Peer review of teaching practices and we do a lot of that and again is non-judgmental and somebody else is going to say that that's nice but have you thought about doing that this way?...sometimes again you are too involved in your own planning and you get into a routine teaching, not necessarily a bad thing but you have a way of teaching that somebody else comes in and says: have you tried this?" (interviewee 7)

One interviewee referred to the support that he has from her colleagues through team-teaching and "other" activity (subject association for religious studies).

Illustrative example from the interviews:

"Usually it offers a different perspective on a topic that could be controversial such as abortion, euthanasia and sometimes we are also different type of faiths in our department so they would offer different perspectives. It improves communication in terms of how you respect other people and what they do. It becomes more inclusive and less exclusive" (interviewee 8).

"You can go to talk about your issues or problems, what you need support with and they will help you through networking basically. They also provide you with resources for you to use in class, that supports me, it's invaluable actually" (interviewee 8).

One interviewee referred to the support that she perceives she has from her colleagues through "other" activity (CPD program).

Illustrative example from the interviews:

“Because of the CPD program, we learn a lot of the stuff in that, we have a Friday’s spotlight session so a member of the staff will lead the Friday session Friday morning and then if we want more information we can go to this member of the staff and find out more about using PSP’s, about powerpoint whatever then we can use it in our teaching” (interviewee 9)

c) Work-role perspective

The “work-role perspective” refers to the support that interviewees’ perceive that they have in their work-role in the organization through those school activities. One interviewee referred to the support she perceives she has in her work role through mentoring/coaching.

Illustrative example from the interviews:

“It makes me feel useful...it’s like teaching... and that’s why I enjoy teaching... helping other people and you know passing on experience.” (interviewee 1)

One interviewee referred to the support she perceives she has in her work role through workshops for leadership development.

Illustrative example from the interviews:

“Last year I was in a school in Coventry, which was designed by the school but it was based on something from the National College of school leadership. I I haven’t had another job, I haven’t done any management of people so it was just great just sit down and talk about things that you haven’t considered before, such as how to run a meeting, how to deal with conflicts in a team. Nice thing that perhaps as a teacher you don’t get experience, and because you are busy dealing with day-to-day, that yes you can get promoted quickly but when you get to that level you haven’t really gotten

experience of management so it was nice to be able to have some training before you make that step to give you the confidence to make it.” (interviewee 1)

One interviewee referred to the support she perceives she has in her work role through the induction for newly qualified teachers.

Illustrative example from the interviews:

“I think that that’s absolutely vital as part of my role...they need someone they can go for reassurance, also they need someone they need guidance because they’ve done a year’s training and it’s a bit like passing your driving test... ” (interviewee 7).

One interviewee referred to the degree of support he perceives he has in his work-role through working with other schools/agencies, curriculum development teams and action research.

Illustrative example from the interviews:

“Certainly working with other agencies because of the things that I’m doing here is to do student voice, student counselling and those sorts of things. So I have spent quite a lot of time working with the city council democracy project and developing links with other schools” (interviewee 10).

“In terms of curriculum development, again I’ve got an opportunity through citizenship programme for example to develop a whole new area of the curriculum at this school over the past eight years.” (interviewee 10).

“Mr B. and I are supposed to be involved in a project now doing some work but we are both so busy doing these things that it kind of is left behind... I think for the management staff that is an exciting opportunity for you to do something different but for the teachers concerned that is just a pain in the ass really because you know it could be fun but we just don’t have the time to do it properly” (interviewee 10).

d) Task perspective

The “task perspective” theme refers to the support that interviewees’ perceived they had for their classroom work through those activities/arrangements.

One interviewee referred to the support she perceived she had for her classroom work through team-teaching.

Illustrative example from the interviews:

“If I’m doing a revision class with students sometimes we want to do team-teaching because is better for the students to have two teachers, bouncing ideas, it can be more creative, it is more fun” (interviewee 1).

One interviewee referred to the support she perceived she had for her classroom work through action research.

Illustrative example from the interviews:

“we did some teaching research in teacher inquiry into different things like homework, they’ve had a massive impact on our school and we have actually changed our whole homework idea through the action research...” (interviewee 3)

One interviewee referred to the support she perceived she had for her classroom work through the provision of parents’ involvement:

Illustrative example from the interviews:

“For example in one of the cheese and wine evenings there was a man who is an engineer and he was saying that he would love to be invited in an engineer lesson and contributes and just some volunteer work... and I said yes that’s great come along and we had his CRB check and he was

helping me with some engineer classes. It's about looking at who you've got and how you can make people feel part of a community" (interviewee 6)

One interviewee referred to the support she perceived she has in her classroom work with her students through curriculum development teams.

Illustrative example from the interviews:

"Help children make the links I think between their learning and one to another and they can see that, that's useful" (interviewee 7).

One interviewee referred to the degree of support she perceived she had in her classroom work through the CPD program.

Illustrative example from the interviews:

"Because I didn't come as an NQT it was completely irrelevant as I had already taught for a few years before I come here" (interviewee 9)

One interviewee referred to the support he perceived he had for his classroom work through all the activities he talked about in his interview (working with other schools/agencies, curriculum development teams and action research).

Illustrative example from the interviews:

"Why these are more important than the others... because I think they link to this third goal that I talked about. Other than being paid for it my reason of being a teacher is to effect change, teaching is political activity, isn't it?" (interviewee 10).

B.3. Overview

Interview analysis showed that teachers' perceptions of their school activities/arrangements can describe teachers' perceptions of their job resources as they describe aspects of teachers' work that stimulate personal growth, learning, and development (Demerouti et al., 2001). In particular, interviewees were given the opportunity to discuss about those school activities/arrangements, what they involved and their importance for them. Indeed, participants adopted different perspectives in their answers. Interviewee 7 was the most often quoted as she provided seven different discussions about different school activities/arrangements and/or their importance for her, followed by interviewee 9 that provided six discussions. Interviewees 1 and 6 produced five discussions, while interviewees 10 and 8 produced four discussions. Finally interviewee 3 produced three discussions and interviewees 2 and 6 only two discussions.

These findings were in accordance with surveys' findings that individual perceptions of school activities/arrangements can make a difference to the degree to which they can describe teachers' perceptions of job resources. Interviewees adopted organisational, interpersonal, work-role and task perspectives to describe those school activities/arrangements and their importance which showed that perceptions of teachers' job resources can be identified in different levels of analysis within the organisation.

6.4. Interviewees' profiles

The construction of individuals' profiles allowed drawing inferences from one method to another as they described teachers' perceptions of a) engagement support, b) school activities/arrangements support, and c) available support using individuals' answers in both the interview questions and certain survey-questions.

With regards to interviewees' survey answers three types of survey-questions were included in the individual profiles:

a) Background variables (gender, current role in the organization)

Those variables were included in the individual profiles in order to examine if there were any significant differences among interviewees' answers based on them.

b) The fourth survey item that asked participants if they perceive any of their available school activities/arrangements as supportive to their engagement.

This item was included in the individual profiles because it allowed interviewees to identify school activities/ arrangements prior to their interviews in which they were asked the same question.

c) The open-ended question "what supports your engagement in your work"

Interviewees' answers on the survey-question "what supports your engagement in your work" were included in the construction of interviewees' profiles as interviewees' were asked to elaborate on those answers in their interviews. In particular, individual profiles included the themes, as emerged from the interview analysis, regarding their perceptions of school activities/arrangements that could be found in each interviewee's responses.

5.4.1. Individual interviewees' profiles

Participants' perception of school activities/arrangements was the second aspect of job resources that the present research addressed. Specifically, interviewees were given the opportunity to refer to their school activities/arrangements in two survey-questions and more extensively in their interviews. The first survey-question that referred to interviewees' school

activities/arrangements was the fourth survey item that asked participants to indicate which ones of the activities/arrangements they ticked they can find in their school also support their engagement in their work. The second survey-question was an open-ended question at the end of the survey that asked participants what supports their engagement in their work. Surveys' analysis showed that teachers' perceptions of their school activities/arrangements formed a separate category of themes that was able to address the following theoretical proposition developed for the purposes of this study:

“Perceiving aspects of one’s work as supportive, this will support one’s engagement in his/her work”

Indeed, analysis showed that “school resources” was a common theme that emerged from participants' answers and described participants' perceptions of school activities/arrangements. This was in accordance with the following statement that guided the development of the interviews' questions regarding interviewees' perceptions of school activities/arrangements.

“Description of one’s perceptions of available school activities/ arrangements”

The construction of the individual profiles, though, gave the opportunity to compare each interviewee's perspectives towards describing what their school activities/arrangements consist of and their importance for them with their answers in the parts of their survey-answers where they referred to their school activities/arrangements. This allowed examining interviewees' preferences over the perspectives they adopted to describe the support they perceive they gain from those school activities/arrangements that they identify as most important for them.

The examination of the developed interviewees' profiles showed clearly that the perceived importance of school activities/arrangements is significant for the description of teachers'

perceptions of job resources (table 57). In particular, seven out of ten interviewees selected in their surveys at least one of the same school activities/arrangements that they discussed about in their interviews. This is important as the survey-question asked them to select school activities/arrangements that they consider more important for their engagement support, while in the interviews there were asked to discuss about school activities/arrangements that they perceive as most important for them. Therefore, exploring teachers' perspectives on the importance of those activities/arrangements can describe their perceptions of job resources based on their own experiences.

Furthermore, there were thirty discussions regarding 14 school activities/arrangements that interviewees considered as the most important for them among the ones available in their schools (table 58). Although only 17 provided both a description of those activities as well and an explanation of why interviewees considered them as important for them, in 13 discussions interviewees adopted a different perspective to describe them than the one they adopted to explain why they perceive them as important. This supports the argument that teachers' job resources can be located in different levels of analysis within the organisation but it also shows that when individuals reflect on the actual impact that they perceive that those activities may have on them they approach them differently than they do when they just describe them.

Finally, the only difference among those thirty discussions based on interviewees' gender involved the work-role perspective, as females adopted work-role perspectives discussing the description and/or importance of school activities/arrangements (5:1).

Table 57: Interviewees' survey's and interview's selection of school activities/arrangements.

Gender	School activities/arrangements support (Survey answer)	School activities/arrangements (Interview answer)
1) F	Opportunities for progression	Workshops for leadership development, Mentoring/coaching, Team-teaching
2) M	Variables like timetable /calendar	Induction of newly qualified teachers, faculty system (team-teaching, curriculum development), parents' involvement
3) F	Ideas to lessons and personal development	Induction for newly qualified teachers, Action research, Working with other schools' agencies
4) F	Peer review, action research, opportunities for collaborations with colleagues	Mentoring/coaching Involvement in decision making
5) F	My team, the international baccalaureate, action research	Working with other schools Participation in decision-making
6) M	Participation in decision-making	Participation in decision-making, collaboration, parents' involvement
7) F	Funding	Induction for newly qualified teachers, curriculum development teams, departmental collaborations peer review

8) M	Colleagues	Induction for newly qualified teachers, team teaching, Subject association for religious education
9) F	Peer-review, working with other schools, mentoring Leadership	CPD program, performance management, mentoring, working with other schools/organisations
10) M	All	Working with other schools/agencies, curriculum development, action research

Table 58: Interviewees' gender and their perceptions of school activities/arrangements

1) F	Work-role Work-role	Work-role Work-role Task-level
2) M	Organisational Organisational	Organisational
3) F	Task-level	Task perspective Interpersonal perspective
4) F	Work-role	Interpersonal Organisational
5) F	Work-role	Organisational
6) M	Organisational Organisational	Organisational Interpersonal Task
7) F	Organisational	Work-role, interpersonal Interpersonal, task Interpersonal Interpersonal

8) M	Interpersonal, task Organisational	Interpersonal Organisational, interpersonal Interpersonal
9) F	Organisational Organisational Organisational, work-role Organisational	Task Interpersonal
10) M	Work-role Work-role Work-role	Task-level Task-level Organisational

6.4.2. Overview

This section presented the third part of the analysis process which drew inferences from the survey-method to the interview-method. Indeed, the interviews' profiles were able to use for each interviewee both surveys' findings and interviews' interpretations. The main finding was that teachers' perceptions of their school activities/arrangements can define their perceptions of job resources as they describe aspects of their jobs that may facilitate their professional growth.

However, it was also made clear that the more individuals reflected on the importance that those school activities/arrangements have had on them the more accurate such a definition would be. The reason is that the analysis of those reflections can give additional information regarding aspects of teachers' work that stimulate personal growth, learning, and development in ways that are most relevant to individuals' daily work-lives.

7.0) CHAPTER 7: TEACHERS' PERCEPTIONS OF JOB RESOURCES AND THEIR POSITIVE PSYCHOLOGICAL CAPITAL

7.1) Introduction

This chapter focuses on the analysis of potential relationships among the aspects of teachers' perceptions of job resources, that the previous two chapters explored, and teachers' positive psychological capital. It consists of two sections that will examine the items and scales that were used and their relationships with teachers' perceptions of job resources. Then it explores key issues regarding relevant job resources and personal resources literature.

The survey-study measured individuals' positive psychological capital and work-engagement, and explored their potential relationships with those perceptions of job resources that the survey study was able to address. Specifically, the analysis of the survey-study explored five potential types of relationships that may exist between teachers' positive psychological capital and their perceptions of job resources:

- a) Teachers' positive psychological capital and teachers' perceptions of their schools as learning organizations
- b) Teachers' positive psychological capital and teachers' perceptions of their school activities/arrangements
- c) Teachers' positive psychological capital and teachers' work-engagement
- d) Teachers' work-engagement and teachers' perceptions of their schools as learning organisations
- e) Teachers' work-engagement and teachers' perceptions of their school activities/arrangements

The relationships between job resources and personal resources are an integral aspect of one's job resources as both of them are important for one's work-related well-being at work (Xanthopoulou, 2007). Furthermore, both the construct of positive psychological capital and the study of the relationships between job resources and personal resources have been a by-product of the developments in the area of positive organizational behaviour (Sweetman & Luthans, 2010). For this reason, the survey study attempted to explore potential relationships between teachers' positive psychological capital and their perceptions of job resources.

7.2) Section A: Scales

A.1) Scales selection summary

Potential relationships between participants' perceptions of job resources and their personal resources were explored using scales previously validated both in the literature, as well as items developed for the purposes of the present research.

The previously validated scales assessed participants' positive psychological capital, work-engagement and their perceptions of their schools as learning organizations. Specifically the Positive Psychological Capital Questionnaire-24 (the validity analysis can be found in Luthans, Avolio, et al., 2007) measured participants' positive psychological capital and its four components (self-efficacy, hope, resilience, optimism) using a 6-point Likert scale ranging from 1 _ *strongly disagree* to 6 _ *strongly agree*. Furthermore, the 9-item version of Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006a) measured participants' work-engagements and its three sub-scales (vigour, dedication, absorption) on a seven point scale, ranging from (0) "never" to (6) "always". Finally, Bowen's (2007) "action" and "sentiment" scales assessed teachers' perceptions of their job resources using a 6-item scales ranging from 1 _ *strongly disagree* to 6 _ *strongly agree*.

The items developed for the purposes of this research involved the two groups of items assessing teachers' perceptions of their school activities/arrangements. The first group of items

assessed participants' identification of their available school activities/arrangements through four items coded into 15 nominal variables. The second group of items consisted of nine items that assessed participants' perceptions of the support they perceive they have from such activities using a 6-point Likert scale ranging from 1 *_strongly disagree* to 6 *_strongly agree*.

A.2) Reliability analyses

A reliability analysis examined the co-efficients of the items constituting positive psychological capital and work-engagement scales. This analysis was carried out in order to examine their distributions and explore potential relationship with the rest of the variables that the present study assessed.

With regards to the items measuring participants' positive psychological capital the reliability co-efficients of five scales were assessed (table 59). In particular, one scale involved all the items that constitute the PsyCap construct. Self-efficacy consisted of six items (e.g. *"I feel confident analyzing a long-term problem to find a solution"*), and so did hope (e.g. *"If I should find myself in a jam at work, I could think of many ways to get out of it"*), resilience (e.g. *"I usually manage difficulties one way or another at work"*), and optimism (e.g. *"When things are uncertain for me at work, I usually expect the best"*). Finally, following Luthans et al.'s (2007) instructions the items *"when I have a setback at work, I have trouble recovering from it, moving on"*, *"If something can go wrong for me work-wise it will"*, *"In this job, things never work out the way I want them too"* were reversely scored as this was the way, also, the original instrument was constructed.

All scales demonstrated high reliability co-efficients as they all had Cronbach values over .70 with no further improvement if any of the items was deleted. Furthermore, the PsyCap scale, as a whole, had the higher reliability co-efficient ($\alpha=.94$), while its optimism sub-scale had the lowest one (.74). These findings confirm that participants' responses in those items could be used to measure participants' PsyCap and its components. For this reason, five composite scores were computed.

Table 59: Reliability analyses of Positive psychological capital scale and its sub-scales

Scales	Cronbach alphas
Positive Psychological capital (<i>24 items</i>)	.94
Self efficacy (<i>6 items</i>)	.89
Hope (<i>6 items</i>)	.85
Resilience (<i>6 items</i>)	.81
Optimism (<i>6 items</i>)	.74

With regards to the items measuring participants' work-engagement the reliability co-efficients of five scales were examined (table 60). One scale involved all the items within the work-engagement construct, while each one of its subscales (vigour, dedication and absorption) consisted of three items. Overall, all scales had high reliability co-efficients ($\alpha > .70$). The whole work-engagement scale had the highest alpha co-efficient ($\alpha = .89$), while the lowest one was found for the absorption sub-scale ($\alpha = .79$). Furthermore, analysis showed that for the work-engagement scale, as well as its absorption and dedication sub-scale, no improvement would be found if any of the items was deleted. Only the alpha value of the vigour sub-scale showed significant improvement if one items was deleted from .81 to .95. However, as the vigour's sub-scale reliability co-efficient was already over .80 and due to the small sample size ($N=63$) all three items were used to measure participants' vigour. These findings confirm that participants' responses in those items can be used in the present study to measure teachers' work-engagement, as well as their vigour, dedication and absorption. For this reason, four composite scores were computed.

Table 60: Reliability analysis of work-engagement scale and its sub-scales

Scales	Cronbach alphas
Work-engagement	.89
<p>At my work I feel bursting with energy.</p> <p>At my job, I feel strong and vigorous.</p> <p>When I get up in the morning, I feel like going to work.</p>	<p>Vigour</p> <p>.81</p>
<p>I am enthusiastic about my job.</p> <p>My job inspires me.</p> <p>I am proud of the work that I do.</p>	<p>Dedication</p> <p>.82</p>
<p>I feel happy when I am working intensely.</p> <p>I am immersed in my work.</p> <p>I get carried away when I'm working.</p>	<p>Absorption</p> <p>.79</p>

A.3) Scales' characteristics

Based on the results of the reliability analysis, nine composite individual scores were formed for the positive psychological capital and work-engagement scales and their sub-scales. This analysis was carried out in order to examine the statistical characteristics of their distributions among the survey-study participants, as well as among the participants that participated both in the survey-study and the interviews.

a) Participants' positive psychological capital

Survey-study participants had a high mean PsyCap score (M=110.79), as well as high mean scores in its sub-scales (table 61). Self-efficacy was the PsyCap scale with the highest mean score (M=29.35), while PsyCap optimism sub-scale had the lower mean score (M=26.35). Furthermore, the resilience sub-scale had the less missing values while the PsyCap scale had the most missing values. All distributions were negatively skewed and had positive kurtosis values but only the hope sub-scale showed a non-normal distribution (Kolmogorov test for normality <0.05). Therefore, non-parametric statistic criteria would be used to PsyCap hope scale in the present study as participants' values were not normally distributed.

Table 61: Survey-study participants' PsyCap scores

	N (Survey participants)	Mean	Kolmogorov-Smirnov test for normality
PsyCap	56	110.79	.42
Confidence	60	29.35	.32
Hope	61	28.43	.01
Resilience	62	27.15	.22
Optimism	60	26.35	.62

The group of the interview participants had, also, high PsyCap scores, while self-efficacy was the PsyCap scale with the highest mean score (M=32.44) and optimism the one with the lowest (M=27.44) (table 62). Among the PsyCap scales, only the resilience scale had no missing values and all PsyCap scales showed a normal distribution among the interviewees (Kolmogorov test, $p>0.5$). Therefore, interviewees' values were normally distributed around the mean PsyCap score, as well as around the mean scores of its sub-scales.

Table 62: Interview participants' PsyCap scores

	N	Mean	Kolmogotov -test
Positive psychological capital	7	111.43	.98
Confidence	9	32.44	.89
Hope	9	30.00	.93
Resilience	10	28.60	.89
optimism	9	27.44	.98

b) Participants' work-engagement

Survey-participants had a mean work-engagement score of $M=37.37$ (table 63). They had a high dedication mean score ($M=15.02$) but they had much lower vigour ($M=13.08$) and absorption ($M=13.56$) score. The vigour and dedication sub-scales were the only sub-scales that had no missing values, while all scales had a normal distribution. This means that participants values were distributed normally around parametric statistic criteria were applied to explore their relationship with other study's variables.

Table 63: Survey-participants' work-engagement scores

	N	Mean	Kolmogorov-smirnov test
Work engagement	62	37.37	.42
Vigour	63	13.08	.11
Dedication	63	15.02	.12
Absorption	62	13.56	.33

The interviewees' groups had a work-engagement score of M=36.90 and they scored higher in dedication (M=14.80) than vigour (M=12.80) and absorption (M=12.70) . Furthermore, all scales were negatively skewed and all but vigour had positive kurtosis values. However, all scales had normal distributions (Kolmogorov test>0.05) (table 64). Therefore, interviewees' responses were normally distributed around the mean scores of work-engagement and its sub-scales.

Table 64: Interviewees' work engagement scores

	N	Mean	Kolmogorov smirnov test for normality
Work-engagement	10	36.90	.56
Vigour	10	12.80	.94
Dedication	10	14.80	.66
Absorption	10	12.70	.64

A.4) Participants' scores and teachers' background variables

Similar to the analysis of the rest of the study's sub-scales, the relationship between PsyCap and work-engagement scales and participants' demographic information was examined. The only significant relationships were found between participants' positive psychological capital scales and their years of teaching experience and years of organizational/managerial responsibilities (N=37). Specifically, a correlation matrix showed a positive relationship between participants' years of organizational/managerial responsibilities and both their composite PsyCap score ($r=.39, p<0.05$) and resilience ($r=.38, p<0.05$). Furthermore, a positive relationship was found between participants' self-efficacy and their years of teaching experience ($r=.33, p<0.05$). However, there was no difference in participants' mean PsyCap scales scores based on their years of teaching experience or years of managerial/organizational responsibilities.

7.3) Section B: Potential relationships

B.1) Positive Psychological Capital (PsyCap) and teachers' perceptions of their schools as learning organizations

The first type of potential relationship that the present study explored was the relationship between teachers' positive psychological capital and their perceptions of their schools as learning organizations. Those relationships were examined due to their conceptual similarities. In particular, both the construct of positive psychological capital and Bowen's (2007) work on the components of schools as learning organizations, adopt a positive-oriented approach to work that can be crucial for performance improvement. Furthermore, the "sentiment" component of schools as learning organisations recognises the value of employees' positive-oriented approach to work that may be important for performance improvement.

Bowen et al. (2006) identifies optimism as one of the dimensions of learning organizations but their approach towards optimism in learning organizations is different than PsyCap optimism which focuses on the employees' positive attributions. The other five dimensions of the "sentiment" component of learning organization are: common purpose, respect, cohesion, trust, and mutual support. In the present study primarily mutual support and, secondly, respect were the sentiments whose relationships with PsyCap was explored, as well as PsyCap relationships with the action components of innovation, involvement and information flow. The main difference between those conceptualisations was that Bowen's description of the action and sentiment component of schools as learning organizations is focuses on individual perceptions regarding collective attributes on ways of working whereas positive psychological capital focuses on individual perceptions regarding one's own ways of working.

Two correlation matrixes examined the relationships between participants' PsyCap scales and the action and sentiment scales. The first correlation matrix used parametric criteria to examine

relationships among the scales with normal distribution, while the second one used non-parametric criteria for the ones with non-normal distribution.

The correlation matrix regarding the scales with normal distribution involved individuals' composite PsyCap scores and their self-efficacy, resilience and optimism scores, as well as their composite action scores and their involvement, information flow and mutual support scores. On the whole, all PsyCap scales had strong ($r > .3$) significant ($p < 0.01$) relationships with all action and sentiment scales. Participants' composite PsyCap scores had a positive relationship with both action ($r = .61, p < 0.01$), involvement ($r = .57, p < 0.01$), information flow ($r = .53, p < 0.01$). Similarly, self-efficacy had a significant relationship with participants' composite action scores ($r = .63, p < 0.01$), involvement ($r = .57, p < 0.01$), information flow ($r = .56, p < 0.01$) and mutual support ($r = .56, p < 0.01$). Furthermore, participants' resilience scores had also a significant relationship with participants composite action scores ($r = .56, p < 0.01$), involvement ($r = .56, p < 0.01$), information flow ($r = .49, p < 0.01$), and mutual support scores ($r = .37, p < 0.01$). Finally, participants' optimism scores significantly correlated with participants composite action scores ($r = .37, p < 0.01$), involvement ($r = .36, p < 0.01$), information flow ($r = .34, p < 0.01$) and mutual support scores ($r = .30, p < 0.01$).

On the other hand, the correlation matrix regarding the scales with non-normal distribution involved participants' hope scores and their innovation, composite sentiment score and respect score. Spearman rho's correlations showed that participants' hope scores had a positive relationship with their composite sentiment scores ($\rho = .31, p < 0.05$), innovation ($\rho = .31, p < 0.05$) and respect scores ($\rho = .30, p < 0.05$).

Therefore, as the construct of positive psychological capital refers to positive oriented cognitions, that allow people to be more flexible (hope), confident (self-efficacy), make positive attributions (optimism), and bounce back and flourish after failure (resilience), it means that teachers' assessment of the degree to which they work in a learning organisation is related to their exhibition of those cognitions.

B.2) PsyCap and work-engagement

The second type of relationship regarding teachers' job resources and personal resources that the present study explored was the relationship between teachers' positive psychological capital and work-engagement. The relationships between the construct of positive psychological capital and work-engagement were explored as they have been both developed within the psychological literature of positive organisational behaviour. Moreover, job resources is considered to be an antecedent of work-engagement and as previously the pilot-study showed the SSLO scales can be operationalised as such. Indeed, Bowen's et al. (2007) assessment tool of schools as learning organisations recognizes the importance of individuals' perceptions that they work in a caring school. Furthermore, previous research into job resources has focused on some of the factors that Bowen et al. (2007) measure through their scales, such as innovation and social support. However, as Bowens' et al.(2007) scales have been developed to assess certain characteristics of schools as learning organizations they can be used to assess specific aspects of teachers' job resources.

What is more, the construct of positive psychological capital conceptually meets the definition of personal resources as an antecedent of work-engagement. In particular, personal resources refer to positive self-evaluations that are linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll et al., 2003). In this sense, positive psychological capital can be considered as a core construct of personal resources that focuses on such positive self-evaluations. However, research shows that the core construct of PsyCap is more strongly related to desired outcomes than its components (Luthans et al., 2007a) while both theoretical work (Sweetman & Luthans, 2010) and empirical research findings (Avey 2010; Avey et al. 2011) supports its relationships with work-related well-being. Therefore, some statistical correlations were expected between the two constructs but due to the small size, those results were treated as indicative of a possible relationship among them.

Two correlation matrixes examined the relationships between participants' PsyCap scales and their work-engagement. The first correlation matrix used parametric criteria to examine

relationships among the scales with normal distribution, while the second one used non-parametric criteria for the ones with non-normal distribution. Overall, significant relationships were found among participants' levels of optimism and hope and their composite work-engagement scores, as well as their vigour and dedication. This means that the more participants agreed that their psychological abilities at work are characterised by optimism and hope, the more they, also, agreed that they are energetic and dedicated to their work.

The correlation matrix among scales using parametric criteria involved participants' composite PsyCap scores, self-efficacy, resilience and optimism scores and participants' composite work-engagement scores and their vigour, dedication and absorption scores. Among those, only teachers' optimism had a significant relationship with participants' work-engagement scores. Specifically, participants' optimism was positively related to their composite work-engagement scores ($r=.34, p<0.01$), as well as their vigour ($r=.31, p<0.05$) and dedication ($r=.35, p<0.01$).

Finally, a correlation matrix using non-parametric criteria among participants' work-engagement scales and the PsyCap hope scale was examined as PsyCap hope was the only PsyCap scale that did not pass the Kolmogorov test of normality. It showed that participants' levels of hope were positively related with their composite work-engagement score ($\rho=.33, p<0.01$), vigour ($\rho=.29, p<0.05$), and dedication ($\rho=.36, p<0.01$).

B.3) PsyCap and teachers' perceptions of school activities/arrangements

The third type of relationship regarding teachers' job resources and personal resources that the present study explored was the relationship between participants' positive psychological capital and their perceptions of school activities/arrangements. In particular, the present research examined the relationships among PsyCap scales and participants' perceptions of their school activities support, as well as the relationships among PsyCap scales and participants' identification of their available school activities.

The relationship between participants' positive psychological capital, work-engagement and their perceptions of school activities/arrangements were examined because a purpose of the present research was to focus on teachers' perceptions of aspects of their work that stimulate personal growth, learning, and development (3rd part of the definition of job resources). Indeed, positive psychological capital is state-like in nature and therefore able to change and develop compared to other personal resources that involve personality characteristics that are more stable over time (Luthans et al., 2007). Furthermore, Luthans has set certain strict inclusion criteria for POB constructs, that are met by PsyCap components of self-efficacy, hope, optimism and resilience, as being: (a) positive, strength-based, and relatively unique to the organizational behaviour field; (b) theory and research-based with valid measures; (3) state-like and thus open to development and performance management. This management-driven view of resources influenced by the development in the area of positive psychology, can be a valuable asset to the understanding of the complex relationships between teachers' personal and job resources as its psychological states are open to development and, therefore, can be targeted and developed. On the other hand, psychological research on the relationships between employees' personal and job resources adopts a strictly academic perspective often focusing on personality traits that are relatively stable over time and, therefore, more difficult to change within the work context.

Results showed that participants' perceptions of the importance of school activities/arrangements can be related with their confidence, hope, optimism and resilience in their workplace. Furthermore, the proportions of participants that identified participation in decision-making, interdepartmental collaborations and curriculum development teams had significantly higher hope scores than those that didn't. As PsyCap hope refers to individual's perception of one's will and ways to achieve one's goals, such relationships show that the identification of those activities/arrangements can be related with ones' perceived ability to pursue his/her goals (will) and/ or alter them when required (ways).

B.3.1) Teachers' positive psychological capital and perceptions of school activities support

Four correlation matrixes explored the relationships among participants' positive psychological capital and their perceptions of school activities support. Two of them examined the relationships between PsyCap scales and participants' composite scores of agreement with the three groups of developed sentences regarding their developmental activities inside their schools, developmental activities outside their school and collaborative work with other teachers. However, the first correlation matrix adopted parametric criteria (Pearson r) to explore the relationships among normally distributed scales, while the second one adopted non-parametric criteria (Spearman ρ) for the ones with non-normal distributions.

The other two correlation matrixes involved a closer examination of participants' PsyCap scales and participants' degree of agreement with each one of the sentences regarding developmental activities/arrangements inside their school, outside their school and collaborative work with other teachers. That involves the relationships between PsyCap scales and the degree to which participants agreed that those activities/arrangements influence their professional learning, impact on their school improvement and support their engagement in their work. However, Pearson r correlations were used to explore the sentences' relationships with those PsyCap scales that showed normal distributions and Spearman ρ correlations for the PsyCap hope scale that didn't pass Kolmogorov's test of normality.

a) Participants' positive psychological capital and their composite school activities support scores

A parametric and a non-parametric correlation matrix explored the relationships between participants' positive psychological capital and their composite school activities support scores. Therefore, the relationship between teachers' positive psychological capital and participants' perceptions of school activities support was explored in the same way that the one among

participants' perceptions of their schools as learning organizations and their school activities support was also explored.

The correlation matrix among scales using parametric criteria involved participants' degree of agreement with the sentences regarding developmental activities outside their school and their composite PsyCap scores, self-efficacy, resilience and optimism scores. Pearson correlations showed strong ($r > .3$) positive relationship among the developed sentences regarding developmental activities outside their school and all PsyCap scales. Specifically, the highest relationship was with individuals' resilience score ($r = .50$, $p < .01$), but they had, also, significant relationships with individuals' composite PsyCap score ($r = .44$, $p < .01$), self-efficacy ($r = .37$, $p < .01$), and optimism ($r = .37$, $p < .01$).

On the other hand, the correlation matrix among scales using non-parametric criteria involved participants' degree of agreement with the sentences regarding developmental activities inside their school and collaborative work with other teachers and the PsyCap hope scale. Overall, Spearman rho correlations showed a strong ($\rho > .3$) relationship between PsyCap hope scale and teachers' composite degrees of agreement with both aspects of school activities support. Participants' composite degree of agreement with the sentences regarding developmental activities inside their school had a positive relationship with their hope scores ($\rho = .31$, $p < .01$). Similarly, participants' composite degree of agreement with sentences regarding collaborative work with other teachers had a positive relationship with their hope scores ($\rho = .38$, $p < .01$).

b) Participants' positive psychological capital and their degree of agreement with school activities' support sentences

A parametric and a non-parametric correlation matrix explored the relationships between participants' positive psychological capital and their degree of agreement with each of the nine developed sentences regarding their school activities. This approach was adopted as it allows an

analysis of the relationship among teachers' perceptions of the support they perceive they have from their school activities and their positive psychological capital separately to their perceptions of their schools as learning organizations.

The correlation matrix among the normally distributed PsyCap scales and participants' school activities support statement involves the nine developed sentences and participants' composite PsyCap scores and their self-efficacy, optimism, and resilience scores. With regards to participants' composite PsyCap scores correlated with all developed sentences over $r=.30$ ($p<0.01$). Furthermore, the highest correlations were found between the composite PsyCap score and the sentences about developmental activities inside the school ($r=.52- .54$, $p<0.01$) and the sentences about collaborative work with other teachers ($r=.56- .64$, $p<0.01$).

Similarly, most of PsyCap scales had significant positive correlation $r=.40$ ($p<0.01$) with all developed sentences. Specifically, participants' PsyCap self-efficacy positively correlated ($r>.30$, $p<0.01$) with all nine sentences but the *"Developmental activities/arrangements outside my school support my engagement in my work"*, while it had the strongest correlations ($r>.50$) with the sentence *"Developmental activities inside my school support my engagement in m work"*, *"Collaborative work with other teachers influence my collaborative learning"*, *"collaborative work with other teachers impacts on my school improvement"*, *"collaborative work with other teachers support my engagement in my work"*. Participants' PsyCap resilience scores positively correlated with all nine sentences ($r>.30$, $p<0.01$), while its strongest correlations was with sentence *"collaborative work with other teachers impacts on my school's improvement"* ($r=.56$, $p<0.01$). Participants' PsyCap optimism scores correlated positively with all developed sentences with the exception of *"developmental activities outside my school influence my professional learning"* sentence. Furthermore, it showed less strong correlations with the sentences regarding developmental activities inside participants' schools ($r<.3$, $p<0.04$), while its strongest correlation was with the sentence *"collaborative improvement"* ($r=.49$, $p<0.01$).

Finally, the correlation matrix among the non-normally distributed PsyCap scales and participants' school activities support statement involved the nine developed sentences and participants' PsyCap hope scale (table 65). Participants' PsyCap hope scores had a strong relationship ($\rho > .3$, $p < 0.01$) with their degree of agreement with the sentences regarding collaborative work with other teachers and developmental activities inside their schools but they had a weaker relationship with the sentence "*developmental activities/arrangements inside my school impact on my school's improvement*" ($\rho = .27$, $p < 0.05$). On the other hand, participants' PsyCap hope scores were not related with the sentences regarding developmental activities outside their school (table 65).

Table 65: PsyCap scales and school activities support sentences

School activities support sentences	Self-efficacy	Resilience	Optimism	Hope
Developmental activities/arrangements inside my school influence my professional learning	r=.38, (p<0.01), N=60	r=.45 (p<0.01), N=62	r=.29 (p<0.05), N=60	rho=.33 (p<0.01), N=61
Developmental activities/arrangements inside my school impact on my school's improvement	r=.48 (p<0.01) N=60	r=.42 (p<0.01) N=62	r=.26 (p<0.05) N=62	rho=.27 (p<0.05) N=61
Developmental activities/arrangements inside my school support my engagement in my work	r=.51 (p<0.01) N=60	r=.39 (p<0.01) N=62	r=.28 (p<0.05) N=60	rho=.35 (p<0.01) N=61
Developmental activities/arrangements outside my school influence my professional learning	-	r=.44 (p<0.01) N=62	-	-
Developmental activities/arrangements outside my school impact on my schools' improvement	r=.43 (p<0.01) N=60	r=.49 (p<0.01) N=62	r=.46 (p<0.01) N=60	-
Developmental activities/arrangements outside my school support my engagement in my work	r=.34 (p<0.01) N=60	r=.41 (p<0.01) N=62	r=.35 (p<0.01) N=60	-
Collaborative work with other teachers influences my professional learning	r=.53 (p<0.01) N=60	r=.49 (p<0.01) N=62	r=.43 (p<0.01) N=60	rho=.33 (p<0.01) N=61
Collaborative work with other teachers impacts on my school improvement	r=.56 (p<0.01) N=60	r=.56 (p<0.01) N=62	r=.49 (p<0.01) N=60	rho=.40 (p<0.01) N=61
Collaborative work with other teachers supports my engagement in my work	r=.56 (p<0.01) N=60	r=.48 (p<0.01) N=62	r=.42 (p<0.01) N=60	rho=.38 (p<0.01) N=61

Therefore, the more teachers perceived that their psychological abilities at work show self-efficacy, hope, optimism and resilience the more they agreed with the support that professional development activities inside their schools and collaborative work with other teachers may offer to them.

B.3.2) Teachers' positive psychological capital and identification of school activities support

The second type of relationships between teachers' positive psychological capital and their perceptions of school activities/arrangements involved the comparisons of participants' mean scores that identified certain activities/arrangement compared with those that did not identify them. T-tests comparisons examined the differences in participants' mean scores, in those scales that were normally distributed, and their identification of available school activities/arrangements, while Mann-Whitney U tests examined those differences for participants' PsyCap hope scale that was not normally distributed (table 66, 67).

Table 66: Participants' selection of participation in decision-making committees and their Positive Psychological Capital (t-test)

		N	M	Std	t	Sig. (2-tailed)
Positive Psychological Capital	No	14	104,64	10,7	-2,45	p=0.01
	Yes	40	114,65	13,8		
Self-efficacy	No	14	26,9	3,31	-3,07	p<0.01
	Yes	44	30,5	4,03		
Resilience	No	15	25,3	3,4	-2,67	p=0.01
	Yes	45	28,2	3,7		

Table 67: Participants' selection of participation in decision-making committees and their state hope (Mann-Whitney U test)

Participation in decision making	N	Mean	p
No	14	26,7	p<0.05
Yes	45	29,3	

Significant relationships were found among teachers' selection of participation in decision-making and participants' composite PsyCap scores ($F=.9$, $p>0.05$, $t=-2.4$, $p=0.01$) and their self-efficacy ($F=2.4$, $p>0.05$, $t=-4.2$, $p<0.001$), hope (Mann Whitney U test, $p<$) and resilience ($F=.10$,

$p > 0.01$, $t = -2.6$, $p < 0.05$) scores. Thus, participants that identified participation in decision-making committees in their schools, compared to those that did not select it, agreed more that their psychological abilities at work are characterised by self-efficacy, resilience, and hope.

B.4) Work-engagement and teachers' perceptions of their schools as learning organizations

Another aspect of the relationships between personal resources and job resources that the present study tried to explore is the relationship between participants' perceptions of their schools as learning organizations and their work-engagement. According to the literature job resources is one category of the main drivers of work-engagement and the present study showed that the statistical characteristics of 13 items from Bowen's et al. (2007) instrument of assessment of schools as learning organizations are such that they can be operationalised as job resources in a latent statistical model.

Due to the small sample size the present study was not able to examine teachers' perceptions of their schools as learning organizations as an antecedent of work-engagement. For this reason, the analysis focused on the correlations between action and sentiment scales and participants' levels of work-engagement using both parametric and non-parametric criteria.

The correlation matrix that adopted parametric criteria involved the relationships between participants' work-engagement and their composite action scores, and their involvement, information-flow and mutual support sub-scales. The only significant relationships were found between participants' total work-engagement score and their composite action score ($r = .28$, $p < 0.05$); as well as their vigour and their composite action scores ($r = .28$, $p < 0.05$), information flow sub-scale ($r = .30$, $p < 0.05$) and mutual support sub-scale ($r = .29$, $p < 0.05$).

The correlation matrix that adopted non-parametric criteria involved the relationships between participants' work-engagement and participants' innovation, composite sentiment score,

and respect scale. The only significant relationships were found between innovation and participants' total work-engagement score ($\rho=.34$, $p<0.01$), vigour ($\rho=.29$, $p<0.01$), dedication ($\rho=.27$, $p<0.05$) and absorption ($\rho=.25$, $p<0.05$).

B.5) Work engagement and teachers' perceptions of school activities/arrangements

The last aspect regarding participants' perceptions of job resources and personal resources that the present study explored was the relationship between teachers' perceptions of their school activities and their levels of work-engagement. This focused on the relationships between work-engagement and participants' perceptions of their school activities support, as well as the relationships between participants' work-engagement scores and their identification of available school activities.

With regards to the relationships between participants' work-engagement and their identification of school activities/arrangements, these were explored through the comparisons of participants' work-engagement scores that selected certain school activities compared to those that did not.

B.5.1) Participants' work-engagement and school activities support

With regards to the relationships between participants' work-engagement and their perceptions of school activities support, similar to the relationships between PsyCap and participants' perceptions of school activities, three correlation matrixes explored them. Two of these examined the relationships between participants' work-engagement and their composite scores of agreement with the three groups of developed sentences regarding their developmental activities inside their schools, developmental activities outside their school and collaborative work with other

teachers. However, the first correlation matrix adopted parametric criteria (Pearson r) to explore the relationships among normally distributed scales, while the second one adopted non-parametric criteria (Spearman ρ) for the ones with non-normal distributions. The third correlation matrix involved a closer examination of participants' work-engagement and participants' degree of agreement with each one of the sentences regarding developmental activities/arrangements inside their school, outside their school and collaborative work with other teachers. That involved the relationships between participants' work-engagement and the degree to which they agreed that those activities/arrangements influence their professional learning, impact on their school improvement and support their engagement in their work. As all work-engagement scales were normally distributed only parametric criteria were used.

a) Participants' work-engagement and their composite school activities support scores

Two correlation matrixes explored the relationships between teachers' perceptions of school activities support and their work-engagement, similarly to the process followed to explore participants' perceptions of their schools as learning organizations and their perceptions of their school activities/arrangements. The first correlations matrix used parametric criteria in order to explore the relationships between participants' work-engagement and their composite school activities support scales with normal distributions. Thus, this correlation matrix consisted of participants' total work-engagement scores, vigour, dedication and absorption scores and their mean composite scores in the "*developmental activities outside my school*" group of items. The second correlation matrix used non-parametric criteria to explore the relationships between participants' work-engagement scales and their composite school activities support scales that did not have normal distributions. Therefore, this correlations matrix included participants' total work-engagement score, vigour, dedication, and absorption scores and their composite score in the "*developmental activities inside my school*" items and their composite score in the "collaborative work with other teachers" group of items.

From the two correlation matrixes only the second one showed significant relationship between participants' work-engagement and their perceptions of school activities support. Specifically, participants' composite scores in the "*collaborative work with other teachers*" group of items had a strong positive relationship with participants' total work-engagement scores ($\rho=.35$, $p<0.01$) and their dedication ($\rho=.38$, $p<0.01$), as well as a weaker relationship with their vigour ($\rho=.26$, $p<0.05$) and absorption ($\rho=.25$, $p<0.05$). On the other hand, participants' composite score in the "*development activities inside my school*" group of items had a weaker positive relationship with participants' total work-engagement score ($\rho=.25$, $p<0.05$).

b) Participants' work-engagement and their degree of agreement with school activities' support sentences

A correlation matrix used parametric criteria in order to explore the relationship between participants' work-engagement and their degree of agreement with each of the nine developed sentences regarding their school activities support. This correlation matrix involved participants' total work-engagement scores, as well as their vigour, dedication and absorption scores and all nine developed sentences. This closer examination showed only a weak significant relationship between participants' dedication and their degree of agreement with the sentence "*collaborative work with other teachers support my engagement in my work*" ($r=.25$, $p<0.05$).

B.5.2) Teachers' work-engagement and identification of school activities

The second type of relationship between teachers' work-engagement and their perceptions of school activities/arrangements involved the comparisons of participants' mean scores that identified certain activities/arrangement compared with those that did not identify them. Specifically, t-tests comparisons examined the differences in participants' mean scores of work-engagement, vigour, dedication and absorption among in the people that selected certain school activities compared to those that did not select them. No significant differences were found in

participants' scores in work-engagement scale based on whether or not they identified any of the school activities listed in their survey-list.

7.4) Overview

This chapter focused on the complex relationship between teachers' perceptions of job resources their positive psychological capital. Analysis showed several significant relationships among participants' perceptions of their schools as learning organizations, their positive psychological capital and their perceptions of school activities. Furthermore, results showed that those relationships can be an important source of information regarding teachers' job resources not just as a part of a psychological research design but also as part of a more in-depth analysis of teachers' perceived resources in their workplace. Indeed, the last aspect of teachers' perceptions of job resources that the present research referred to was their perceptions of their sources of engagement support. Those perceptions were explored initially in both the pilot-study and the survey-study but they were, also, explored in a greater depth through the interviews allowing the identification of various perceived resources and their importance for teachers' work-lives.

8.0) CHAPTER 8: TEACHERS' PERCEPTIONS OF THEIR SOURCES OF ENGAGEMENT SUPPORT

8.1) Introduction

This chapter will discuss another aspect of teachers' perceptions of job resources that the present study addressed by focusing on the analysis of teachers' perceptions of their sources of engagement support. Similarly to the previous discussion chapters it includes surveys' and interviews' findings to explore key issues in relation to relevant job resources research. It consists of three sections that will present surveys' analyses, interviews' analyses and the construction of individuals' profiles that explored this aspect of teachers' perceptions of job resources.

Although, both surveys' and interviews explored those perceptions, interviews were able to do so in greater depth, as they showed how interviewees associated their sources of engagement support with supportive aspects of teachers' work that can provide support in achieving work-related goals (Demerouti et al., 2001). However, the construction of individual profiles allowed a closer examination of teachers' perceptions of their sources of engagement support as they examined individual answers in both the survey-study and the interviews.

8.2) Section A: Surveys' analyses

Survey analysis involved the analysis of participants' answers on the open-ended survey question "what supports your engagement in your work" in the pilot- and survey-study. Part of teachers' job is to engage their students in their lessons and indeed there is an increased focus on the influence of student engagement on several positive educational outcomes (Shelley et al., 2011). For this reason, it was assumed that teachers' would be familiar with the word engagement.

Indeed, the screening test of the question "what supports your engagement in your work" showed that could be used to elicit information regarding secondary school teachers' perceptions of job resources. For this reason, both the pilot-study and the survey-study included an

open-ended question that asked participants what supports their engagement in their work. The purpose of this question was to explore teachers' perceptions of their sources of engagement support as an aspect of their job resources and allow drawing inferences from the pilot- and survey-study to the interviews.

Surveys' analyses provided a themes' analysis that described teachers' perception of their sources of engagement support which was further explored in the interviews. However, the themes that emerged through the pilot-study analysis were re-coded through the surveys' analyses in order to define participants' perceptions of job resources in both surveys and resolve certain problematic issues in relation to pilot-study's themes.

A.1) Pilot-study

The analysis of participants' responses on the pilot-study produced the first stage of themes analysis that described teachers' perceptions of their sources of engagement support. Those themes were further examined and appropriately recoded through the present study's survey-study and one-to-one interviews in order to construct a definition of teachers' perception of job resources.

A.1.1) Themes' development: Analytical structure

Based on the definition of job resources, seven categories emerged from participants' answers to the open-ended question "what supports your engagement in your work" (table 68). They referred to various aspects of participants' work-lives and a few non-work related aspects of their lives that they perceived as supportive to their engagement in their work. Each category consisted of themes which showed participants' own answers to the pilot-study's survey question.

Table 68: Sources of engagement support-pilot study themes

<p>Work-self</p> <ul style="list-style-type: none"> •Feeling valued •Work significance •Feedback •Recognition •Autonomy
<p>Students</p> <ul style="list-style-type: none"> •Care/commitment to study •Feedback •Reaction •Progress
<p>Subject</p> <ul style="list-style-type: none"> •Personal love/ commitment •Challenge
<p>Leadership</p> <ul style="list-style-type: none"> •Support •Feedback
<p>Colleagues</p> <ul style="list-style-type: none"> •Support •Feedback
<p>School resources</p> <ul style="list-style-type: none"> •Care •Time •Positive/supportive environment •Training •Opportunities
<p>Non-work related perceptions</p> <ul style="list-style-type: none"> •Personal attitude •Sources of emotional support

The category of “work-self” was the first category of themes that emerged from participants’ answers to describe themes in which participants talked about themselves at work or their work with students. The characteristic of this category was that participants’ answers focused on their feelings about themselves regarding their work. This category included five sub-themes:

- Feeling valued
- Significance
- Feedback
- Recognition
- Autonomy

The category of “students” was the second category that emerged from participants’ answers and described themes in which participants talked about their students. In this sense, the main difference between the “self” and the “students” categories was in the latter participants’ answers focused clearly on their work with students. Specifically, four themes showed participants’ perceptions of the ways in which their students support their engagement in their work:

- Care/ commitment to study
- Positive feedback
- Reaction
- Progress

The category of “subject” was the third category that emerged from participants’ responses and focused on positive aspects of their subject. Specifically, two themes described teachers’ perceptions on how their subject supports their engagement in their work:

- Personal love/commitment
- Challenge

The category of “leadership” was the fourth category that emerged from participants’ responses and focused on participants’ positive perceptions regarding their leadership team as a separate aspect of teachers’ work. Two themes showed those perceptions:

- Support

- Feedback

The category of “colleagues” was the fifth category of themes that emerged from participants’ responses and focused on their positive perceptions regarding their colleagues as a separate aspect of teachers’ work. Two themes showed those perceptions:

- Support
- Feedback

The category of “school resources” was the sixth category that emerged from participants’ responses. It included four sub-themes in which teachers were focusing on characteristics of their workplace and their schools’ resourcefulness independent of specific characteristics of their leadership team or colleagues. Five themes described teachers’ perceptions:

- Care
- Time
- Positive/supportive environment
- Training
- Opportunities

The category of “non-work related perceptions” was the seventh category that emerged from participants’ responses and included responses that focused on teachers’ perceptions of sources of support beyond their work. The characteristic of this category is that it described sources of support that participants did not clearly identify in their responses as an aspect of their work at their school. Two participants focused on such perceptions to describe their sources of engagement support:

- Personal attitude
- Sources of emotional support

However, those initial categories and sub-themes that emerged from the analysis of the pilot-study had to be re-organised for two reasons. The first reason was that data couldn't represent teachers' perceptions in a way that would be an adequate description of teachers' job resources. Indeed, the data focusing on students and subjects allowed the researcher to say more about teachers' commitment rather than their job resources, which is the key focus of the study. Furthermore, various sub-themes across categories collided with others in different categories which didn't allow for the development of a definition of teachers' Job resources.

The "work-significance" sub-theme of the "work-self" category collided with the sub-themes of "reaction", and "progress" and found in the "students" category. Moreover, the "feedback" sub-theme of the "work-self" category collided with the "feedback" sub-themes found in the "students", "leadership" and "colleagues" categories; while the "support" sub-theme was found in both "leadership" and "colleagues" categories and it was echoed in all sub-themes of the "school resources" category. Furthermore, the "autonomy" sub-theme of the "work-self" category collided with the "challenge" sub-theme of the "subject" category; while both the subject and self category shared the theme "personal love/commitment".

The second reason was that the initial analysis didn't reflect the motivational role of job resources that is inherent in the generic definition of job resources. For those reasons, the pilot-study's participants' responses on the question "what supports your engagement in your work" were analysed alongside with survey-study's participants' responses on the same question in order to produce a better description of participants' perceptions of job resources.

A.2) Survey study

A.2.1) Themes development: Analytical structure

The analysis of participants' responses in the survey-study's open-ended question aimed to provide a description of participants' perceptions of job resources and resolve the problems that were identified in the analysis of the same question in the pilot-study. Indeed, survey-study participants referred to the same sources of engagement support that participants' in the pilot-study identified.

However, the analysis of their responses provided a better description of participants' perceptions of job resources that reflected the answers of both the participants' group of the pilot-study as well as the survey-study's one.

Specifically, three categories of teachers' perceptions emerged (table 69):

- a) Work-perceptions
- b) School perceptions
- c) Non-work related perceptions

Table 69: Sources of engagement support- Surveys' themes

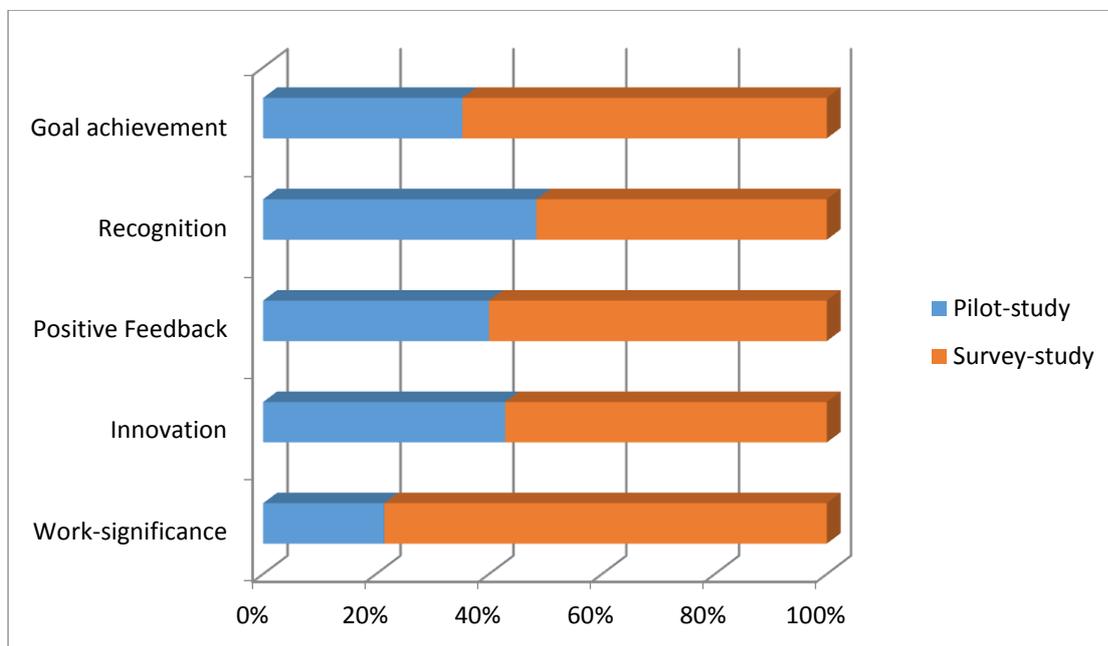
Themes'	Sub-themes	Sub-themes	Sub-themes	Sub-themes	Sub-themes	Further analysis	Themes'	Sub-themes	
Self	Feeling valued	Work-signific.	Feedback	Recognition	Autonomy		Work perc.	Work-significance	
Students	Care/ Commit. to study	Feedback	Reaction	Progress				Positive feedback	
Subject	Personal love/ Commit.	Challenge						Recognition	
								Goal-achievement	
								innovation	
Leadership	Support	Feedback					School perc.	Supportive relationships with leadership	
								Supportive relationships with colleagues	
								School resources	Supportive environ.
									Supportive school activities/ arrang.
Colleagues	Support	Feedback							
School resources	Care	Time	Positive/ Supp. environ.	Training	Opportunities				
Non-work related percep.	Personal attitude/ health	Sources of emot. support				Non-work related perc.	Personal attitude/ heath		
							Sources of emotional support		
							Individual activities		

a) Work-perceptions

The category of work-perceptions was the first category that emerged from participants' responses. It reflected the pilot-study's themes of teachers' perceptions about aspects of themselves at work, their students and their subject that they perceive as supportive to their engagement in their work. Five themes showed how participants' work-perceptions supported their engagement in their work (table 70):

- 1) Work significance
- 2) Innovation
- 3) Positive feedback
- 4) Recognition
- 5) Goal achievement

Table 70: Work-perceptions themes' frequencies



Analysis showed that those themes were found in both pilot-study and survey-study participants' responses (table 70). However, as this analysis included participants' responses in both surveys and tested the themes that emerged during the pilot-study analysis there could be a

potential bias towards participants' responses in the survey-analysis. For this reason, each participants' separate response in the open-ended survey question "what supports your engagement in your work" in both surveys was used.

As the above table (table 70) shows, there were some differences on the frequencies in which participants in those two surveys perceived that each of those themes supported their engagement in their work. Such differences can be important because they show participants' preferences over supportive aspects of their work in their schools in the pilot-study and the survey-study. These themes, as well as their frequencies are described in depth below and a series of tables will present pilot-study's and survey's participants' responses that formed those themes.

In particular, "recognition" and "goal-achievement" were the most frequent theme in participants' responses followed by "positive feedback". However, "innovation" was more frequent than "work-significance" in participants' responses in the pilot-study and the opposite was the case for participants' responses in the survey-study. Furthermore, "recognition" that was the most equally frequent in participants' responses in both surveys, while "goal achievement" and "work-significance" were more frequent in the survey-study. Small differences were found on the frequencies of "positive feedback" and "innovation" between the two surveys.

Those findings suggest that understanding teachers' perceptions of job resources may require both addressing supportive aspects of teachers' work that different groups of teachers may perceive as important (e.g. recognition), as well as being able to address those aspects that one specific group of teachers may perceive as most important than others.

1) Work significance

The work significance sub-theme was the same theme that was formed in the pilot-study as a sub-theme in the "students" category. It included participants' responses in both the pilot-study and the survey-study that focused on the importance of their work. Three responses from three

participants of the pilot study and eleven responses from ten participants in the survey-study referred to this importance of their work (table 71).

2) Innovation

The innovation theme included participants' responses about developments as supportive to their engagement in their work. It reflected the "challenge" sub-theme of the pilot-study and the "autonomy" sub-theme of the self category. Seven responses from six participants in the pilot-study and nine responses from seven participants in the survey-study focused on those perceptions to describe their sources of engagement support (table 72).

3) Positive feedback

The positive feedback theme included participants' responses about perceiving that their work is appreciated. It reflects the "positive feedback" sub-themes of the "students", "leadership", and "colleagues" categories, as well as the "reaction" sub-theme of the "students" category. Eight responses from eight participants in the pilot-study and twelve responses from twelve participants in the survey-study focused on teachers' perceptions of "positive feedback" (table 73).

4) Recognition

The recognition theme included participants' responses that identified perceiving that their work is appreciated as supportive to their engagement in their work. It reflected the "recognition" sub-theme and the "being valued" sub-theme of the self category of the pilot-study. Fifteen responses from twelve participants in the pilot-study and fifteen responses from fourteen participants in the survey-study focused on those perceptions to describe their sources of engagement support (table 74).

Table 71: “Work significance” responses

Each pilot-study’s participant responses	Each survey-study’s participant responses
<p>Participant 40:</p> <ul style="list-style-type: none"> - Seeing students flourish and feeling that something is worthwhile and valuable <p>Participant number 76:</p> <ul style="list-style-type: none"> - Making a difference <p>Participant 88:</p> <ul style="list-style-type: none"> - Desire that everyone should have the best chance of a good start in life 	<p>Participant 7:</p> <ul style="list-style-type: none"> - Acknowledging that I make a difference <p>Participant 12:</p> <ul style="list-style-type: none"> - The students <p>Participant 14:</p> <ul style="list-style-type: none"> - Being in a position to positively influence change for the good in some students <p>Participant 21:</p> <ul style="list-style-type: none"> - The pupils with whom I work - Meaning at work-doing something worthwhile <p>Participant 32:</p> <ul style="list-style-type: none"> - My own belief that I can make a difference, give someone the confidence to learn. The belief that what I do is valuable is important to students, even when staff don’t see it that way <p>Participant 40:</p> <ul style="list-style-type: none"> - Sometimes even come back to tell me that they [the students] appreciate what they learnt <p>Participant 41:</p> <ul style="list-style-type: none"> - Knowing that I make a difference all the time. <p>Participant 54:</p> <ul style="list-style-type: none"> - Knowing I’m making an impact <p>Participant59:</p> <ul style="list-style-type: none"> - Making a difference to lives around me - Contributing to the ethos and success of the school

Table 72: “Innovation” responses

Each pilot-study’s participant responses	Each survey-study’s participants responses
<p>Participant 26:</p> <ul style="list-style-type: none"> - New ideas and challenges <p>Participant 28</p> <ul style="list-style-type: none"> - Professional freedom in certain areas esp. in large classroom <p>Participant 36:</p> <ul style="list-style-type: none"> - New challenges every year especially if it is something I am personally interested in. <p>Participant 57:</p> <ul style="list-style-type: none"> - Allowed to be creative <p>Participant 95:</p> <ul style="list-style-type: none"> - Being allowed to follow my individual interests in education, - Not being forced to take part in things that are not relevant to my experience 	<p>Participant 6:</p> <ul style="list-style-type: none"> - New skills used and developed every day <p>Participant 15:</p> <ul style="list-style-type: none"> - Being allowed to “pilot” new projects with the support of headteacher, - Seeing a new initiative “take off” and be embraced by the whole school community <p>Participant 17:</p> <ul style="list-style-type: none"> - Challenge <p>Participant 21:</p> <ul style="list-style-type: none"> - Innovation, - Having the independence to develop my role <p>Participant 27:</p> <ul style="list-style-type: none"> - Creative <p>Participant 60:</p> <ul style="list-style-type: none"> - If it’s challenging

Table 73: “Positive feedback” responses

Each pilot-study’s participant responses	Each survey-study participant responses
<p>Participant 14:</p> <ul style="list-style-type: none"> - Positive feedback from pupils <p>Participant 19:</p> <ul style="list-style-type: none"> - Pupil enjoyment of lessons <p>Participant 37:</p> <ul style="list-style-type: none"> - Well behaved pupils who are enthusiastic about subject and have good interaction skills <p>Participant 40:</p> <ul style="list-style-type: none"> - Positive feedback <p>Participant 44:</p> <ul style="list-style-type: none"> - Positive reactions from students <p>Participant 52:</p> <ul style="list-style-type: none"> - Feedback on my teaching <p>Participant 57:</p> <ul style="list-style-type: none"> - Feedback <p>Participant 97</p> <ul style="list-style-type: none"> - Joy-the kids faces 	<p>Participant 2:</p> <ul style="list-style-type: none"> - The response from the students <p>Participant 7:</p> <ul style="list-style-type: none"> - Positive response from students <p>Participant 15:</p> <ul style="list-style-type: none"> - Positive interaction with the students <p>Positive 16:</p> <ul style="list-style-type: none"> - The reaction of the students <p>Participant20:</p> <ul style="list-style-type: none"> - Pupils’ enthousiasm <p>Participant 23:</p> <ul style="list-style-type: none"> - Positive feedback from senior leadership, students or parents <p>Participant 30:</p> <ul style="list-style-type: none"> - Feedback from peers <p>Participant 39:</p> <ul style="list-style-type: none"> - Pupil responses during and outside lessons <p>Participant 43:</p> <ul style="list-style-type: none"> - Positive feedback from peers, leadership <p>Participant 51:</p> <ul style="list-style-type: none"> - Good kids <p>Participant56:</p> <ul style="list-style-type: none"> - Students gaining respect and following requests <p>Participant 63:</p> <ul style="list-style-type: none"> - Positive feedback from students, parents, and other staff

5) Goal achievement

The goal achievement theme included participants' responses that identified their professional goals and aspirations as supportive to their engagement in their work. It reflected the "personal commitment" of the subject category, and the "progress" sub-theme of the students' category. It, also, included certain responses that in the pilot-study that were found within the "colleagues", "leadership" and "school resources" sub-themes. Thirteen responses from ten participants in the pilot-stud and twenty two responses from sixteen participants in the survey-study focused on those perceptions to describe their sources of engagement support (table 75).

Table 74: “Recognition” responses

Each pilot-study’s participant responses	Each survey-study participants’ responses
<p>Participant 9: - Knowing my opinions matters</p> <p>Participant 28: - Recognition of a job well-done (by colleagues, SLT, pupils etc)</p> <p>Participant 35: - Recognition for hard work and effort, - Respect</p> <p>Participant 36: - Being valued, - Being “prized?” when I do something well,</p> <p>Participant 39: - Being valued, whole school thinking</p> <p>Participant 53: - feel supported in my role</p> <p>Participant 57: - Being valued</p> <p>Participant 73: - Personal motivation and passion for the students recognised by the key decision-makers in the school</p> <p>Participant 84: - Feeling valued</p>	<p>Participant 1: - Getting paid</p> <p>Participant 2: - I like to be recognized for my contributions</p> <p>Participant 3: - Having a paid employment responsibility</p> <p>Participant 13: - Feeling valued and appreciated</p> <p>Participant 15: - The knowledge that my work is respected both by my school colleagues and outside agencies, parents - Mutual respect</p> <p>Participant 17: - Praise from others and encouragement</p> <p>Participant 19: - Recognition from my peers and headteacher</p> <p>Participant 24: - Professional acknowledgement - Respect</p> <p>Participant 34: - Feeling valued and supported</p> <p>Participant 35: - Feeling appreciated and valued</p>

<p>Participant 103:</p> <ul style="list-style-type: none"> - Work being valued <p>Participant 109:</p> <ul style="list-style-type: none"> - Feeling valued <p>Participant 95:</p> <ul style="list-style-type: none"> - Having people value my experience and ideas - Money 	<p>Participant 39:</p> <ul style="list-style-type: none"> - Encouragement from other staff at school (teaching and non-teaching) <p>Participant46:</p> <ul style="list-style-type: none"> - Fairness <p>Participant50:</p> <ul style="list-style-type: none"> - Praise and thanks <p>Participant64:</p> <ul style="list-style-type: none"> - Pay
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Table 75: “Goal achievement” responses

Each pilot-study’s participant responses	Each survey-study’s participant responses
<p>Participant 2:</p> <ul style="list-style-type: none"> - Own motivation for own career decisions–school not that supportive <p>Participant3:</p> <ul style="list-style-type: none"> - Interest in subject - Care for students <p>Participant 27:</p> <ul style="list-style-type: none"> - Own personal goal to achieve & do well in my work <p>Participant 40</p> <ul style="list-style-type: none"> - Being successful - Working to my learning style <p>Participant 46:</p> <ul style="list-style-type: none"> - Loving my subject <p>Participant 73:</p> <ul style="list-style-type: none"> - Personal motivation and passion for the students <p>Participant 89:</p> <ul style="list-style-type: none"> - Continual high expectation of myself and staff <p>Participant 92:</p> <ul style="list-style-type: none"> - The students’ progress and achievements - Personal growth and development <p>Participant111:</p> <ul style="list-style-type: none"> - Vision 	<p>Participant 6:</p> <ul style="list-style-type: none"> - The pupils’ education <p>Participant 7:</p> <ul style="list-style-type: none"> - Seeing results <p>Participant14:</p> <ul style="list-style-type: none"> - The need to work well as a team member supporting the academic and pastoral needs of my students <p>Participant15:</p> <ul style="list-style-type: none"> - My continued enthusiasm to support progress whether academic, emotional or social <p>Participant21:</p> <ul style="list-style-type: none"> - The vision of where I want to be <p>Participant24:</p> <ul style="list-style-type: none"> - Achievement of students - Personal sense of accomplishment (job done well) - Becoming better/improvements <p>Participant25:</p> <ul style="list-style-type: none"> - Good planning <p>Participant26:</p> <ul style="list-style-type: none"> - Being organised - SMART targets <p>Participant 31:</p> <ul style="list-style-type: none"> - My commitment to young people <p>Participant35:</p> <ul style="list-style-type: none"> - Clear expectations and goals

	<p>Participant 40:</p> <ul style="list-style-type: none"> - Confidence that I'm doing the right thing/teaching the right way as students gain success. <p>Participant 50:</p> <ul style="list-style-type: none"> - Seeing the children make progress <p>Participant51:</p> <ul style="list-style-type: none"> - Love of my subject - High standards expectations <p>Participant60:</p> <ul style="list-style-type: none"> - If it can have results <p>Participant63:</p> <ul style="list-style-type: none"> - Having clear goals - Working towards the next step up the leadership scale <p>Participant 64:</p> <ul style="list-style-type: none"> - Students' A level results - Challenging student to think
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b) School perceptions

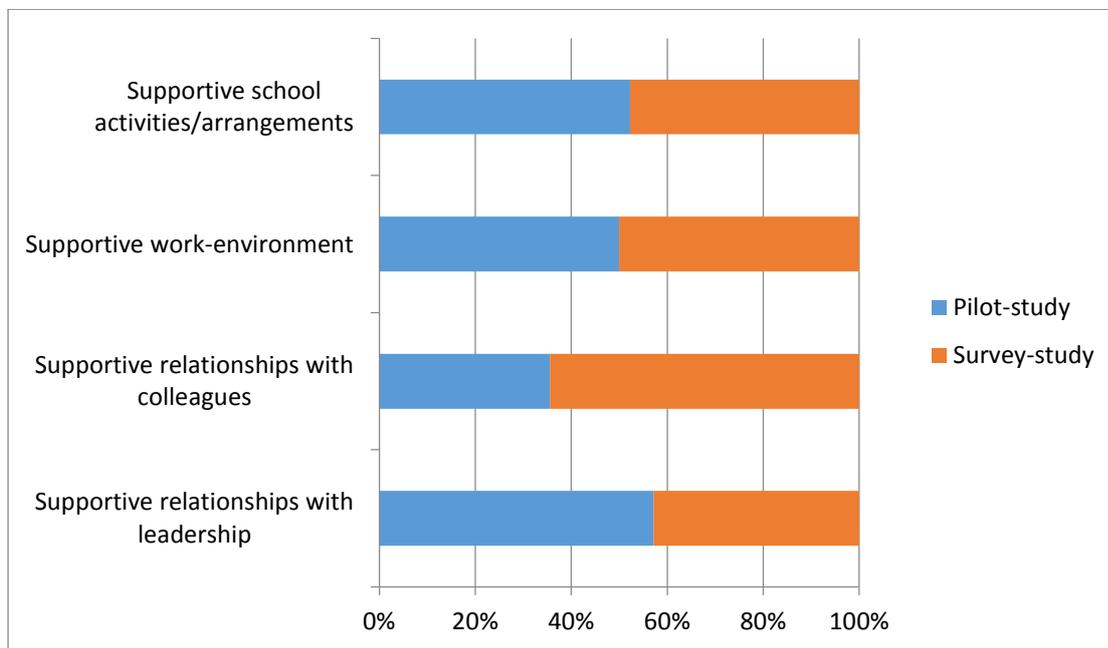
The category of school perceptions was the second category that emerged from participants' responses. It reflected the pilot study's themes of teachers' perceptions about their leadership, their colleagues, and their school resources. Three themes showed how teachers' school-perceptions support their engagement in their work:

- 1) Supportive relationships with leadership
- 2) Supportive relationships with colleagues
- 3) School resources:

- 3.1) Supportive work-environment
- 3.2) Supportive school activities/arrangements

Those themes were found in both pilot-study and survey-study participants’ responses (table 76) and are examined in depth below. A series of tables will, also, present each participant responses to each survey that formed those themes.

Table 76: School perceptions themes’ frequencies



As the above table shows, “supportive activities/arrangements” and “supportive relationships with colleagues” were the two most frequent themes in both surveys. On the other hand, “supportive work-environment” and “supportive relationships with the leadership” were the least frequent.

However, “supportive work-environment” was the equally frequent theme in participants’ responses in both surveys, while “supportive school activities/arrangements” and “supportive relationships with leadership” were slightly more frequent in the pilot-study participants’ responses.

Finally, the largest difference was found for the “supportive relationships with colleagues” that was more frequent in the survey-study participants’ responses.

1) Supportive relationships with leadership

The “supportive relationships with leadership team” theme reflects the “support” theme of the leadership category of the pilot-study themes. It included participants’ responses that identified their relationship with leadership as supportive to their engagement in their work. Eight responses from six participants in the pilot-study and six responses from six participants in the survey study focused on such perceptions to describe their sources of engagement support (table 77).

2) Supportive relationships with colleagues

The “supportive relationships with colleagues” theme reflects the “support” theme of the colleagues’ category of the pilot-study themes. It included participants’ responses that clearly identified their relationships with their colleagues as supportive to their engagement in their work. Sixteen responses from thirteen participants in the pilot-study and twenty-nine responses from twenty three participants in the survey study focused on such perceptions to describe their sources of engagement support (table 78).

Table 77: “Supportive relationships with leadership” responses

Each participants responses (pilot-study)	Each participants responses (survey-study)
<p>Participant 23:</p> <ul style="list-style-type: none"> - Enthusiasm and open-mindedness from leadership team <p>Participant27:</p> <ul style="list-style-type: none"> - Good working relationships with SLT <p>Participant32:</p> <ul style="list-style-type: none"> - Supportiveness of senior staff <p>Participant 42:</p> <ul style="list-style-type: none"> - Support from all staff-whether co-workers or Senior Management <p>Participant79:</p> <ul style="list-style-type: none"> - My immediate team leaders - Direct and perspnal relationships - Considerate & supportive leadership <p>Participant110:</p> <ul style="list-style-type: none"> - Line manager 	<p>Participant6:</p> <ul style="list-style-type: none"> - Supportive leadership team <p>Participant17:</p> <ul style="list-style-type: none"> - Supportive management <p>Participant36:</p> <ul style="list-style-type: none"> - Good leadership <p>Participant42:</p> <ul style="list-style-type: none"> - Line management support <p>Participant55:</p> <ul style="list-style-type: none"> - Public opinion/political will <p>Participant 63:</p> <ul style="list-style-type: none"> - Some members of the leadership group-with whom the departments is more closely associated with

Table 78: “Supportive relationships with colleagues” responses

Each participant responses (pilot-study)	Each participants responses (survey-study)	
<p>Participant9: - Sharing good practice with others</p> <p>Participant11: - Good communication amongst staff - Hard working team/ & supporting you.</p> <p>Participant27: - Staff morale - Working together to share ideas & good practice</p> <p>Participant30: - When colleagues & senior members of staff ask about new tasks-exam course for example, rather than dismissing or they have a miss or lack of understanding</p> <p>Participant34: - Relationships with staff, from the head to the caretakers, showing best practice with each other and trying them in my classroom</p> <p>Participant35: - Sharing good practice - Friendships & good working relationships with colleagues</p>	<p>Participant6: - Colleague that have a vision of the school - Positive colleagues</p> <p>Participant9: - The teachers around me; being able to call on their experience and advice if I need it - Sharing a common goal</p> <p>Participant17: - A team ethos</p> <p>Participant19: - Staff happiness - Good peer support network - People I can seek support from</p> <p>Participant20: - My colleagues</p> <p>Participant22:</p>	<p>Participant36: - Strong network of support</p> <p>Participant37: - Belonging to a team with supportive staff</p> <p>Participant41: - A fantastic “work team”</p> <p>Participant43: - Colleagues/collaboration</p> <p>Participant49: - Support of colleagues</p> <p>Participant50: - Support from colleagues - Advice</p> <p>Participant51: - Very pleasant staff group</p> <p>Participant52: - Good colleagues</p>

<p>Participant40:</p> <ul style="list-style-type: none"> - Discussing with like-minded teachers 	<ul style="list-style-type: none"> - People that support me, who think similarly and 	<p>Participant56:</p> <ul style="list-style-type: none"> - Staff/peers
<p>Participant42:</p> <ul style="list-style-type: none"> - Support from all staff 	<ul style="list-style-type: none"> have a similar mindset. 	<p>Participant58:</p> <ul style="list-style-type: none"> - My team
<p>Participant66:</p> <ul style="list-style-type: none"> - Working with supportive colleagues 	<p>Participant24:</p> <ul style="list-style-type: none"> - Friendship and colleagues 	<p>Participant 61:</p> <ul style="list-style-type: none"> - Contact with other teacher
<p>Participant90:</p> <ul style="list-style-type: none"> - Friendship 	<p>Participant26:</p> <ul style="list-style-type: none"> - Gaining social support from colleagues 	<ul style="list-style-type: none"> - Helping with learning styles
<p>Participant92:</p> <ul style="list-style-type: none"> - My team: their support and enthusiasm 	<p>Participant27:</p> <ul style="list-style-type: none"> - Having supportive colleagues 	<p>Participant63:</p> <ul style="list-style-type: none"> - Colleagues especially close department colleagues and year team managers with whom I work closely with
<p>Participant102:</p> <ul style="list-style-type: none"> - Support from other members of the staff 	<p>Participant29:</p> <ul style="list-style-type: none"> - Having a very supportive team to work with 	
<p>Participant111:</p> <ul style="list-style-type: none"> - Team reward me 	<p>Participant33:</p> <ul style="list-style-type: none"> - Supportive colleagues 	

3) School resources

The “school resources” sub-theme reflects the “school resources” theme of the pilot-study. It included participants’ responses that identified work in their schools as supportive to their engagement in their work. However, contrary to the pilot-study theme, it had only two sub-themes: supportive environment, supportive school activities/arrangements.

3.1) Supportive work-environment

The “supportive work-environment” sub-theme included participants’ responses that identified the support they perceive they have from their work-environment, aside from their relationships with their leadership team and their colleagues, as supportive to their engagement in their work. It reflected the “care”, “time”, and “positive/supportive environment” sub-themes of the “school activities” category in the pilot-study. Overall, nine participants in the pilot study and eleven participants in the survey-study focused on those perceptions to describe their sources of engagement support (table 79).

Table 79: “Supportive work-environment” responses

Each participant responses (pilot-study)	Each participant responses (Survey-study)
<p>Participant 26:</p> <ul style="list-style-type: none"> - Knowing that support to help move things forward is available <p>Participant3:</p> <ul style="list-style-type: none"> - If the school cares for me as a person (home/school balance, workload <p>Participant31:</p> <ul style="list-style-type: none"> - A supportive department in conjunction with other departments who are willing to engage in cross-curricular links <p>Participant35:</p> <ul style="list-style-type: none"> - Consideration re: workloads and work-life balance –particularly at hectic points of the year <p>Participant37:</p> <ul style="list-style-type: none"> - Positive environment <p>Participant50:</p> <ul style="list-style-type: none"> - Excellent departmental team and excellent pastoral team <p>Participant63:</p> <ul style="list-style-type: none"> - Departmental support <p>Participant74:</p> <ul style="list-style-type: none"> - Calm and positive environment <p>Participant99:</p> <ul style="list-style-type: none"> -Environment 	<p>Participant10:</p> <ul style="list-style-type: none"> - Clear supportive guidance and policies/practices <p>Participant13:</p> <ul style="list-style-type: none"> - Working in a supportive faculty/department <p>Participant33:</p> <ul style="list-style-type: none"> - Clear direction <p>Participant20:</p> <ul style="list-style-type: none"> - Facilities - Peace and quiet in my classroom <p>Participant21:</p> <ul style="list-style-type: none"> - The teachers and pupils with whom I work <p>Participant25:</p> <ul style="list-style-type: none"> - Lack of interruptions <p>Participant46:</p> <ul style="list-style-type: none"> - A supportive environment <p>Participant52:</p> <ul style="list-style-type: none"> - A positive environment

3.2) Supportive school activities/arrangements

The “supportive school activities/arrangements” sub-theme included participants’ responses that identified the support they perceive they have from their available school activities/arrangements as supportive to their engagement in their work. It reflected the “time”, “training” and “opportunities” “sub-themes of the “school activities” category in the pilot-study. Furthermore, it included responses regarding their working arrangements with their colleagues apart from their support. Twenty-two participants in the pilot study and nineteen participants in the survey-study focused on those perceptions to describe their sources of engagement support (table 80).

Table 80: “Supportive school activities/arrangements” responses

Each participant response (pilot-study)	Each participants responses (Survey-study)
<p>Participant14:</p> <ul style="list-style-type: none"> - Time to plan better lessons <p>Participant19:</p> <ul style="list-style-type: none"> - Excellent in school training on class management <p>Participant27:</p> <ul style="list-style-type: none"> - Departmental meetings <p>Participant28:</p> <ul style="list-style-type: none"> - Involvement in decision-making for large and small aspects of school’s life <p>Participant29:</p> <ul style="list-style-type: none"> - CPD opportunities - having time to try new things <p>Participant33:</p> <ul style="list-style-type: none"> - Working with other members of staff <p>Participant35:</p> <ul style="list-style-type: none"> - Flexibility - working with and learning from other schools <p>Participant36:</p> <ul style="list-style-type: none"> - Being given “time’ to do something well <p>Participant 40:</p> <ul style="list-style-type: none"> - ... being given enough time to do it well <p>Participant41:</p> <ul style="list-style-type: none"> - Knowing that we work as a team <p>Participant46:</p>	<p>Participant5:</p> <ul style="list-style-type: none"> - Teamwork <p>Participant19:</p> <ul style="list-style-type: none"> - Staff involvement in my projects <p>Participant20:</p> <ul style="list-style-type: none"> - Time when I get it - Opportunities to succeed <p>Participant24:</p> <ul style="list-style-type: none"> - Training <p>Participant25:</p> <ul style="list-style-type: none"> - Time of day (effects on pupil behaviour/energy) <p>Participant26:</p> <ul style="list-style-type: none"> - Departmental meeting to share good practice - Relevant/fun/inspiring schemes of work <p>Participant37:</p> <ul style="list-style-type: none"> - Collaborative work <p>Participant43:</p> <ul style="list-style-type: none"> - Collaboration <p>Participant46:</p> <ul style="list-style-type: none"> - Opportunities to develop <p>Participant48:</p> <ul style="list-style-type: none"> - Sufficient training - Time to finish a job

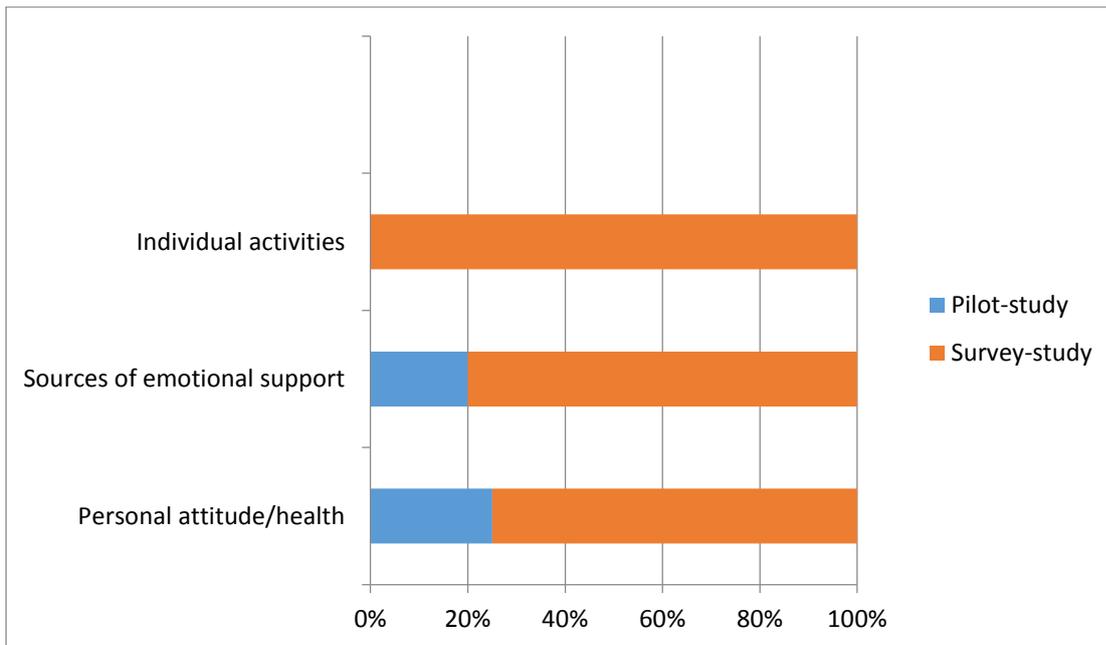
<p>- Working with my team</p> <p>Participant50:</p> <ul style="list-style-type: none"> - Excellent departmental team and excellent pastoral team <p>Participant52:</p> <ul style="list-style-type: none"> - Opportunities to do extra-curricular projects or enrichment activities - Team-teaching - Opportunities for collaboration <p>Participant57:</p> <ul style="list-style-type: none"> - Coaching - Collaboration <p>Participant58:</p> <ul style="list-style-type: none"> - Working with other teams to support students learning <p>Participant63:</p> <ul style="list-style-type: none"> - Training that is cascaded-dept <p>Participant102:</p> <ul style="list-style-type: none"> - Time (or lack of it) <p>Participant108:</p> <ul style="list-style-type: none"> - Working with peers on specific projects 	<p>Participant54:</p> <ul style="list-style-type: none"> - Opportunities for progression - Making a choice about what I get involved in <p>Participant55:</p> <ul style="list-style-type: none"> - Variables like timetable/calendar <p>Participant57:</p> <ul style="list-style-type: none"> - Collaboration with colleagues - Opportunities to showcase worth (productions, concerts, performance in and outside school) <p>Participant58:</p> <ul style="list-style-type: none"> - The international baccalaureate wide community <p>Participant61:</p> <ul style="list-style-type: none"> - Collaboration - Openness with the departments
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c) Non-work related perceptions

The category of non-work related perceptions was the third category of themes that emerged from participants' responses and reflected the pilot study's theme of teachers' non-work related resources (table 81). It included three sub-themes in which teachers were focusing on sources of support outside their work-environment:

- 1) Personal attitude/health
- 2) Sources of emotional support
- 3) Individual activities

Table 81: Non-work related perceptions themes' frequencies



These themes were the least frequently identified in participants' responses (table 81). However, survey-study participants identified them slightly more often than pilot-study participants, while "sources of emotional support" was overall the most frequent theme in participants' responses. Those themes are examined in depth below and a series of tables will present pilot-study's and survey's participants' responses that formed those themes.

1) Personal attitude/health

The "personal attitude/health" sub-theme included participants' responses that identified their own psychological states and health as supportive to their engagement in their work. One

participant in the pilot-study and three participants of the survey-study focused on such perceptions to describe their sources of engagement support (table 82).

Table 82: “Personal attitude/health” responses

Each pilot-study participant response:	Each survey-study participant response:
- Being happy	Participant19: - Fun Participant27: - A positive attitude always Participant55: - Health/energy

2) Sources of emotional support

The “sources of emotional support” sub-theme included participants’ responses that identified other aspects of their lives as sources of emotional support that are supportive to their engagement in their work. One participant in the pilot-study and four participants in the survey-study focused on such perceptions to describe their sources of engagement support (table 83).

Table 83: “Sources of emotional support” responses

Each participant responses (Pilot-study)	Each participant responses (Survey-study)
<p>- My husband & family</p>	<p>Participant8: -My family, especially my husband who supports all I do; my friends and their advice when times are rough; personal factors over school factors, I have found the support I need away from school</p> <p>Participant42: - Support of family</p> <p>Participant44: - God</p> <p>Participant58: - My partner</p>

3) Individual activities

The “individual activities” sub-theme included participants’ responses that identified activities that they undertake outside their work as supportive to their engagement in their work. Three participants of the survey-study focused on such perceptions to describe their sources of engagement support (table 84).

Table 84: “Individual activities” responses

Each participant responses (pilot-study)	Each participant responses (Survey-study)
	<p>Participant42</p> <ul style="list-style-type: none"> - Extra curriculum engagement <p>Participant53:</p> <ul style="list-style-type: none"> - Having a life outside of work and managing my time well so work is work and leisure time is leisure time this gives me the energy and enthusiasm needed to do the job well but also gives me a much needed sense of perspective <p>Participant63:</p> <ul style="list-style-type: none"> - Having other interests to ensure teaching maintains its interest, therefore ensuring life does not revolve around work

A.3. Overview

Participants’ perception of their sources of engagement support was the fourth aspect of teachers’ perceptions of job resources that the present study addressed. Overall, both the survey and the interview analysis showed teachers’ perceptions of what supports their engagement in their work can be an important source of information regarding teachers’ perceptions of job resources as they described aspects of their work that participants associated with their professional achievement.

Those findings were in accordance with psychological and educational research in related areas. In particular, the majority of research in job resources has measured such factors using psychological models. For example, Hakanen et al. (2006) focused on such factors testing a

psychological model that examined the relationship between Finnish teachers' job control, information, supervisory support, innovative climate and social climate and their work-engagement. Similarly, Prieto et al.'s (2008) psychological model among others it examined the relationship between teachers' job resources (measured as autonomy and support climate) and their work-engagement, while Bakker et al.'s (2006) model addressed the relationship between school principals' social support from colleagues, opportunities for development, and social support from the intimate partner and their work-engagement.

Those researchers were able to measure various job resources that can be found in the teaching profession and their analyses showed statistically significant relationships between teachers' job resources and their work-related well-being. Those findings only indirectly are related to the present study as teachers' perceptions of their sources of engagement support were examined using open-ended survey questions and interview questions. However, many themes that emerged from the qualitative analysis of teachers' perceptions of their sources of engagement support are in accordance with this line of research as they describe similar aspects of teachers work. Indeed, the present study showed that teachers' frequently focused on supportive aspects of their work-self ("goal achievement", "recognition", "work-significance", "positive feedback", "innovation"), school (e.g. "supportive school activities/arrangements", "supportive relationships with colleagues", "supportive relationships with leadership") and non-work related domain to describe these sources of support (e.g. "emotional sources of support").

On the other hand, research into employee engagement has drawn attention to a larger variety of factors in employees' work-lives that may influence their engagement in their work due to conceptual differences between the concepts of work-engagement and employees' engagement. In particular, Harter et al.'s (2002) conceptualisation of employee engagement has focused on employees' work-perceptions such as their perceptions of 1) clarity of expectations and provision of basic materials and equipment, 2) feelings of contribution to the organization, 3) feeling a sense of belonging to something beyond oneself, and 4) feeling as though there are opportunities to discuss

progress and grow. This line of research, though, does not use the generic definition of job resources, does not focus on the teaching profession this line of research and uses quantitative analysis. Therefore, it is only directly related to the findings of this research. However, it can be important as it addresses work-perceptions that can be supportive to one's engagement at work without assuming a motivational component. Indeed, the present study showed that "supportive school activities/arrangements" was among the two most frequent themes in teachers' descriptions of their sources of engagement support.

Finally, educational researchers have also focused on similar aspects of teachers' jobs without, though, identifying them as their job resources. For example, Collie et al. (2011) showed that teachers' school climate, measured as teachers' collaboration, students' reaction, school resources and decision-making, was a significant predictor of teachers' commitment. Furthermore, Lent et al. (2011) using a social cognitive integrative model showed that perceived organizational support was among the best predictors of teacher' job satisfaction and was indirectly related to their life satisfaction. Those findings are, also, indirectly related to the findings of the present study as they use quantitative analysis to address supportive work-perceptions focusing but they focus in the teaching profession without assuming by definition a motivational component. Indeed, the analysis of the teachers' perceptions of their sources of engagement support showed that "recognition", "goal-achievement", "supportive relationships with colleagues" and "supportive school activities/arrangements" were the most frequently found themes in participants' responses in both the pilot- and the survey-study.

Therefore, the present study's analysis of teachers' perceptions of their sources of engagement support drew attention to supportive factors of teachers' work in both surveys' analyses. Furthermore, such factors were addressed using the open-ended question "what supports your engagement in your work?" and, therefore, allowing individual to focus on any aspects of their work- and off-work life they wanted without assuming a motivational component in them.

The interviews, though, were able to examine those perceptions in a greater depth addressing the generic definition of job resources and its assumed motivational component more accurately than the pilot- and survey-study analyses.

8.3. Section B: Interview-analysis

Interview questions explored further aspects of teachers' perceptions that were addressed in the surveys as well as allowing inferences to be drawn from the surveys' analysis to interview analysis so that both of them can equally add to the construction of a definition of teachers' perceptions of job resources. In particular, the categories of themes that emerged from the interview analysis and described teachers' perceptions of their sources of engagement support were used to complement the themes and the conclusions drawn from the analysis of the pilot- and the survey- studies. Therefore, the interview themes reflected the themes that emerged from surveys' analyses and based on the definition of job resources and their assumed motivational role they addressed aspects of teachers' jobs that may be functional in achieving their work related goals (Demerouti et al., 2001). However, all themes were developed grounded on participants' responses on their perceived sources of engagement support.

Interviews' analysis approached teachers' answers based on the definition of job resources and their assumed motivation role (Demerouti et al., 2001) and interviewees' reflections on what supports their engagement in their work. Specifically, according to Demerouti et al.'s (2001) definition the term *Job resources* refers to those physical, psychological, social or organizational aspects of the job that may do any of the following: (a) are functional in achieving work related goals; (b) reduce job demands and the associated physiological and/or psychological costs; (c) stimulate personal growth, learning, and development. Furthermore, a key element in job resources is the motivational processes that they trigger (see Bakker et al.; Annet et al.; Hakanen et al., *Work & Stress*, 22, 3, July_September, 2008) that is also echoed in job characteristics theory (Hackman and

Oldham, 1980). This assumed role of job resources, along with the argument that job resources can be located in different levels of analysis within an organisation (Demerouti et al., 2001) substantially influenced the process of themes analysis. In particular, interviewees extensively described sources of support that they related with their own work in their schools and their work-environment. These discussions reflected the themes that emerged from the surveys' analyses but they, also, formed perspectives (organisational, interpersonal, work-role, task, and non-work related) that showed where these sources of support can be located in relation to their work, their schools, and their off-work life.

On the other hand, allowing interviewees to reflect on their own survey and interview answers and define their leadership support allowed the development of themes that were grounded on interviewees' responses. For this reason, two approaches were followed with regards to interviewees' perceptions of job resources:

- a) Surveys' analysis approach
- b) Interview analysis approach

The surveys' analysis approach involved the themes that emerged from the analysis of participants' responses on the question "what supports your engagement in your work" on the pilot- and survey-studies. The interviews' analysis approach involved the themes that emerged from the analysis of interviewees' responses. Both approaches are informative for teachers' perceptions of job resources. However, the second approach is a development of the themes that emerged in the pilot- and survey- studies. This approach provides a description of participants' perceived job resources located in different levels in the organisation grounded on their answers. What is more, though, it allows more accurate inferences from the data gathered with the survey and interview method to address the study's research questions.

B.1) Themes' development: Analytical structure

The construction of interview themes used the themes' analysis of the survey studies as a template and developed them as the interview analysis progressed. Analysis showed that those themes partially reflected interviewees' responses and they were not able to describe them adequately due to certain short-comings within each category and their sub-themes. For this reason, the second analytic approach was followed that produced a different categorization of themes. This analysis described teachers' perceptions of their sources of engagement support and resolved the shortcomings of the previous analytic approach and allowed a construction of a definition of teachers' perceived Job resources as a group.

a) Surveys' analysis approach

Interviews' analysis initially used the themes that emerged from the analysis of the survey question "what supports your engagement in your work" as a beginning point. It was able up to a certain degree to describe teachers' perceptions of their sources of engagement support and therefore a different analytical approach was required.

With regards to the category of positive work-perceptions, the analysis supported its five sub-themes: work significance, positive feedback, recognition, goal achievement, innovation. However, it provided an unadequate description of teachers' perceived job resources for two reasons. Firstly, the distinction between the "work significance", "positive feedback" and "recognition" sub-themes became problematic as the interview analysis progressed. Secondly, the "goal achievement" sub-theme proved to be a larger category of teachers' "professional achievement" that could encompass the rest of the themes in this category.

As far as the category of "positive school perceptions category" is concerned, data analysis supported its four sub-categories "supportive relationships with leadership", "supportive relationships with colleagues", "supportive work-environment" and "school activities/arrangements". This category provided a well-defined description of teachers' school

perceptions. However, it did not define adequately teachers' perceived job resources because overall teachers perceived that those aspects of their work in their schools were important for their "professional achievement" and "professional growth", which in turn became two of the main themes' categories that emerged through further interview analysis. As a result, they got combined under the perspectives that formed the sub-themes of the "professional achievement" and "professional growth" categories. Finally, the category of non-work related perceptions proved to be the most clearly defined one and remained as it was throughout the interviews' analysis and it formed the "non-work perspective" sub-theme of the "professional achievement" category.

b) Interview analysis approach

Interviewees' responses were analysed based on the generic definition of job resources and their assumed motivational role that is inherent in their definition. However, a second analytic approach was imperative for two reasons. First of all, as previously mentioned, the initial analytic approach followed in the analysis of participants' responses on the open-ended survey question provided up only up to certain extent a description of teachers' perceptions of job resources. Specifically, it provided an inadequately accurate description of teachers' perceptions of job resources, taking into consideration all interviewees data and reflecting the sources of support that interviewees discussed in their interviews. Indeed, there were some sub-themes that had emerged earlier that proved to be not that well-defined or collided with each other. Furthermore, new themes emerged and teachers' sense of control over their work and their role in the organisations became a re-current issue. Similarly, themes describing teachers' perceptions of their sources of engagement support and school activities/arrangements support got linked to their professional growth and professional achievement.

The "professional achievement" category was one of the largest categories of teachers' perceptions and it included interviewees' perceptions of aspects of their work that supported their

engagement in their work. It had already arisen in previous stages of analysis as a sub-theme in the category of positive work-perceptions but as the interview analysis progressed it became a separate category that reflected a large part of both initial sub-themes of “positive work-perceptions” and “positive school perceptions”. The advantage of this analysis is that it can support a definition of teachers’ perceived job resources focused on the first part of their generic definition: “physical, psychological, social or organizational aspects of the job that may be functional in achieving work related goals” (Demerouti et al., 2001). It, also, had five sub-themes that described the perceived importance of those sources. Among those themes the “non-work related perspective” was the only category that had emerged from the initial data gathered in the survey and remained the same throughout the interview analyses.

- organisational perspective
- interpersonal perspective
- work-role perspective
- task perspective
- non-work related perspective

Those sub-themes that emerged from this analytic approach enabled later a construction of interviewees’ profiles. Those sub-themes are explained below followed by illustrative examples from the interviews.

B.2. Illustrative analysis:

B.2.1. Professional achievement

a) Organisational perspective

The “organisational perspective” theme included teachers’ answers that described sources of support from an organisational perspective for their profession. In previous stages of the analysis this theme it was part of the “work significance”, “supportive relationships with leadership” and “school resources” themes. Two interviewees perceived that an organisational perspective of their sources of support is important for their engagement in their work and consequently their achievements.

Illustrative examples from the interviews:

“& if I know that what I do is perceived to be good by leadership, then I’m more like likely to get promoted...that keeps me going as well” (interviewee 1)

“The political will to pay us and reward us and not undermine us. Both nationally and in the local community there is a lot of comparison between schools each year when the A-level results come out and the number of students who may or may not go to Oxbridge & things like that, there’s a lot of opinion and selection going on (interviewee 2)

“The arrangements of classes where one’s free lessons come the non-contact time can be absolutely perfect and have a very good and satisfying year..and another year you’ve got a very bad class first thing on a Monday morning or a last in a Friday...so one can never say from year to year this is how it’s going to be.... it’s on the school calendar in terms of certain times of the year” (interviewee 2)

b) Interpersonal perspective

The “interpersonal perspective” theme included teachers’ perceptions of their relationships with their colleagues, students and leadership team. Four interviewees perceived that their interpersonal relationships were a significant source of support for their engagement in their work.

Illustrative examples from the interviews:

“In terms of working with staff and people that I know really helps me engage with my work. If I’m happy at work, I’m gonna be happier and engaged in my work... with support of staff in terms of getting to know different areas of curriculum staff can support me in this way and I feel more engaged if they have good ideas and can bring them to me” (interviewee 3)

“ That really helps me and my team speaking about M... and J... and people which are absolutely brilliant and more than just colleagues but friends s well and my department completely and totally supports me whether it’s good, whether it’s bad really, is just always there and listens and that kind of staff” (interviewee 5)

“I would definitely say one key factor is openness and respect to other teachers in terms of the styles, the pedagogies that they use and it’s interesting because it comes from a background that all of us in my department and different teacher training universities all specialize in different types of pedagogies and we all have our preferred style of teaching and we work together to support that individuals improve their lessons and suggest ideas in departmental meetings” (interviewee 8)

“We have a line manager who is a member of the senior leadership who pops down every couple of days checking everything is ok, he supports us quite a lot and takes an interest into what we are

doing really and supports us as a whole department...he is not distant because he is constantly aware of what is going on” (interviewee 9)

c) Work-role perspective

The “work-role” theme included teachers’ responses that the role that they perceive that they have in the organisation supports their engagement in their work. Four interviewees identified the role they have in the organisation as supportive to their engagement in their work.

Illustrative examples from the interviews:

“I like to be given the responsibility of helping other teachers. That makes me feel like I’m doing my job well” (interviewee 1)

“I’ve got a very interesting job, ‘cause I manage a faculty full of music, arts, drama, media studies so there’s lot of interesting things happening within the faculty which makes it very interesting because no 2 days are the same, every year we change projects , we do different things with the children that’s inspiring” (interviewee 4)

“It’s the wider community of IB, so the fact that this is really important to me, the fact that what I do out there with the IB is also of interest of what I do here but is a kind of sense of camaraderie that there is a wider community in sense of...because in terms of education certainly in the UK it’s quite a small cohort that actually do the IB in terms of who is teaching and students and school so it’s a very close community” (interviewee 5)

“The school is a very caring school where we want to push children from stage A to stage B to stage C and I feel that but doing what I do I contribute to that and that’s what makes me excited about the job” (interviewee 6)

d) Task perspective

The task perspective theme included teachers' answers that showed that perceiving their work in the classroom as important for themselves and their student supports their engagement in their work. Seven interviewees identified their classroom work as of importance for their engagement in their work.

Illustrative examples from the interviews:

" I feel responsible for the students...what keeps me motivated is that making sure they do well"(interviewee 1)

"In terms of students, when you get to know those students and they gain your respect and they want you respect. It's brilliant to see them following requests like when you ask them something they do it first time you see them down the corridor" (interviewee 2)

"The role of making a difference to the lives and contributing to the ethos and success of the school... seeing children coming out of my lessons or other I've worked with them stronger, knowing more.... (interviewee 6)

"Engagement involves an element of competition...also I think they need to see a point to it, they won't be engaged in a piece of work for long... if they don't see why they are actually doing it and what's the reason for them doing it...so it has to have results". (interviewee 7)

"We always keep track of whatever they are happy with in what they are doing in Stage 4 we do questionnaires making sure that the activities we do are relevant to what they want to do, we are not just doing the curriculum...So we change the activities depending on if they are into games or if they enjoy trampolining or whatever, so we change the activities they are doing...I think in PE it's

different because although it's a core subject we still ought to create our own curriculum, so whatever activities we are doing as long as the kids are enjoying them promotes their learning really
(interviewee 9)

“Challenging students to think. Get them to think about the world in ways that perhaps they haven't done before to challenge some of the ideas that perhaps they've grown up with, point of view “
(interviewee 10)

e) Non-work related perspective

Non-work related perspective included interviewees' responses in which they focused on other areas of their lives that they perceived as a significant source of support. This was the only category that emerged from the initial data gathered in the survey and remained the same throughout the interview analyses. Two interviewees identified such sources of support as important for their engagement in their work.

Illustrative examples from the interviews:

“ In terms of health/energy is a very debilitating occupation I think you have to be on top of your form in terms of fitness and health...you are not unique in that but children are very quick to know when you are not hundred percent on top of things...& that includes aging as well. Most people as they get older they go higher the profession and have less time in the classroom but if you remain a very much classroom teacher and have quite a high contact time it can be very wearing” (interviewee 2)

“I have lots of interests outside work: I play rugby. It's taking me away from work, something for me to do to enjoy rather than have it my whole life...I'll go mad otherwise” . (interviewee 9)

B.3. Overview

Interview analysis complemented surveys' findings and showed that teachers' perceptions of their sources of engagement support can define teachers' perceptions of their job resources as they describe aspects of teachers' jobs that may be functional in achieving work related goals (Demerouti et al., 2001). In particular, interview analysis formed the category of "professional achievement" and interviewees adopted organizational, interpersonal, work-role, task, and non-work related perspectives to describe their source of engagement support (table 85). Those themes reflected the themes' categories that emerged in the surveys' analysis but provided a more accurate description of interviewees' answers and met better the generic definition of job resources and its assumptions.

Table 85: Sources of engagement support-interview themes

Professional achievement			
Interviews' analysis	<i>Survey-question analysis</i>		
Organisational Perspective	<i>Positive school perceptions</i>	<i>Supportive relationships with leadership</i>	
Interpersonal Perspective		<i>Supportive relationship with colleagues</i>	
Work-role		<i>School resources</i>	<i>Supportive environment</i>
	<i>Supportive activities/arrangements</i>		
Task-perspective	<i>Positive work perceptions</i>	<i>Work-significance</i>	
		<i>Positive feedback</i>	
		<i>Recognition</i>	
		<i>Goal achievement</i>	
		<i>Innovation</i>	
Non-work related perceptions	<i>Non-work related perspective</i>	<i>Personal attitude/health</i>	
		<i>Sources of emotional support</i>	
		<i>Individual activities</i>	

The “organisational perspective” theme reflects parts of the previously developed “school perceptions” theme and parts of the “work-significance” sub-theme. The characteristic, though, of this theme was that interviewees described their sources of engagement support taking a professional point of view. Indeed, educational research has often discussed the subject of teachers’ professionalism and what this may mean for the teachers’ work inside and outside their classroom (e.g. Hargreaves & Goodson 1996; Hargreaves 1994; Helsby, 1996; Day; 2000)

The “interpersonal perspective” reflects the sub-themes of “relationships with leadership”, relationships with colleagues” and some elements of the “school activities” theme.

Therefore, it described the support they perceived they had from their colleagues and leadership teams through the relationships and collaborations they have with them. Those themes are consistent with research findings regarding teachers' stress and aspects of their work that buffer its negative effects (Kitching et al., 2009; Kieschke & Schaarchmidt, 2008; Klusmann et al., 2008). Furthermore, educational research in related areas has repeatedly shown the importance of leadership and colleagues support. For example, Day et al. (2007) based on the VITAE research project presented longitudinal data on factors affecting teachers' development, learning and effectiveness and showed that leadership support and colleagues' support most frequently contributed to teachers' sustained commitment. Similarly, MacTanish & Kolb (2006) after a review of the relevant literature suggest teachers' engagement is related to the collaborative culture of the school and teachers' psychological empowerment that they associate with teacher leadership.

The "work-role perspective" sub-theme includes teachers' perceptions about their role as teachers within the organisation. In particular, it described how aspects of their job that are functional in achieving work-related goals can provide support in achieving work-related goals, and absorbed some of the "work-perceptions" sub-themes (e.g. innovation, goal-achievement) and the "supportive environment" sub-theme of participants' school perceptions that emerged through the analysis of the pilot- and survey- studies. Those themes are consistent with the factors found in educational research regarding teachers' engagement and professional lives. For example, Day et al. (2007) showed that resilient teachers irrespective of their professional life phase focused on the influence of in-school leadership, colleagues and personal support.

The "task perspective" includes the themes of "work-significance", "positive feedback", "recognition" that as the analysis progressed failed to form separately well-defined themes. For this reason, they were coded as "task perspective" as they included teachers' perceptions about the significance of their work in the classroom with their students and the feedback they gain from them. The "task perspective" included participants' responses that focused on the perceived importance of their work, on their need to feel that their work is valued and recognized as well as

feeling that that they gain positive feedback from various sources. In doing so, they described their perceptions of aspects of their job that are functional in achieving work-related goals. These also reflected the “work-significance”, “positive feedback” and “recognition” sub-themes that emerged through the analysis of the pilot- and survey- study. Those themes are consistent with the factors found in educational research regarding the teachers’ work motivation and especially its intrinsic nature (e.g. Brundrett, 2008; Woodward, 2003).

Finally, the “non-work related perspective” was the same themes’ category that had emerged already after the analysis of the pilot- and survey-studies. It described teachers’ perceptions of aspects of their lives beyond their work that they perceived as supportive to their engagement in their work. The “personal attitude/health” theme refers to participants’ answers that mentioned that they way they feel supports their engagement in their work. The theme of “sources of emotional support” refers to participants’ answers that referred to sources of support such as family, friends, spirituality. Finally, “individual activities” refers to the support provided by the engagement with other activities outside school. Generally, psychological research has identified the significance of one’s perceived resources outside work for his/her performance and well-being inside their work. Such a finding has also been confirmed by education research. For example, Day et al’s (2007) presentation of longitudinal factors affecting teachers’ development, learning and effectiveness based on the VITAE project it showed that personal support (e.g. family) was among the factors that mentioned most frequently as contributing to teachers’ sustained commitment. Indeed, several researchers have focused on the interaction between teachers’ personal and professional lives (e.g. Hargreaves, 1994; Nias, 1989; Nias et al., 1992) and its pressure on the reality of their work.

8.4. Section C: Interviewees' profiles

The construction of individual profiles included individual answers in both the survey-study and the interviews and allowed a closer examination of teachers' perceptions of their sources of engagement support. Those were teachers' perceptions of supportive aspects of their jobs that interviewees associated with their professional achievement. By doing so they allowed drawing inferences from the survey method to the interview method in order to answer the present study's research question.

C.1) Individual profiles

Participants' perception of their sources of engagement support was one aspect of the job resources that the present study explored both through the survey- and the interview method. Specifically, interviewees were given the opportunity to refer to what supports their engagement in their work in their open-ended survey question and discuss their perceived sources of engagement support more extensively in their interviews. Indeed, one interview question was developed based on the following theoretical proposition:

“Perceiving aspects of one’s work as supportive, this will support one’s engagement in his/her work”

The construction of individual profiles allowed the examination of interviewees' preferences over adopting specific perspectives to describe their sources of engagement support. Those perspectives were in accordance with the above theoretical proposition as participants focused on different aspects of their work that they perceive as supportive in order to describe their sources of engagement support.

All interviewees discussed in their interviews their survey answers. A closer, though, examination of the themes found in interviewees' survey and interview responses showed certain differences (table 86). First of all, only five out of ten interviewees discussed in their interviews the exact same aspects of their jobs that they mentioned in their survey answers. In particular, interviewees 1, 3, 7, 9, 10 associated with their professional achievement exactly the same sources of engagement support that they referred to in their survey answers. The rest referred to either different or less aspects of their work in their interview question. Such differences in participants' answers, also, show that the interview themes can more clearly reflect the assumed motivational role of job resources than the survey themes. Those, difference were only lifted after the analysis of interviewees' perceptions their sources of available support at an event of a change (see the following chapter) as participants reflected on a greater variety of sources of support beyond those that they associated with their professional achievement.

Furthermore, the question "what supports your engagement in your work" showed that there were fewer differences among participants in relation to their gender (table 86). Specifically, both males and females discussed the same sources of engagement support but females adopted slightly more perspectives. Furthermore, three out of the four participants that associated with their professional achievement exactly the same sources of engagement support they mentioned at their survey-answer were, also, females. However, those were much smaller differences than the one found among males and females in other categories of interviewees' perceptions of job resources.

Table 86: Individual sources of engagement support themes

	Gender	Survey themes	Interview themes
1	F	Work-perceptions (recognition, work-significance), school perceptions (school resources)	Task, organisational
2	M	Work-perceptions (goal achievement) school perceptions (leadership, school resources) non-work related perceptions (health)	Non-work related, organizational (x2)
3	F	Work-perceptions (positive feedback), school perceptions (colleagues)	Interpersonal, task
4	F	School perceptions (colleagues, school resources)	Work-role
5	F	School perceptions (school resources) non-work related perceptions (emotional sources of support)	Work-role, interpersonal
6	M	Work-perceptions (work-significance), school perceptions (work-significance)	Work-role, task
7	F	Work perceptions (innovation, goal achievement)	Task
8	M	School perceptions (relationships with colleagues, school resources)	Interpersonal
9	F	School perceptions (colleagues, leadership), Work perceptions (positive feedback, goal achievement), non-work related perceptions (individual activities)	Interpersonal-. Task, non work related
10	M	Work perceptions (recognition, positive feedback, work-significance)	Organisational, Task

C.2. Overview

This section presented the third part of the analysis which focused on the inferences from one method to another through the construction of individuals' profiles. Indeed, the interview profiles used for each interviewee included both survey's findings and interview interpretations. The main finding was that, irrespective of teachers' gender, their perceptions of their sources of engagement support can define their perceptions of job resources as they describe aspects of teachers' jobs that may be functional in achieving work-related goals (Demerouti et al., 2001) and therefore important for their professional achievement. Finally, both survey findings and interview interpretations described the same sources of engagement support but individuals' interview answers were more able to show the motivational potential of teachers' perceived job resources as well as the ways in which they may be located in different levels of analysis within the organisation.

9.0) CHAPTER 9: TEACHERS' PERCEPTIONS OF THEIR SOURCES OF AVAILABLE SUPPORT

9.1) Introduction

This chapter is the last discussion chapter and focuses on the analysis of teachers' perceptions of their sources of available support. This is the fifth aspect of teachers' perceptions of job resources that the present study addressed. Compared, though, with the others that were discussed in the previous chapters, teachers' perceptions of their sources of available support were explored only through participants' interviews. It involved participants' reflections of sources of support in the face of a perceived demanding change and, therefore, it, also, answers the present study's research sub-question.

The chapter consists of two sections that examine teachers' perceptions of available sources of support. The first section will present the themes' analysis that described those perceptions along with illustrative examples from the interviews. The second one will focus on interviewees' profiles that will compare themes found in individual answers and focus on individual differences.

9.2) Section A: Interview analysis

Two interview questions explored teachers' perceptions of sources of available support. The first interview question asked participants' to describe a change they faced recently at their current workplace and what supported them most at the time. For this reason, two probe-questions were often used for this purpose:

I'd like you to describe to me a change that you experienced recently in your current workplace.

What did it involve and how did you experience it?

What helped you to adjust?

The second interview question asked participants to reflect on their answers in the survey's question "what supports your engagement in your work" and on available school activities/arrangements that supported them at the time of a change.

Do you think that any of the previously discussed activities provided you with help at the time?

Finally, after the first two interviews a need was identified for an additional question "how would you define leadership support for you?" as it was expected that potential interviewees holding different positions would perceive their job resources and leadership support differently.

A.1) Themes development: Analytical structure

Interviews' analyses approached teachers' answers based on the definition of job resources and their assumed motivation role (Demerouti et al., 2001) and interviewees' reflections on:

- a) what supported them when they faced a change in their current workplace
- b) the support that their sources of engagement support and/or their school activities/arrangements offered them at the time
- c) their definition of leadership support for them.

Indeed, especially important was the definition of job resources as physical, psychological, social or organizational aspects of the job that may reduce job demands and the associated physiological and/or psychological costs (Demerouti et al., 2001). However, allowing interviewees to reflect on their own survey and interview answers and define their leadership support allowed the development of themes that were grounded on interviewees' responses. For this reason, the themes that were developed earlier in the interviews allowed a better understanding of teachers' perceptions of job resources under perceived change demands. Specifically, five categories of

themes were constructed grounded on interviewees' answers that were used to describe teachers' sources of available support at an event of a demanding change:

- a) Change level
- b) Change support
- c) School activities/arrangements' support
- d) Sources of engagement support
- e) Leadership support

The "change-level", "change support", and "leadership support" categories emerged from interviewees' answers in the first interview question regarding participants' perceived resources at an event of a demanding change and were added to earlier developed interview themes. What is more, all themes allowed a definition of interviewees' perceptions of job resources based on the second part of their generic definition: "physical, psychological, social or organizational aspects of the job that may (a) be functional in achieving work related goals", and (b) reduce job demands and the associated physiological and/or psychological costs.

- a) Change-level

As far as the "change-level" category is concerned, it includes interviewees' perceptions of a recent change that they faced in their current work-place. As different kinds of job resources are expected to be found in different levels of analysis in any organisation, interviewees were told to focus on any change they considered significant for them. Indeed, interviewees described three types of changes:

- 1) Organisational-level changes
- 2) Work-level changes
- 3) Task-level changes

Organisational-level changes included structural and legislation changes; work-level changes regarding changes in the organisation of interviewees' work; and task-level changes regarding changes in their classroom-work.

b) Change support

The change support theme involves interviewees' responses on what supported them at the change event(s) they described. Similarly to other parts of this analytic approach it includes interviewees' descriptions of sources of support in relation to their work, their schools and their off-work life:

- 1) Organisational perspective
- 2) Interpersonal perspective
- 3) Work-role perspective
- 4) Task perspective
- 5) Non-work related perspective

c) School activities/arrangements support

The school activities/arrangements support category involved participants' reflections on whether school activities/arrangements that they discussed earlier in their interviews, also, supported them at that event of change. For this reason, three sub-themes were constructed following the same analytical approach that was followed earlier in the analysis of interviewees' answers:

- 1) Organisational perspective
- 2) Interpersonal perspective

3) Task perspective

Those themes had the same definition with the ones that emerged from the analysis of interviewees' perceptions of school activities/arrangement

d) Sources of engagement support

The sources of engagement support category involved participants' reflections on whether the perceived sources of engagement support that they discussed earlier in their interviews, also, supported them at that event of change. For this reason, five sub-themes were constructed following the same analytical approach that was followed earlier in the analysis of interviewees' answers:

- 1) Organisational perspective
- 2) Interpersonal perspective
- 3) Work-role perspective
- 4) Task perspective
- 5) Non-work related perspective

Those themes had the same definition with the ones that emerged from the analysis of interviewees' perceptions of what supported their engagement in their work.

e) Leadership support

The "leadership support" category includes teachers' definition of leadership support for them. Four themes emerged for this category:

- 1) Leadership role
- 2) Relationships with leadership
- 3) Leadership organisation
- 4) Change support

The reason that interviewees were asked to define leadership support for them was to examine whether the current role that teachers held in the organisation may signify differences in their perceptions of job resources especially with regards to their leadership support. Although this wasn't possible because in the ends eight out of ten interviewees were heads or assistant heads in their departments, interviewees' definition of leadership support were useful in understanding teachers' perceptions of job resources through the construction of individual profiles.

The "leadership role" theme included interviewees' responses that focused on the role that leaders have or have had in their school and why this has been important.

The "relationships with leadership" theme included interviewees' responses that focused on the relationships they have with the leadership team in their school and their importance for them.

The "leadership organisation" theme included teachers' answers that focused on the way leadership is organised in their school as an important factor of leadership support.

Finally, the "change support" theme included teachers' answers that focused on the support that they had from leadership related to a specific change in their workplace.

A.2. Illustrative analysis

As already mentioned one purpose of the interviews was to explore teachers' perceptions of job resources under perceived change demands. For this reason, interviewees were encouraged to reflect on what supported at an event of a demanding change, as well as on their own answers regarding their sources of engagement support and available school activities/arrangements.

A.2.1. Change level

Interviewees were told to focus on any change they considered as significant for them as different kinds of job resources are expected to be found in different levels of analysis in any organisation. Indeed, participants focused on different kinds of changes, how they impacted them and also what supported them the most at that time. As previously described, three types of changes emerged from interviewees answers:

- 1) Organisational-level changes
- 2) Work-level changes
- 3) Task

- 1) Organisational-level changes

Five interviewees referred to organisational-level changes that included structural and legislation change.

Illustrative examples from the interviews:

“Moving schools? We moved from four sites into one unified site and college...” (interviewee 8)

“We used to get all kinds of professional development and self-review if there was a need and sort of appropriate one could find a course, either in-house or externally one would be allowed....that is shrunk massively. It’s very rare now the one gets any external...so that is a change and is not just with the latest round of cuts it’s been over the last ten years one would say, Warwickshire particularly” (interviewee 2)

“We had just decided to go as an academy so it’s a massive change for the school. and at this moment of time there has been no change for me personally. The school will become an academy in

March or April. In terms of what happened for that to take place, we've had consultations within governors ehm... with the school, within the city wide to gain the most amount of knowledge about whether we should go Academy or not, so this has been a massive change for the school"
(interviewee 3)

"Yes, the new Ofsted legislation. Well, the new Ofsted legislation has changed things around basically so it's more emphasis on teaching and learning and how we can actually move that into our lessons. That's definitely something that has made me think about my lessons, ehm... making children all aware of knowing what they should be achieving during that lesson time whereas it's not just going out and teaching lesson, this is what we will achieve by the end of it but not levelling and all that sorts of stuff so it's bringing everything in questioning and being able to question me"
(interviewee 3)

"One of the changes in specific in my department has been in recent years rather than working in separate subject areas we've started to work more collaboratively as across different subject areas, so for example 2 years ago we introduced a year seven production in July with 270 children so that was a big change to the way we worked rather than separate areas so it has been really exciting so we have continued doing this project" (interviewee 4)

"So the big change has been a structural change here. In post 16 there was one who was over stage 5 and key stage 4 that basically did nothing and then they have taken him out. Then I was made a joint head of post 16 along with my colleague and then they decided to only have one head of post 16 and he got the position rather than me so I got an assistant head of post 16...I'm not really happy about that" (interviewee 5)

2) Work-level changes

Three interviewees referred to work-level changes regarding changes in the organisation of interviewees' work.

Illustrative examples from the interviews:

"Well everything about my job at the moment is about dealing with change... so my role was to basically undo everything they had previously done and start fresh. In terms of change you know I had to manage people that weren't very happy about that, I had to manage the person who previously run it so I was the person from outside coming in to do it, which obviously is not going to make this person feel good so I had to work with him, get him on board" (interviewee 1)

"I think that in the current situation we've got with key stage 4 this year we are in a process of changing our examination board...-I had to think as the head of the department how I'm going to approach it and I always think what approach I'm going to use but basically what I've done is gone through the different examination boards, printed off their exam papers, given away to my department and every lunch time we sat down and have a chat about what we liked or disliked as a group of four about the different examination papers, strengths and weaknesses and people can talk openly about what they hate and dislike" (interviewee 8)

"One issue is that things haven't changed dramatically for me personally at the school for quite some time. The role that I'm doing now I've been doing it for a quite a long time. And in terms of structure of the school, there haven't been any huge changes. I know that some secondary schools are moving towards academies and that is going to affect their teaching. But at the moment there hasn't been a lot of change at this school" (interviewee 10)

“I’m not bored with these sorts of teaching situation, it’s not the classroom that is boring, it’s the kind of...I’d like a new challenge of something else to do you know...like something else. I don’t know what it is, that’s part of the problem. If you don’t know what it is you want to do then you can’t actually do it, can you? You need to know what you want to do” (interviewee 10)

“I used to work in a FE institution which is for post 16 only. Then I came to work in the school. When I first came to the school the kind of relationships between teachers and students it was entirely different and the whole kind of ethos and the regimentation of the school was something that I found difficult to adjust initially. And I think that it took me quite a long time to adjust to that” (interviewee 10).

3) Task-level changes

Three interviewees’ referred to task-level changes regarding changes in the interviewees’ classroom-work.

Illustrative examples from the interviews:

“4 weeks ago the head asked me to take over the DRI departments. They never did well in this school and the children have done religious education and I’ve changed it to philosophy. I’ve changed the name to start with just for cosmetic purposes really but I’ve also decided to change the way it was going to be taught and change the way rooms was going to look like...everybody does the same every class year 7 to year 11 they work in the same theme and it’s all about developing their mind, their conscience, we started on how wonderful the body is and then we’ve learned to know the breathings and deep relaxation and then we started talking about the soul...-I was teaching French before, quite a different story” (interviewee 6)

“For me what has become massively important is technology. So we use a lot more digital technology, the use of stop watches, video-cameras and cameras to analyze performances and kids use those, there is a lot of technology that we use, when I first started as a teacher we didn’t use that at all”(interviewee 9)

“We had to change our control system for geography and is the one that I run and so I had to rewrite it and at the same time something else changed the English bacculaureate came in from this government and to make sure that all students have access to it we are giving all of our year 9 students either on geography or history course for GCSE and so I’m teaching a group of lower ability children in year 9 the GCSE which is completely new to me... this had been really a big change as well as delivering a new control assessment ehm.. it was quite daunting...I’ve woken up many times at night worrying about it...”(interviewee 7)

A.2.2. Change support

The change support category of themes involved the perspectives that interviewees adopted to describe what supported them at an event of a demanding change. Its sub-themes were formed following the same analytic approach as throughout interview analysis.

1) Organisational perspective

Organisational perspective refers to the support that interviewees’ perceived they had from the organisation of their schools or their school activities/arrangements at the time of a demanding change. Four interviewees adopted an organisational perspective to describe their sources of change support.

Illustrative examples from the interviews:

“they want to produce leaders so I’m in a position that not many teachers are... It is not only about the students is about teachers and developing young teachers and I’ve been very lucky that this is one....they funded me to come on this Masters so they have paid half of the money” (interviewee 1)

“In my own personal case, the fact that I stayed in one school most of my career. I think for my career this continuity and seeing education through ones set of management structure...I think I would have found much more difficult if I had been moving all the time to manage my own kind of perception of teaching and my own classroom management...I think I have stayed in my comfort zone but within that I’ve been quite successful” (interviewee 2)

“So I’m not involved in the big decision process, if I want to be involved in that kind of stuff...I’d like to leave here after 14 years. I’d have to leave and find another job, maybe within IB, maybe as a deputy head or as a head in another school but at the moment this has been a massive change for me and I’m not really happy about that (interviewee 5)

“It was good that we had a week’s transition. We sent people away, we set the holidays early so we could set up here and get ready ehm...and now we have every room with ICT we have laptops...and it’s been great” (interviewee 8)

2) Interpersonal perspective

Interpersonal perspective refers to the support interviewees’ perceive they had from their colleagues and leadership at the time of a demanding change. Eight interviewees adopted an interpersonal perspective to describe their sources of change support.

Illustrative examples from the interviews:

"I think support from colleagues, knowing that if I experienced a problem I could go and talk to someone and get advice on how to do it differently without someone doing it for me" (interviewee 1)

"I spoke to the principal about it and tells me that my impact is still there but is not officially recognized" (interviewee 5)

that's been very helpful, people knowing that I'm looking for work and say that: "these jobs are coming out keep an eye on them"(interviewee 5)

"What helps is the way the head thinks about the leadership in a school...he said because I know you are the best man for this job...no-one else has been able to do it, I think you can really do it and please just think about it..." (interviewee 6)

"What this schools is really good at id for say: here's your job you do it as you want it as long as in the end you've got the results you know the exam results, what we want to achieve as a school the way you do it and if you want to share it but it's up to you...I trust you in doing this" (interviewee 6)

"Openness was important, that we knew, what was happening when we had to move, when we had our boxes packed, what the impact would be on our teaching, what was available to us ehm... but we also had a collaboration in terms of the design of the new school and that was very important although I think the head-teacher just did what he wanted anyway (laughs) but in order to have good paper? You have to say that there was a consultation I'm not complaining because I absolutely love it. Openness enough for deadlines things like that, very clear transparent" (interviewee 8)

"Time was given to us every four weeks 2 hours we could link with those people like schemes of work, that was really brilliant, working with other people you know we had faced deadlines it was good and that went well. (interviewee 8)

- *"Greeting my team..., I think that colleagues were supportive and I think colleagues have also gone through, that is the need to have a job" (interviewee 10)*

3) Work-role perspective

The work-role perspective refers to the support that interviewees perceived that they received from the way their work is organised. Four interviewees adopted a work-role perspective about their sources of change support at an event of a demanding change.

Illustrative examples from the interviews:

" Because we've been working with different subject areas I've been working with the drama teaching, which I wouldn't normally do and I've been going into arts lessons to have a look into what they were doing for the project which I wouldn't normally have done and that has been very important " (interviewee 4)

" Many things in my life come back at the IB community, although I run the programme here I'm also a consultant for them, a workshop leader for them, an examiner for them, I've sat in the national committee for them and all that staff" (interviewee 5)

"And I thought ok trust me to do it and I'm gonna take it as a challenge and I put my conditions...in exchange I don't want to be pressurised for this or that, I want to do it the way I want to do it. I don't want people telling me do it in this way and not in that way" (interviewee 6)

"I think that the transition from a college environment which is much more informal between teachers and students to the school relationship where there is much stricter hierarchy kind of changed me as a person I think, I had to adapt myself to work in a situation like this " (interviewee 10)

4) Task perspective

Task perspective refers to the support that interviewees' perceived that they had from their classroom work at an event of a demanding change. Four interviewees adopted a task perspective to describe their sources of change support:

Illustrative examples from the interviews:

"...from the point of view of my own job satisfaction because I'm a singer and I think in secondary schools singing is done not very well we wanted to try to get children sing a lot and there have been some national initiatives from the government about getting children to sing more and so by doing the year seven production and also currying arts, dancing, drama, teachers as well it gave us a really good excuse to say all children you are going to be in the production and everyone is going to sing"
(interviewee 4)

"Here's taking a real risk because every week is different you don't know how the children are going to react. It's completely out of their comfort zone and the overall majority of the children are loving it, they want more" (interviewee 6)

"Some of them didn't know me before but they definitely came to trust me...their books show a level of understanding, not the greatest level of understanding but I never expected that... they are very smiley at class and I take that as a good thing. I made sure that I've marked their books, I've marked their work almost daily to begin with 'cause I needed to get their level ... I do a lot at the start of the lesson of how are we today, how we are all feeling a lot of emotional intelligence to get them feeling a bit more secure. These kids at the end of it will have a grade... I wanted for them was to understand more about geography more about the world they live in" (interviewee 7)

"They are very smiley at class and I take that as a good thing" (interviewee 7)

“Technology in trampolining because we have video and kids can watch what they have just done and have another go and compare the two” (interviewee 9)

5) Non-work related perspective

Non-work related perspective refers to sources of support that interviewees did not place within their school environment. One interviewee adopted such a perspective to describe his individual attitude as his main source of support.

Illustrative examples from the interviews:

“Being determined really not to let them beat me really” (interviewee 10)

A.2.3) School activities arrangements support

The school activities/arrangements support category of themes involved the perspectives that interviewees adopted to describe the support that their available school activities/arrangements also offered them at the event of a demanding change. Those themes were the same themes that emerged from participants’ answers earlier in their interviews.

1) Organisational perspective

Four teachers focused on the support those activities/arrangements offered them as members of the organisations at an event of a demanding change:

Illustrative examples from the interviews:

“Being given opportunities if you want them is the best thing that you know has motivated me, if I’d been in a school where there were no such opportunities I know I would have been bored quickly but because I’ve been given lots of opportunities to do and I can put... there’s so many opportunities you can go in any direction you want to, that’s been great” (interviewee 1)

“We had to do departmental peer work, we had learning walls, we have actually work with another department within our school to gain ideas from each other” (interviewee 3)

“Interdepartmental collaboration was definitely... I’m a PE teacher and we worked with science. It was nice to see what science would do and what we could bring in together to help each other out “ (interviewee 3)

“Coaching has been quite useful. I did some coaching, I was the coachee -we have a process, we have an external coach that the school employed that comes in and helps for some years now and that was quite useful”. (interviewee 5)

2) Interpersonal perspective

Five interviewees reflected on the support that those school activities/arrangements offered them through their relationships with their colleagues:

Illustrative examples from the interviews:

“I’d say being listened to by the leadership team” (interviewee 1)

“I think we rely on one another, you need to know you can share problems or if you can achieve the particular end someone else may have a solution. I think for teachers the days that a person was in their classroom on their own are gone, there is an open-door policy, peer observation and team teaching and things like that that are much more encouraged” (interviewee 2)

“I haven’t seen him this year, I need to see him again so I’m not seeing him since I’ve been feeling I don’t want to be here you know. It isn’t that this is a bad job but I’m teaching for 14 years and I don’t want to be in this position really I want to be having more managerial role that I have”. (interviewee 5)

“Work that we’ve done with my follower geographer...because she has taught some of them before and I haven’t but also the teacher-assistant in the classroom ehm...knows me very well and so I’ve been asking her opinion about what she thinks and of giving her some of the work you know...so she has been very helpful as well a lot of discussion in team work, the whole team this is vital when you are approaching something new, they’re supporting me”. (interviewee 7)

“I think certain approaches such as coaching and mentoring, there are coaching methodologies and different ways of doing it. For example, when we have performance management reviews and is part of that process we observe for lessons and some give us feedback. A lot of people have different methods if they are being coached and you know a teacher wants to know what was good about it, what great have I got and what can I do to improve. And sometimes if somebody says to me okay we can have a coaching session after that observation I can think okay I can know what to expect from

that... if somebody is talking to me "are they coaching me?" ehm... I may thought that's patronizing but it's effective if I know that's going to happen" (interviewee 8)

3) Task perspective

Three interviewees reflected on the support that their classroom work offered them through those school activities/arrangement when they faced a demanding change:

Illustrative examples from the interviews:

"Yes, definitely we had a whole idea about, we were doing telly of questionnaires, so what we were questioning we used close quote or open questioning during our lessons time. So somebody would come in and actually observing you, focusing on that it was really important and actually helped us in terms of making things right. If you had lots of open questions in the beginning of the lesson but I've found it very difficult to do it during the lesson and it's now focusing on now to improve those to have with the teaching and learning in my lessons" (interviewee 3)

"Co-teaching and team teaching has been very important and also...Because we've been working with different subject areas I've been working with the drama teaching, which I wouldn't normally do and I've been going into arts lessons to have a look into what they were doing for the project which I wouldn't normally have done and that has been very important" (interviewee 4)

"It has been a challenge yes, definitely yes. And because it was so new I was quite concerned about this to have lots of time ehm...these kids at the end of it will have a GCSE, it may not be a great G it may be up to I don't know 1-2 may get a C but the rest will be lower. But they will have a grade, but more than that I decided in the outset the point that I wanted for them the results I wanted for them, was to understand more about geography more about the world they live in and that they did enjoy

the learning and so we are trying to build some learning skills. So they walk away with some learning skills they didn't have before that they can apply next year... I'll also be very happy and enjoy the challenge of them much more than I thought I would but that's because I think they are enjoying too"
(interviewee 7)

A.2.4) Sources of engagement support

The sources of engagement support involved the perspectives that interviewees adopted to describe the support that their sources of engagement support also offered at the event of a demanding change. Those themes were the same themes that emerged from the analysis of the question "what supports your engagement in your work" as interviewees reflected on their own answers. Therefore five sub-themes described teachers' perceptions of the support that those aspects of their work offered at an event of a demanding change.

1) Organisational perspective

One interviewee adopted a professional point of view to describe his sources of available support:

Illustrative examples from the interviews:

"I do think that we've narrowed our sides in education to teaching to exam syllabuses and to the test and the broad education and the connectivity of education had somewhat they've lost it's somewhat...this is my subject, that is what you need to get through it, ehm... you may drop that subject ok...you have your exam, you don't need to know anything more about geography or history or the environment 'cause you have your certificate and now we concentrate on English degree level, or postgraduate level...and so that narrowing yes...specialism but...and I think it's been encouraged by SATS and GCSC (interviewee 2)"

2) Interpersonal perspective

One interviewee focused on her interpersonal relationships to describe her sources of available support.

Illustrative examples from the interviews:

“Collaborations with colleagues that’s definitely has been the case because we have all talked about what we were doing and we had worked together. I would have to share ideas to put the project together and this ultimately has been a big production at the end of all this” (interviewee 4)

3) Work-role perspective

Two interviewees focused on the way their work is organised to describe their sources of available support.

Illustrative examples from the interviews:

“Working with other schools and organisations. Again the IB because you know I’m here, other schools the work I do with them through the IB so I expect a phone call in half an hour from another school and that has been really useful” (interviewee 5)

“So I had to think as the head of the department how I’m going to approach it and I always think what approach I’m going to use but basically what I’ve done is gone through the different examination boards printed off their exam papers, given away to my department and every lunch time we sat down and have a chat about what we liked or disliked as a group of four ehm...about the different examination papers, strengths and weaknesses and people can talk openly about what they

hate and dislike or we have all accepted the fact beforehand that we probably need to change at least we are 90 % sure” (interviewee 8)

4) Task perspective

One interviewee focused on his classroom work to describe his sources of available support.

Illustrative examples from the interviews:

“I’m hoping by the end of this term to have changed a lot of the way that children think and opening new ways of thinking and I can see already and all the staff had told me that the children are different they come out of your lessons and they talk about things that they have never talked about...” (interviewee 6)

5) Non-work related perspective

One interviewee focused on sources of support outside her work to describe her available sources of support.

Illustrative examples from the interviews:

“My partner has been incredibly supportive and tells me just do whatever you want to do, if you need to leave then leave, if we need to move to a different country then we will move to a different country and that has been really really...far more than anybody in the school. People listen but in terms of actual support...” (interviewee 5)

A.2.5. Leadership support

One last goal of the interviews was to examine whether the current role that teachers held in the organisation may signify significant differences in their perceptions of job resources especially with regards to their leadership support. Similarly to the previous interviews' analysis this question was also analysed based on the generic definition of job resources.

1) Leadership role

The "leadership role" theme included teachers' answers that focused on the role that leaders have or have had in their school and why this has been important. Overall, one interviewee identified leadership role as an important aspect of leadership support for her.

Illustrative examples from the interviews:

"...over the years I had three headteachers all very different and most being here quite a long time so they had and manage changes in society and changes in the education and such....Because they have so much power and if they use it wrong it can you know quickly demolish a lot of systems and you know something simple as the budget if they can't manage the resources of the school they you can't buy books or employ the staff you need..." (interviewee 2)

"I think we have a weak leader. I think she's not as good as she thinks she is" (interviewee 5)

"I think leadership in this school is fundamentally driven by external factors... leadership in this school is organized to respond to Ofsted ...I don't think that I feel inspired by some charismatic

leader, I think we have a lot of people that are panicking about filing, we try to fit around their issues” (interviewee 10)

2) Relationships with leadership

The “relationships with leadership” theme included teachers’ answers that focused on the relationships they have with the leadership team in their school and their importance. Overall, two interviewees identified relationships with leadership as a significant factor of leadership support.

Illustrative examples from the interviews:

“I find everybody within that leadership body is absolutely fantastic and supporting me as I progress through this new job that I’ve got but also to help support others within the group” (interviewee 3)

“My subject leader for geography, I see her as my boss. She’s been very helpful” (interviewee 7)

3) Leadership organisation

The “leadership organisation” theme included teachers’ answers that focused on the way leadership is organised in their school as an important factor of leadership support. Overall, three interviewees identified the organisation of leadership as a significance source of support.

Illustrative examples from the interviews:

“We have a line a manager I would go if I have any problems if we have problems in the department and then we will go to our department manager, he’s brilliant anyway. If we have issues within lessons then we sent children to the referral room...” (interviewee 9)

“To me...I have an assistant head that I call line manager for the pastoral side of things, ehm... who is absolutely brilliant you can go and for support. We also have deputy head that is also part of our pastoral team” (interviewee 9)

“We’re trying to get from a satisfactory school to an outstanding school and we’ve had big structural change in the leadership here, so we had heads of faculty subjects that have been brought for the first time, we’ve had 2 vice principals-one retired, one leave-we had someone coming in that role. So things have been restructured and I think bringing the heads of faculty had been really helpful for people” (interviewee 5)

4) Change support

The “change support” theme included teachers’ answers that focused on the support that they had from leadership with regards to a specific change in their workplace. Overall, three interviewees focused on such support during change to define leadership support.

Illustrative examples from the interviews:

“For this venture it was just saying it’s a bit more money to buy the resources you want: do you want this room?, what do you want for the room? You want it re-paint it or you want redecorate it?...anything that I ask which is reasonable...and initially they even came to see if it was working and if the children were responding and people knocking at the door : are you okay?” (interviewee 6)

“My subject leader for geography. She supports sometimes just switching rooms if I say that then she will say ok let’s make the life easier of those children let’s switch rooms. A couple of them are autistic and they haven’t got confidence so things like that make them more comfortable so this has been really useful” (interviewee 7)

“For me personally leadership support has been really good, because the head-teacher and the senior team they value what we do in music and what we try to do so we had lots of support from them both financially in giving us some finances for the project and also being there for performances and sending children thank you notes and the staff thank you’s and things like that which have been very supportive” (interviewee 4)

A.3. Overview

This section presented the analysis of the interviews questions that described teachers’ perceptions of available support at an event of a demanding change. In particular, interview interpretations were based on the second part of the generic definition of job resources...However, the themes’ development were grounded on participants’ answers and extended the same themes that were developed in the analysis of the interview question “what supports your engagement in your work”.

Three categories of themes were developed: change level, change support and leadership support. Similarly to the categories of themes that emerged at the analysis of the other interview question, they also reflected both the motivational element of the concept of job resources and the assumption that they can be found in various levels of analysis within the organisation (Demerouti et al., 2001). Psychological research in job resources has often examined job resources under high demands among various occupational groups including the teaching profession (e.g. Bakker et al., 2007; Hakanen et al., 2006; Hakanen et al., 2005). However, those pieces of research have addressed teachers’ job resources using quantitative analyses.

The present study showed that teachers’ reflections on available sources of support when they faced a demanding change in their work-life can describe their perceptions of their job resources. In particular, interviews’ analysis showed that teachers focused on the organisation of

their schools and its arrangements (organisational perspective), their interpersonal relationships (interpersonal perspective), the organisation of their work (work-role perspective), their classroom work (task perspective) and their off-work life (non-work relate perspective) to describe their sources of available support. These findings are in accordance with the generic definition of job resources but they offer a qualitative definition that focuses on the specific experiences of a specific group of teachers. Therefore, such a definition could supplement a quantitative assessment of job resources in order to meet the specific needs of certain individuals and address their specific perceived sources of support in their organisations.

Finally, interviews' interpretations were examined in parallel with the ones that emerged earlier regarding participants' sources of engagement support and their school activities/arrangements support. Those comparisons showed that although the same themes emerged from the analysis of interviewees' answers they did not have the same frequency. In particular, interviewees focused on supportive aspects of their work that they had discussed about earlier in their interviews. Compared, though, to their earlier responses those descriptions were more vivid and descriptive but referred to a smaller amount of perceived sources of support. This finding was further examined through the construction of individuals' profiles and supports the argument that job resources become increasingly important when they are under threat (Bakker & Demerouti, 2007). Although, it was formed in the context of quantitative research in job resources, interviews' analysis showed that their importance of certain sources of support for the individuals can be understood better through their reflections about a time that they needed them the most.

9.3) Section B: Interview profiles

The construction of individuals' profiles allowed a closer examination of interviewees' perceptions of their sources of available support at an event of a demanding change by comparing individual responses in different parts of the study. In doing so they addressed the present study's research sub-question and the theoretical propositions and framework that formed the interview questions.

The second research question of the present study was “Do they (teachers’ perceptions of job resources) differ under change demands”? Indeed, the interview hypothesis regarding this research question was that “job resources gain their salience under change demands” (Bakker & Demerouti, 2007). Furthermore, the construction of interview profiles examined the degree to which the theoretical propositions developed for this research study were able to be met:

“Perceiving that aspects of one’s work can also support him/her when he/she faces change demands, this will significantly support him/her”

“Perceiving having enough resources (irrespective of their source) during change is important for one’s engagement in his/her work”

Finally, individual profiles were able to examine more closely individual perceptions of their sources of support at the face of a demanding change and draw comparisons as described by the theoretical framework that led the study’s interview questions:

- 1) *“Description of what one perceives that supports him/her when dealing with perceived change.”*

Teachers’ perceptions of their available sources of support at an event of a demanding change were able to provide the above description.

- 2) *“Description of one’s perceived available resources when dealing with perceived change.*

Vs

Description of his/her available resources”

A comparison among the themes on individual responses regarding participants' perceptions of change support and their available sources of support provided the above descriptions.

3) *"Description of one's perceived available resources when dealing with perceived change.*

Vs

"Description of what one perceives that supports his/her engagement in his/her work"

A comparison among the themes on individual responses regarding participants' change support and their sources of engagement support provided the above descriptions.

4) *"Description of one's perceived available resources when dealing with perceived change.*

Vs

"Description of one's perceptions of available school activities/arrangements"

A comparison among the themes on individual answers regarding participants' available sources of support and their school activities/arrangements' support met the above descriptions.

B.1) Individual profiles

Interview profiles examined each individual's answers in this part of the interview compared with his/her answers earlier in the study. By doing so they tested a number of theoretical propositions that were developed to address teachers' perceptions of their job resources under

perceived change demands. In particular, six questions were included in the individual profiles to define interviewees' perceptions of their job resources under perceived change demands:

- a) Background variables (gender, current role in the organisation).

Participants' gender was included in the individual profiles in order to examine if there may be any significant differences among interviewees' answers based on it. As eight out ten interviewees were heads or assistants heads in their department only gender was further used in interviewees' profiles.

- b) Interviewees' responses on the survey- and interview- question:

"What supports your engagement in your work?"

Interviewees' answers on this question were included in the construction of interviewees' profiles in order to allow comparisons among each individual's answers.

- c) Interviewees' responses on the question:

"Could you select the most important activities for you from those you ticked in the questionnaire that you can find in your school? Why?"

Interviewees' answers on this question were included in the construction of interviewees' profiles in order to allow comparisons among each individual's answers.

- d) *"I'd like you to describe to me a change that you experienced recently in your current workplace. What did it involve and how did you experience it? - What helped you to adjust?"*

This question was included in the interview profiles because it examines teachers' perceptions of their sources of available support.

- e) Interviewees' responses on the questions:

“Do you think that any of the previously discussed activities provided you with help at the time?”

“Do you think that any of your answers that you see (showing them their answers) you mentioned that supports your engagement in your work provided you with help at the time?”

These questions were included in the interviewees’ profiles in order to allow comparisons among individuals’ answers.

f) Interviewees’ responses on the question:

“How would you define leadership support for you?”

This question was included in the interviewees’ profiles as themes’ development showed that interviewees often related their leadership support with their perceived sources of available support.

B.1.1. Available perceived resources

There were thirty seven discussions regarding interviewees’ perceived support for sixteen events of change. Five interviewees described six situations of organisational-level change (N=5), five interviewees described five situations of work-level changes (N=5), and three interviewees described three situations of task-level change (N=3) (table 87).

Table 87: Interviewees' gender and change-level themes

Gender	Change-level
1) F	Work
2) M	Organisational
3) F	Organisational
	Organisational
4) F	Organisational
5) F	Organisational
6) M	Work
	Task
7) F	Organisational
	Work, Task
8) M	Organisational
	Work
9) F	Task
10) M	Work
	Work

In all cases that interviewees referred to more than one change in their interviews they were encouraged to elaborate more on the one that they perceived as more demanding. The only difference in interviewees discussions based on their gender was found with regards to organisational-level changes as three female interviewees referred to seven situations of change (N=3), while males only to two (N=2). Other than that, females referred to slightly more work-level (4:2) and task-level (2:1) changes than males.

In those discussions (table 88) the most common perspectives interviewees adopted to describe their sources of available support were organisational perspectives (N=11) and interpersonal perspectives (N=10), followed by work-role perspectives (N=6), task perspectives (N=7), non-work related perceptions (N=2), and leadership support (N=3). Individuals' organisational, interpersonal, task, and non-work related perceptions emerged as part of the themes development regarding teachers' answers on available sources of support but the analysis of interviewees' of their definition of leadership support gave the separate theme of "change support". Indeed, there were two cases in which interviewees' defined their leadership support as the support they perceived they had at the event of the change they described, separately to the sources of available support that they discussed in other part of their interviews.

Table 88: Interviewees' gender and their available perceived resources

Gender	Change-support	Engagement support (change question)	School activities/ arrangements' support (change question)	Leadership support
1)F	Organizational, interpersonal	Organisational	Organizational, interpersonal	-
2)M	Organisational	Organisational	Organisational	Leadership role
3)F	-	-	-	Relationships with leadership
			Organisational, Task	Leadership organisation
4)F	Work-role	Interpersonal	Task	Change support

5)F	Organisational, work-role, Interpersonal	Work-role, Non-work related source of support	Organisational, Interpersonal	Leadership role Leadership organisation
6)M	Interpersonal, Work-role	Task	-	Change support
	Task	-		
7)F	-			Relationships with leadership
	Task	Task	Interpersonal	Change support
8)M	Organisational, Interpersonal		Interpersonal	-
		Work-role		
9)F	Task	-	-	Leadership organisation
10)M	organisational			Leadership role
	Interpersonal, work-role, non- work related perspective			

Both females and males identified the same sources of support and adopted the same perspectives to describe them. Furthermore, eight out of ten interviewees adopted multiple perspectives to describe their available support at an event of a change but female interviewees adopted such multiple perspectives more often than males. Specifically, females' interviews gave more discussions regarding their available sources of support through a task perspective than males (5:1) as individually they also adopted more often a task perspective than males (F=4, M=1).

Furthermore, females' interviews produced more discussions regarding their available sources of support through an organisational (6:5) and interpersonal perceived support (6:4) although individually they did not adopt organisational (F=3, M=3) and interpersonal (F=4, M=3) perspectives much more often than males. Similarly, more male interviewees adopted a work-role perspective (F=2, M=3) to describe their sources of available support at an event of a change but their interviews did not produce more discussions about their perceived sources of support adopting a work-role perspective (F=3, M=3). No differences were found with regards to interviewees' perceptions of non-work related support based on interviewees' gender.

Finally, interviewees' definitions of perceived leadership support provided some additional information regarding interviewees' perceived available resources. Female interviewees discussed more extensively all themes of leadership support: leadership role (N=1), leadership organisation (N=3), relationships with leadership (N=2), and change support (N=2), while males discussed only about leadership role (N=1) and change support (N=1). Furthermore, leadership role and change support were two themes that emerged from interviewees' definitions of leadership support that were important for understanding their available resources at an event of a change. Specifically, all three interviewees that defined their leadership support as change support referred to how their leadership supported them at the event of a demanding change. That information was additional to the perspectives that interviewees adopted previously in their interviews to describe their available resources and for this reason it was treated as a separate theme of interviewees' perceived available resources. Moreover, the three interviewees that defined leadership support as "leadership role" were the ones that were the most critical towards leadership in their interviews as a whole. The first one was the interviewee that adopted the most organisational perspectives in his interview to describe his perceived sources of support, often referring to the support (or lack of it) that teachers as professionals have not only from the school but from societal and political opinions and decisions. The other two interviewees that defined leadership support as "leadership role" were the only two

interviewees that focused on their perceived non-work related sources of support at an event of a demanding change as an answer to the lack of support from their school.

B.1.2) Available perceived resources Vs change support

The construction of individuals' interview profiles allowed the comparison between teachers' perceptions of available perceived resources and their change support. In particular, interviewees' change support themes were compared with the themes in their own answers regarding the additional support that their sources of engagement support and/or their available school activities/arrangements offered them at that situation. Each interviewee referred to one to three sources of change support

The main difference between interviewees' perceptions of change support and their perceived available resources at an event of a change was that all interviewees gave more focused answers with regards to the former than the latter. Specifically, all interviewees adopted any perspective only once in each of their answers. Furthermore, compared with interviewees' perceptions of available support, males adopted more often an organisational (F=2, M=3) and an interpersonal perspective (F=2, M=3), while females still adopted slightly more task perspectives (F=2, M=1) to describe their sources of change support. Other than that, four interviewees adopted a work-role perspective (F=2, M=2), and one adopted a non-work related perspective (F=0, M=1) (table 89).

Table 89: Interviewees' gender and their change-support themes

Gender	Change-support
1)F	Organizational, interpersonal
2)M	Organisational
3)F	-
4)F	Work-role
5)F	Organisational, work-role, Interpersonal
6)M	Interpersonal, Work-role
	Task
7)F	-
	Task
8)M	Organisational, Interpersonal
9)F	Task
10)M	organisational
	Interpersonal, work-role, non-work related

B.1.3) Change support Vs sources of engagement support

Six interviewees (M=3, F=2) gave seven discussions regarding the ways in which interviewees' sources of engagement support supported them at an event of a change (table 90). In those discussions, interviewees' adopted all the perspectives that emerged from the interviews' analysis and there were fewer changes found based on interviewees' gender. Specifically, two interviewees adopted an organisational perspective (M=1, F=1), one interviewee adopted an interpersonal perspective (M=0, F=1), two interviewees adopted a work-role perspective (M=1, F=1), and one interviewee adopted a task-perspective (M=1, F=0). Compared, though, with their discussions regarding their perceived sources of change support, their reflections regarding the support they gained at an event of a change from their perceived sources of engagements support gave fewer perspectives.

Table 90: Interviewees' gender and their sources of engagement support at an event of a change

Gender	Engagement support (change question)
1)F	Organisational
2)M	Organisational
3)F	-
4)F	Interpersonal
5)F	Work-role, Non-work related
6)M	Task
7)F	-
8)M	Work-role
9)F	-
10)M	

Table 91: Participants' gender and their sources of engagement support

Gender	Engagement support (survey)	Engagement support (interview)	Engagement support (change question)
1) F	Work-perceptions (recognition, work-significance)	Task	Organisational
	school perceptions (school resources)	Organisational	
2) M	Work-perceptions (goal achievement)	Non-work related	Organisational
	school perceptions (leadership, school resources)	Organisational	
	non-work related perceptions (health)	Organisational	
3) F	Work-perceptions (positive feedback),	Task	-
	school perceptions (colleagues)	Interpersonal	
4) F	School perceptions (colleagues, school resources)	Work-role	Interpersonal
5) F	School perceptions (colleagues, school resources)	Work-role Interpersonal	Work-role
	non-work related perceptions (emotional sources of support)	-	Non-work related
6) M	Work-perceptions (work-significance)	Task	Task
		Work-role	
7) F	Work perceptions (goal achievement)	Task	-
8) M	School perceptions (relationships with colleagues, school resources)	Interpersonal	Work-role
9) F	School perceptions (colleagues, leadership)	Interpersonal	-
	work perceptions (positive feedback, goal achievement)	Task	
	Non-work related	Non-work related (individual activities)	
10) M	Work perceptions (recognition, positive feedback, work-significance)	Organisational	-
		Task	

The analysis of interviewees' discussions regarding sources of their work that they perceived as supportive at an event of a change showed that they adopted no different perspectives than the ones they adopted earlier to discuss their sources of engagement support. Compared, though, with their answers in the first interview question they all gave a more focused description of the way in which their sources of engagements were supportive to them at an event of a change by focusing on one perspective that they had already referred to both in their surveys as well as earlier in their interviews (table 91).

B.1.4. Available perceived resources Vs school activities/arrangements' support

Female interviewees focused much more on the support they perceived they had from their available school activities/arrangements at an event of a change. Specifically, seven interviewees (M=2, F=5) gave ten discussions regarding the support they perceived they had from their available school activities/arrangements. Furthermore, even among the five female interviewees, three of them adopted multiple perspectives to describe this support. Overall, four interviewees adopted an organisational perspective (F=3, M=1), four adopted an interpersonal one (F=3, M=1), and two a task perspective (F=2, M=0) (table 92).

Table 92: Interviewees' gender and their school activities/arrangements' support at an event of a change

Gender	School activities/ arrangements' support (change)
1) F	Organizational, interpersonal
2) M	Organisational
3) F	-
	Organisational, Task
4) F	Task
5) F	Organisational, Interpersonal
6) M	-
7) F	
	Interpersonal
8) M	Interpersonal
9) F	-
10) M	

All interviewees provided a more focused description of the support they perceived they had from their available school activities/arrangements at that event compared with their earlier interview answers (table 93). Specifically, all seven interviewees adopted one to two perspectives to give one description of support they perceive they have had from their available school activities/arrangements when they faced some demanding change situation. On the other hand, earlier in their interviews, each one adopted one to four perspectives to refer to the support they have had from their available school activities/arrangements and/or they adopted one or more perspectives in multiple discussions about that support. Contrary, though, to interviewees' perceptions of sources of engagement support at an event of a change, nine out of ten interviewees (irrespective of their gender) adopted either completely different or significantly fewer perspectives to describe the support that their school activities/arrangements offered them at an event of a change compared with their answers in their interview.

Three interviewees adopted a perspective to describe the support that their school activities/arrangements offer to them that they did not use earlier in their interviews when they referred to those school activities arrangements/activities. For example, one female interviewee adopted an organisational perspective to give two descriptions of the support that her school activities/arrangements offered to her at an event of a change, while she had used work-role and task perspectives earlier in her interview. Similarly, another male interviewee adopted an interpersonal perspective for the same reason, although earlier in his interview he had adopted only organisational perspectives. Finally another female interviewee adopted a task perspective to describe her school activities/arrangement perceived support at an event of a demanding change, although earlier she had adopted interpersonal, organisational and work-role perspectives.

Moreover, four interviewees adopted only one of the perspectives that they used earlier in their interviews to describe the support that their available school activities/arrangements offered them at an event of a change. For example, one female interviewee adopted an organisational and

task perspective to describe the support that her available school activities/arrangements offered her at an event of a demanding change, while she had adopted an interpersonal and task perspective earlier in her interview. Another female interviewee adopted at that part of her interview an organisational and interpersonal perspective, while she had adopted an organisational and work-role perspective to refer to the support she perceived she had from her available school activities/arrangements. Similarly, another female interviewee adopted an interpersonal perspective to describe the support that her school activities/arrangements offered her at an event of a change, while she had adopted organisational, work-role, task and multiple interpersonal perspectives to refer to the support of those school activities/arrangements earlier in her interview. Finally, one male interviewee adopted an interpersonal perspective to describe the support that he perceived that his available school activities/arrangements offered to him at an event of a demanding change, while he had adopted organisational, task and multiple interpersonal perspectives to refer to his school activities/arrangements' support earlier in his interview.

Table 93: Interviewees' gender and school activities/arrangements

Gender	Description (interview answer)	Importance (interview answer)	School activities/arrangements' support (change question)
1) F	- Work-role Work-role	Work-role Work-role Task-level	Organisational Organisational
2) M	Organisational Organisational	- - Organizational	Interpersonal
3) F	Task-level - -	- Task perspective Interpersonal	Organisational Task
4) F	- Work-role	Interpersonal Organizational	Task
5) F	Work-role -	- Organizational	Organisational Interpersonal
6) M	Organisational - Organisational	Organizational Interpersonal Task	
7) F	- Organisational - -	Work-role, interpersonal Interpersonal, task Interpersonal Interpersonal	Interpersonal
8) M	-	Interpersonal	Interpersonal

	Interpersonal, task Organisational	Organisational, interpersonal Interpersonal	
9) F	Organisational Organisational Organisational, work-role Organisational	Task Interpersonal - -	-
10) M	Work-role Work-role Work-role	Task-level Task-level organisational	-

B.5. Overview

This section presented the third part of the analysis which included the construction of individuals' profiles focused on the inferences drawn in this study. In particular, it used both individuals' survey and interview answers to test four theoretical propositions regarding teachers' perceptions of their job resources under perceived change demands. Indeed, interviewees' profiles showed that participants identified sources of available support in various levels of analysis within the organisation and adopted the same perspectives that emerged earlier in the analysis to describe them. However, participants most often adopted organizational perspective to describe those sources of available support, while the way participants defined their leadership support was related to the perceived availability of support from the school when they faced a change.

Furthermore, participants gave a more focused description of their sources of change support than their overall descriptions of their available sources of support. Similarly, participants' gave a more focused description of the ways in which their sources of engagement support and their school activities/arrangements supported them at an event of a demanding change than they did earlier in their survey- and interview answers. Those results confirm the argument that job resources gain more importance for the individuals when they are under threat. Finally, some

differences were found on the frequency of perspectives and the discussions that participants produced based on their gender, which means that individual characteristics may predispose teachers to acknowledge or search for different types of support when they need it.

Therefore, this analysis showed that the perceived importance of ways of working in a school and the degree to which they meet individual needs can make the difference on whether or not they are identified as supportive by school-teachers. This was further manifested through interviewees' definition of their leadership support and their perceived importance of non-work related sources of support. In particular, interviewees that defined their leadership support as "change support" also held positive perceptions regarding the support they have from their school. On the other hand, interviewees that defined leadership support as "leadership role" were the ones that were the most critical towards leadership in their interviews as a whole and focused on their perceived non-work related sources of support at an event of a demanding change as an answer to the lack of support from their school.

10.0) Chapter 10: Interviewees' perceptions of job resources and their school contexts

10.1. Introduction

The present study explored secondary school teachers' perceptions of job resources in an area in the Midlands in UK through surveys and two rounds of interviews. The first round of interviews explored teachers' perceptions of their sources of support, while the second round of interviews explored the relationship between those perceptions and interviewees' school context.

Ten teachers employed in seven schools participated in the first round of interviews. Eight teachers, employed at the time in four state-schools and one Academy, volunteered to participate after the researcher's direct contact with their schools. Two teachers, employed at the time in two Academies, volunteered after researcher's invitation in their class at WIE. The same group was approached for a second interview to explore the perceived influence of interviewees' school contexts on their perceptions of job resources. For this reason, the schools' last OFSTED reports were reviewed along with information gathered from each school's website.

However, there were some changes in the working status of some interviewees and the status of their school context from the first round of their interviews. As a result, only five teachers participated in the second round of interviews. Those teachers at the time of the second interview were employed in two Academies, two state schools and one was now working privately. The other five teachers were either unavailable to participate in the second round of interviews or their working circumstances had changed and were not able to participate. In particular, three interviewees never responded to researcher's call for a follow-up interview, one interviewee had retired and moved to Australia, while another had moved to a school in Brighton and did not agree to participate in a skype interview that was offered as an alternative.

This chapter will present the findings of this second round of interviews and discuss interviewees' profiles regarding how their school contexts throughout their career may have

influenced their perceived sources of support. In contrast, though, to the rest of the qualitative analysis it does not seek to test any theoretical propositions but rather examine further the themes that emerged in the first round of interviews. It consists of two main sections that will present:

- a) Follow-up interviews' questions analysis
- b) Interviewees' profiles and school context influence

10.2. Follow-up interviews' questions analysis

Five interview questions explored teachers' perceptions of the ways in which school contexts have influenced their perceptions of job resources. Their purpose was to explore further the themes that emerged from the first round of interviews by focusing on interviewees' perceptions of their sources of support throughout their career.

Interview questions:

- 1) What do you think you need to do your job?
- 2) How have the schools you have been in during your career influenced your perceptions of what you need to do your job?
- 3) How have the departments you have been in during your career influenced your perceptions of what you need to do your job?
- 4) How have the colleagues you have had in your career influenced your perceptions of what you need to do your job?
- 5) How have the leaders you have had in your career influenced your perceptions of what you need to do your job?

10.3. Themes' development

All themes that emerged through the interview analysis were grounded on interviewees' answers. They described the support that interviewees perceived they had from various aspects of their work-life in their current school as well as previously in their career. For this reason, they were, also seen in parallel with relevant information about their school gathered from their schools' websites and their most recent OFSTED report. This information included basic information about the schools and their curriculum as well as OFSTED's reports on pupils' attainment, quality of teaching and leadership.

Five categories of themes emerged that described the relationship between interviewees' perceptions of job resources and their school context:

- 1) The first category of themes was "Resources" and reflected interviewees' responses about what they think they need to do their job and it had two sub-themes: school resources and individual characteristics.

- School resources

It included interviewees' responses that described how schools offer them what they need to do their job (e.g. "*Obviously I need resources in my classroom in terms of equipment and things for the students to use*").

Two interviewees (interviewee 4 and interviewee 5) focused on their school resources in order to describe what they need to do their job. Their stories were significant different from each other but they both identified specific resources that are specifically needed for the execution of certain job tasks. Such a difference in interviewees' approaches towards their sources of support has been a recurrent finding in the present study as participants tended to describe their sources of support by adopting different perspectives (organisational, interpersonal, work-role, task, non-work related perspectives). Such approaches illustrate where interviewees locate their sources of support within their school contexts.

However it, also, signals that individual teachers may hold different criteria on what is important for them and why. This was manifested in the second round of interviews by the fact that some interviewees tended to focus more on individual characteristics than school resources when describing their sources of support. In particular, three interviewees (interviewees: one, six and ten) focused on personal attributes in order to describe what they need to do their job, whereas two interviewees (interviewees: four and five) focused on school resources. Their stories as shown in their first and follow-up interviews can explain their approaches towards their sources of support and especially how their personal experiences of their schools, colleagues, departments and leadership has influenced their perceptions. On the other hand, the information gathered regarding interviewees' current schools and their characteristic or areas of recent improvement was not that important to the interpretation of interviewees' responses.

- Individual characteristics

This sub-theme included interviewees' responses that described how personal attributes offer them what they need to do their job (e.g. *"you need to be a good leader in terms of motivating people and encouraging people"*).

A commonality among the stories of the three interviewees (interviewees one, six and then) that identified individual characteristics as their main source of support was that they attributed to themselves a sense of having an impact upon their schools. That was evident in their responses in both their follow-up interviews and their first interview. This is in accordance with the literature on teachers' supportive school contexts that clearly shows that the most effective source of support for teachers is having conditions in schools that foster teachers' participation in the schools' improvement and decision-making processes (e.g. Louis & Kruse, 1995; Harris & Muijs, 2005; Leithwood et al., 2009).

2) The second category of themes was “School influence” and it reflected interviewees’ responses about how the schools they have been in their career influenced their perceptions of what they need to do their job. It had two sub-themes: shaping each other, acknowledging needed resources

- Shaping each other

This sub-theme included interviewees’ responses that described how the shared ability of schools and individuals to shape each other has influenced their perceptions of job resources (e.g. *“the school has influenced the way I teach, the way I am as a person and I’ve influenced the school”*)

- Acknowledging needed resources

This sub-theme included interviewees’ responses that described how working in a school that offers them the resources they need to do their job has influenced their perceptions of job resources (e.g. *“we can raise money from putting on productions and other events we can use that money then to fund the next production or the next event so the school is helpful”*)

3) The third category was “Departmental influence” and reflected interviewees’ responses about how the departments they have been in their career influenced their perceptions of job resources. It was the least often met theme and it had only one sub-theme: likemindedness.

- Likemindedness

This sub-theme described how working in a likeminded environment has influenced interviewees’ perceptions of job resources (e.g. *“I think all the people in the departments are very similar to me so we don’t have any disagreements”*)

4) The fourth category was “Colleagues’ influence” and reflected interviewees’ responses about how the colleagues they have had in their career have influenced their perceptions of job resources. It had two sub-themes: team-playing and learning.

- Team-playing

This sub-theme included interviewees' responses that described how the experience of being in a team has influenced their perceptions of job resources (e.g. *"Someone has an idea, we talk about it and the idea gets bigger and bigger and bigger"*)

- Learning

This sub-theme included interviewees' responses on how their learning from their colleagues has influenced their perceptions of job resources (e.g. *"I think there have been significant colleagues in the past from which I have learnt skills"*)

5) The last fifth category was "Leadership influence" and reflected interviewees' responses about how the leaders they have had in their careers have influenced their perceptions of what they need to do their job. It had two sub-themes: shaping schools and shaping teachers.

- Shaping schools

This sub-theme included interviewees' responses that described how leaders' capability to shape their schools had influenced their perceptions of job resources (e.g. *"there are increasingly under the thumb of government and the room to maneuver them and be child-centred is restricted by the structural demands of OFSTED"*)

- Shaping teachers

This sub-theme included interviewees' responses that described how leaders' capability to shape the teachers in their schools has influenced their perceptions of job resources (e.g. *"She knew where she was going and she was communicating her ideas with them"*).

Those findings show that teachers focused much more on the perceived influence that their school contexts have had on their overall professional work-life rather than their influence on their learning. This is in accordance with research findings on the effectiveness of teachers' CPD (e.g.

Goodall et al., 2005; Day et al., 2007; Orfer & Pedder, 2010) that highlight the importance of offering opportunities that match the needs of individual teachers in schools and their actual access to appropriate resources.

10.3.1. Interviewees' profiles and school context influence

Similar to the analysis of the first round of interviews a set of interviewees' profiles were constructed in order to understand each interviewee's perceived sources of support and the influence of their school contexts. Moreover, those categories of themes, along with their sub-themes, were, also, seen in parallel with information regarding interviewees' schools especially for those that participated in the second round of interviews. However, for the ones that participated only in the first round of interviews, only, a basic description of themselves and their schools was included.

10.3.2. OFSTED reports and interviewees' profiles

The OFSTED reports provided interesting information regarding key characteristics of the schools that interviewees were employed into, their strengths and weaknesses, the quality of the teaching and the effectiveness of their leadership. However, they added considerably less to the interpretation of interviewees' responses than the information already gathered through the first round of interviews. For example, interviewee 5 at the time of her second interview had left her previous school and was working privately. The OFSTED report acknowledges that recent staff turnover and changes in her school have caused disruption for teaching and leadership but her responses on her first interview provided more information about how she perceived those changes and the lack of leadership support. On the other hand, the OFSTED reports on the other four schools in which participants were employed at the time of their second interview showed that the leadership has been improved or outstanding and there was a shared vision among the leadership team and staff members.

10.4. INTERVIEWEES' PROFILES

INTERVIEWEE'S PROFILE:

Interviewee 1 was a teacher-student at the WIE and worked in an Academy that opened in September 2013 and is larger-than-average secondary school. She was a female, 29 years old. She had a PGCE and she was in the middle of an MSc.

She was the least experienced one but she was already an assistant principal in her current school and as she had more extensively discussed in her first interview she felt that she was "raised by her previous school" and she was lucky to have received support that other teachers may not have received. In her second interview she continues discussing how her current school has supported her bringing it as an example of how schools and its members "shape each other" through positive role-models as well as how leadership can "shape teachers" offering them support during change.

SCHOOL CONTEXT

She had five years teaching experience and then she was seconded to an academy (during which I met her at the time of her first interview) for one year. Then she went back to her previous school and came back to the academy to take up a permanent position (during that period I met her for her follow-up interview). Her role at the time was assistant principal but she was due to live to Australia the same summer, a few months after our interview.

Her school benefits from the additional support of the Midland Academies Trust that is set to help local schools share best practice and become outstanding. It had Engineering and Science specialisms that focus on modern and relevant applications and the curriculum concentrates on enabling all students to gain the key competencies in English, Mathematics and Information and Communication Technology (ICT). Furthermore, the school's Virtual Learning Environment (VLE) is

rich in information that helps students take control of their own learning. Their last OFSTED report in 2011 showed that pupils' attainment was improving (especially in English and Mathematics) but the proportions of students who made expected and better than expected progress were still below national averages. Similarly, the quality of the teaching was getting better but not enough over time to help student make consistently good progress. Although many teachers were good at using questions and discussions to check regularly students' progress this was not consistent enough across the school. However, students were fully involved in a reach variety of activities that were set to help them develop the ability to learn on their own and in small groups. Other weaknesses involved not putting fully in practice learning plans and not giving students enough opportunities to practice their writing skills and strengthen their literacy standards rapidly enough. Finally, the academy's leadership was improved since the current Principal joined the academy whose drive for improvement and very high expectations resulted in sustained improvement. According to the school's last OFSTED report, staff seems to share her clearly articulated vision and senior leaders work well with middle managers to put this vision into practice, while there are robust arrangements for monitoring the quality of teaching. At the same time, academy's self-evaluation has shown to be thorough involving all staff and having good arrangements for getting the views of students and their parents and carers.

INTERVIEWEE'S PERCEPTIONS OF JOB RESOURCES

She provided a description of the resources she needs to do her job drawing from her overall career experience rather than the context of one specific school. In particular, she focused on "individual characteristics", described as having vision and people's skills, that are important for her to do her job.

“Vision-see things clearly and be able to evaluate and be able to look critically, look on what’s going on, the positives and the things that need to be improved and then understanding how to make it happen.

“People’s skills-so you need to be a good leader in terms of motivating people and encouraging people and picking them up if they are feeling down and you know in the school environment a lot of the time people have had bad days and so be able to pick them up and kind of keep them going when they are tired. I think communication is very important which links with people’s skills.”

School influence

She, also, identified the shared capability of schools and their members “to shape each other”, by providing positive role models, as the way in which schools have influenced her perceptions of what she needs to do her job.

“Positive role models for me in terms of leadership so with my current senior leadership team we meet regularly and you know we talk formally and informally and at senior leadership team meetings formally we kind of share ideas and critique ideas...They will coach me, they will not tell me what to do but they will ask me a series of questions which will allow me to work it out myself and that model is something that I’ve found very useful and I use it with the staff I manage as well”.

Colleagues' influence

Moreover, she acknowledged colleagues' support to her "learning", in terms of learning to deal with people, as the way in which they have influenced her perceptions of what she needs to her job.

"All through my career I have met people who do a brilliant job and is about looking them and thinking why are they doing a brilliant job and how can I do that but at the same time colleagues who I've worked with and they have been difficult to work with and learning strategies on how to deal with them. So, learning how to deal with people in certain situation has helped me kind of progress because I've learnt to adapt and you know work with people differently and not to take some things at heart. So learning about the people"

Leadership influence

Finally, she acknowledges leaders' capability "to shape teachers", especially regarding dealing with people and communicating change, as the way in which leadership has influenced her perceptions of job resources.

"In so many ways, leadership of people, learning to deal with different people at different situations. Leadership of change, so one of the things that I've learnt is to communicate change to other people and understanding that maybe not everyone sees it the way I see it and having to kind of adapt, introduce ideas to people. A lot of experience of just doing it and reflecting on how I did it and doing it differently next time"

INTERVIEWEES' PROFILES:

Two interviewees (interviewee 2 and interviewee 8) were working in one state secondary school located in Leamington Spa. However, neither of them participated in the follow-up interview. Interviewee 2 was a male in his sixties that he retired soon after his first interview and then moved to Australia and he wasn't able to participate in a follow-up interview. At the time of the first interview he was a Head of Year 13 and Junior Sixth form tutor. Interviewee 8 was also a male, 33 years old that had 9 years teaching experience and at the time of the first interview he was the Head of religious studies and citizenship. He did not, though, participate in the follow-up interview.

SCHOOL CONTEXT

Their school is larger than the average secondary school and it has specialist arts college status since 1999. In September 2009, students from across the school's four sites were brought together onto one campus comprising a set of brand new buildings. Its faculty system allows a tight management of the curriculum that is greatly facilitated by the design of the new school, notably the fact that each subject department has a suite of adjacent rooms within the new building. The schools' subject departments are grouped within 5 faculties are grouped according to common areas of knowledge and understanding, enabling the sharing of ideas about teaching, learning and students' progress is monitored between faculty members from different departments.

Their last 2011 OFSTED report (2011) showed that it is a good school. As far as students' attainment is concerned inspectors observed mostly enthusiastic students making good or better progress in the large majority of lessons. The percentage of students who gained more than five A* to C GCSE grades is above average, but when English and mathematics were included, the percentage was average. However, the school's result in Summer 2013 show that English was a particular strength that year achieving. According to the school's 2011 OFSTED report most teachers plan and use a wide range of strategies to make sure that their teaching matches students' ability. A rigorous lesson observation scheme has been used constructively and has contributed significantly

to improvements in teaching. Literacy and information and communication technology skills are developed very well but development of numeracy is less effective. Finally, the headteacher and senior managers offer very good support to middle managers, who are capable and accept a high level of accountability for the areas for which they are responsible. Sharing of good practice is increasing but is not yet used to full effect in ensuring consistently high quality in all aspects of the school's work. Quality assurance through lesson observations has worked well to improve teaching but has not yet been fully successful in ensuring a consistent quality in assessment. Additionally, numerous methods, including the use of text messages and web access, are used to engage with parents and carers. There are, also, numerous partnerships that are highly productively. For example, a strong partnership with the University of Warwick has ensured a high quality graduate teacher programme is in place at the school.

INTERVIEWEES' PROFILES

Two interviewees (interviewee 3 and interviewee 4) were employed in a heavily oversubscribed comprehensive technology college that attracts students from a wide area surrounding, and including, the centre of Coventry. Only interviewee 4 participated in the follow-up interview. Interviewee 3, was a female, 25 years old that had 2 years teaching experience as a PE teacher and 6 months experience as Deputy Head of college. However, she didn't participate in the follow-up interview.

Interviewee 4 was a female, 43 (at the time of her second interview), and had a BSc in Music and a MSc in Music Education. Her teaching experience included the positions of music teacher, Head of Music and Head of Performing Arts: music, drama and arts. She was one of the two interviewees that focused on school resources to describe what they need to do their job. She was more experienced than interviewee 5 (that, also, focused on school resources) but, also, more satisfied with her current school context. She identified school resources (time, classroom equipment and extra activities) as most important to her and their availability it's what has

influenced the most her perceptions of what she needs to do her job. This is clearly shown during her first interview as well in which she discusses the challenges of an organisational change in her department that moved teachers from working in separate subjects to working collaboratively and how her school and its leadership supported her. In her second interview she, also, refers to the same change without being asked directly to do so. In particular, she explained that her schools' ability to "acknowledge needed resources" and "team-playing" among her colleagues have offered her the support she needed to organise successfully her department's school productions. Focusing on her department she argues that the "likemindedness" among the teachers has allowed the development of an environment where all share the same values and, thus, have no disagreements. Finally, she described how her experiences of leadership have influenced her perceptions of leadership support arguing that supportive leaders (like the one she has in her current school) can motivate teachers whereas non-supportive leaders (like the one she had in her previous school) can demoralize teachers.

SCHOOL CONTEXT

The school's specialist status in technology was reaccredited in September 2008. It has gained a number of awards including Artsmark Gold, Sportsmark Gold, Investors in People, and Healthy Schools status. Furthermore, the school has a strong international dimension maintaining partnerships with schools in a number of other countries but in particular, Spain, France, Germany and China. Their European partnerships involve cultural exchanges and language development but their Chinese partnerships are much deeper in terms of developing teaching and learning, shared live lessons, regular live conversations about educational philosophy and pedagogy as well as the cultural and linguistic benefits for students. The school is comprised of 14 faculties and a key feature is its college system as it is comprised of six colleges that provide mentoring to their students and they found that one of the major contributing factors to their improved external examination results was their 1-1 mentoring that they offered to Year 11 students.

According to their last OFSTED report (2011) attainment is above average for a majority of indicators. An area of particular strength is the support that school provides to students with complex learning needs that ensures they are fully included in the school community and their individual needs are sensitively and consistently met. Furthermore, senior and middle level leaders are involved in rigorously evaluating and improving teaching practice. However, inspectors, also, recognized that a shortcoming that prevents students from making consistently excellent progress in their learning is that the level of challenge in tasks that teachers set is not always best suited to students' individual ability levels. Furthermore, observations and discussion showed that students contribute well to the training of student teachers. Finally, the headteacher and senior staff provide outstanding leadership. Expectations are very high and challenging targets are set and met, including for the school's specialist subjects due to the rigorous and systematic monitoring and evaluation processes that are in place. At the same time, governor support and challenge the school well in tackling weaknesses and bringing about the necessary improvement, while the school enjoys positive relationships with a very large majority of parents and carers.

INTERVIEWEE'S PERCEPTIONS OF JOB RESOURCES

She provided a description of the resources she needs to do her job focusing primarily on her experience in the school that she was currently employed. In particular, she focused on school resources that are important for her to do her job such as time, classroom equipment and extra activities.

"I need time first of all to plan, to meet with staff, to organize things. Obviously I need resources in my classroom in terms of equipment and things for the students to use because music is a practical subject and you need practical equipment. I think because I feel my working days very

pressurized because there are a lot of things to do all the time and I think that when you teach a subject like music or you oversee something like the performing arts and it's not just what you are doing in the classroom which counts. Is what you do outside the classroom the counts in terms of the extra things that you do, the rehearsals, the instrument lessons, organizing concerts, organizing productions and those are the things that you don't get paid for, there are above and beyond what you do"

School influence

She, also, focused on "acknowledging needed resources" to describe the degree of the availability of resources in schools, such as free time and funding, has influenced those perceptions that can include.

"In my previous school I didn't have any responsibilities so it was other people that had to make those decisions really not me. When I came in this school I became Head of Music. My school is fairly supportive of music. So actually I have more time-free time-than other teachers do. So they support me in this way and because in terms of resources we can raise money from putting on productions and other events we can use that money then to fund the next production or the next event so the school is helpful"

Department influence

Furthermore, she identified "likemindedness" as the way in which her department has influences her perceptions of what she needs to her job.

"I think all the people in the departments are very similar to me so we don't have any disagreements over what we need to do. Everybody puts the children first so that's what we are there to do-is to put the children first and whatever the children need we then work to make this happen. So if we need extra time we will go and ask the senior team "this is what we need because the children need that for their events".

Colleagues' influence

Moreover, she identified team-playing, through snowballing ideas and carrying out plans, as the way in which their colleagues have influenced her perceptions of job resources.

"I think that when you work with people that put the children first, who are hard-working it's easy for ideas to kind of snowball. Someone has an idea, we talk about it and the idea gets bigger and bigger and bigger. I'll give you an example. We were thinking that perhaps we don't do enough singing in our school and we were thinking how to get children to sing. Obviously, we were talking in our office on how we can do this and gradually through those conversations and talking different ideas we came up with idea of having productions for children to sing in and then this idea grew and grew and grew to have the whole year group put on in a production. 270 children in the year group...that was a good example on how staff just talking about ideas ended up with something quite big, quite significant"

Leadership influence

Finally, she acknowledges leaders' capability to "shape teachers", by motivating or demoralizing them, as the way in which leadership has influenced her perceptions of what she needs to her job.

"a good leader can really motivate and encourage people to their job and more. I think a poor leader can demotivate staff. I've worked with four different headteachers in 20 years of teaching and some of these headteachers have been really supportive and it makes a real difference because when people are supportive you feel as if you can do anything. You feel as if you can go and ask "Can I do this? Can I do that? And they will say yes. It really boosts your confidence, your motivation, what you can offer to the children. If you have a leader, as I had in the past, that you go and you ask something and say "I'm not sure" and they see difficulties and they see problems it demoralizes you"

INTERVIEWEE'S PROFILE

One interviewee (interviewee 5) was employed in an academy that opened in Solihull in September 2008 and was very much larger than most secondary schools. She was 54 and she had 4 years teaching experience in Year 7 and was an assistant Head of post-16 and IB co-ordinator. However, at the time of her second interview she was not working in that school anymore. She was now working privately and she, also, held a consultancy role within IB and the national association of IB school (e.g. arranging training workshops).

Interviewee 5 was the most dissatisfied teacher with her school context, which was more clearly shown in her first interview where she expressed her dissatisfaction with the school's leader and that she was looking for a new position. At the time of the second interview she had already left her previous school and she was working privately. For this reason, she focuses most on what she

needs most to do her job at the moment drawing from her career experiences in her previous school to describe how her school context has influenced her perceptions of what she needs to do her job. She notes that having “resources” such as access to internet is the most important for her and as school may not always “acknowledge those needed resources” and fully appreciate her work. Finally, she argues that the most important influence on the way available resources are perceived is exercised by the leadership due to leaders’ ability to “shape schools and teachers”.

SCHOOL CONTEXT

The academy opened in September 2008 and attracts students from a very large number of primary schools in Solihull and the surrounding area that come from a wide range of socio-economic backgrounds. The academy's specialisms are technology and visual arts, it also holds Training School status and has gained a number of awards including the Healthy Schools award and the Intermediate International Schools award. The school has undertaken a major investment in the IT infrastructure making the academy a completely wireless site. According, though, to its last OFSTED report (2011) significant building and refurbishment work across the site along with staff turnover and changes have led to disruption to teaching and leadership in recent years. Overall, the academy is a satisfactory and improving school. It has, also, links with communities in Nepal and Zambia that strengthen students’ knowledge of other cultures. As far as students’ attainment is concerned, is above average on entry to the school and by the end of Year 11 standards remain above average overall, although there is some variation across groups of learners when compared to groups nationally. Academy’s curriculum is organized within eleven faculties the difference between the good and satisfactory teaching is linked to the use of assessment (OFSTED, 2011). Another key feature of support is through the extended schools programme, which includes family learning opportunities that allows students’ parents to get involved in the school (e.g. family learning classes, “keeping up with the children” courses, a “Dad’s” group). Finally, inspectors noted that the

governing body, leaders and staff share a strong passion and drive to improve students' achievement and life chances. A high priority is placed on improving the quality of teaching through a systematic approach to training and coaching. As a training school, staff has access to an observation suite where lessons can be recorded and discussed to hone teaching skills. The emphasis is now on increasing the proportion of good or better teaching.

INTERVIEWEE'S PERCEPTIONS OF JOB RESOURCES

She provided a description of the resources she needs to do her job that were specific school resources, perceiving that especially internet access is a necessity for the delivery of her lessons:

"Internet access, e-mail, basic stationary, books. Internet access is absolutely vital, telephone, Skype, this kind of stuff. I think this is how life is going, everything seems to be on the internet now. I didn't teach in the time that there wasn't internet so this must have been different I think. Contacting people it's really important, communication"

School influence

She, also, focused on "acknowledging needed resources" to describe how schools' capability to acknowledge teachers' needs, such as that of having internet access, has influenced her perceptions of what she needs to her job.

"As a teacher schools think about what you need but sometimes they don't know the impact of not having them there so if your internet is down for a day that's your lesson gone! Your computer is not working. Once I was trying to play a sound clip and the speaker didn't work and it has been really difficult. Sometimes the schools wouldn't understand how difficult this is".

Colleagues' influence

Moreover, she recognized colleagues' support to "teacher learning" as the way in which they have influenced to a small degree her perceptions of job resources.

"People can give you tips and staff but although I was the oldest in my department when I was teaching English I was the one that often found the class, the websites etc."

Leadership influence

Finally, she describes how leaders' capability to "shape schools" and "shape teachers" has greatly influenced her perceptions of what it's needed for her job. With regards to leaders' capability to "shape schools" she describes it as having a vision and knowledge of your shortcomings and strengths.

"The further I go the further I think about leadership. You can have all the technology, all the books, all the money in the world but you don't have any idea how to listen to somebody, you have no vision, you have no strategies for moving forward then those things are pointless, you need to have some kind of idea...You have to understand where your shortcomings are but also what your strengths are and not be afraid to talk about both"

With regards to leaders' capability to "shape teachers" she describes it as being able to make people believe in you providing as well an example.

"To be a good leader you need to make people believe in you. There was a very small school, independent school in Germany and the head-teacher there had started in the school 18 months ago

as a social teacher and now she was the head: in 18 months and she's only 35. I was inspecting this school and at first I thought that it would be a disaster but she was absolutely brilliant. She had vision, she had respect, staff really loved her and I deliberately use the word love her... She knew where she was going and she was communicating her ideas with them and that was really important"

INTERVIEWEES' PROFILES

Two interviewees (interviewee 6 and interviewee 7) were employed in a school that became an Academy in 2012 which was after the time of the first interview. From those two interviewees only interviewee 6 participated in the follow-up interview. Interviewee 7 was a female, 40, with 16 years of teaching experience and 16 years experience in organizational/management positions. Her role at the time of her interview was assistant Head-teacher with responsibility of teaching year 7.

Interviewee 6 was a male, 45, that had completed a teacher science scheme (training on the job) and had a degree in Theology. He had 21 years of teaching experience and 19 years of experience in organizational/ management positions (College Pastoral Director, Head of Language, Head of Philosophy). Interviewee 6 was the most experienced teacher among the ones that participated in the follow-up interview. He has been 18 years in this school and as he mentioned in his first interview he had taken on new responsibilities as the head-teacher asked him to take over the DRI departments. In both of his interviews he refers to his experiences related to this event and the changes that he brought to his classroom-work for these lessons as an example of how important teachers' work can be if they have leadership support. Moreover, in his second interview he describes how his duties and responsibilities serve as an example of "teamwork" among colleagues as well as an example of leaders' and school's capability to "shape teachers". Finally, he acknowledges that his freedom to shape the department the way he wanted has added to its "like-mindedness".

SCHOOL CONTEXT

The school includes an eight-place resource base for pupils with visual impairments. Their pastoral system is managed on a vertical basis and pupils are divided into four Colleges that consist of vertical mentor groups, made up of pupils from Years 7 to 11. Pupils spend 30 minutes at the start of each day with their vertical mentor group, working on a range of activities designed to breakdown potential barriers between age and social groups across the school. Each mentor group is led by a 'Personal Mentor' who will remain with children throughout their school career from Year 7 to Year 11, and each College is led by a 'College Director' who is responsible for the personal well-being of every child within the College from Year 7 to Year 11.

Their last full OFSTED assessment was prior to this transition (2011) and the school has held specialist technology status since 2004. It showed that students' attainment is improving rapidly and that there is a shared vision in the school to address underachievement. In particular, the school has a strong focus on improving teaching and learning supported by a robust lesson observation scheme, while teachers are well supported in improving their practice. Although, only a few lessons were outstanding the school had already begun to identify and share more widely the best practice that exists in these lessons. Furthermore, teaching and learning in design and technology were improving and at least satisfactory and teachers mostly create a well organised, calm and purposeful learning environment. A personalised approach to developing the curriculum has proved successful in getting a close match between what pupils want to study and how this can be offered most effectively. Moreover, good collaboration through a local federation has broadened the availability of subjects considerably and is working well. The inclusion of subjects such as engineering, hospitality and catering fit well with the school's specialist status and ensure a broad technology curriculum, which is helping to support improved achievement in this area. Finally, the head-teacher has created a strong and committed leadership team which has prioritised improving standards and ensured a very high level of support for pupils to develop personally and socially, as well as academically. Staff

shares the senior team's clear vision for the school that is also indicated by the rapid progress in raising standards in 2009 from a much lower point in 2008. The high emphasis on accurate and rigorous evaluation of the quality of teaching and learning has ensured that managers have a clear picture of what needs to be done to improve lessons further. Finally, partnership work with external stakeholders, such as the University of Warwick and the local church, at all levels of management works effectively with many benefits to pupils.

INTERVIEWEE'S PERCEPTIONS OF JOB RESOURCES

He provided a description of the resources he needs to do his job drawing from his experience in the current school that he is employed. He focused on the "individual characteristic" of having a sense of calling to describe what he needs to his job.

"It's to do with what I feel the calling to do in terms of doing a job really well, having the children and their welfare in mind, their development in mind. With that if you have resources it is great but if you haven't you just do with what you have"

School influence

He, also, focused on the shared ability of schools and their members "to shape each other" in terms of teaching, ethos and beliefs in order to describe the way in which schools have influenced her perceptions of what she needs to do his job.

"I've been here for 18 years now and I've seen the school changing, improving, going through many OFSTED inspections and the school has influenced the way I teach, the way I am as a person and I've influenced the school as well in terms of ethos, in terms of beliefs"

Department influence

Furthermore, he identified “likemindedness”, in terms of creating the same ethos, as the way in which his department has influenced his perceptions of job resources.

“I’m the only teacher so I’ve shaped the department the way I wanted it. So I’m very privileged in that....but there was nothing before I started and I’ve created everything that there is. I’ve created the ethos, the curricula, everything”

Colleagues’ influence

Moreover, he identified team-playing, such as building a team and its ethos, as the way in which their colleagues have influenced her perceptions of job resources.

“If you lead a team you’ve got to have teamwork with you, you build the team and you build the capacity, you build the ethos as well. For example, in my pastoral team I’ve got seven tutors and those seven tutors are doing a great job and I want to motivate them to do this great job. I want them to be able to even take my job if they wanted to at some point”

Leadership influence

Finally, he describes how leaders’ capability to “shape schools” by setting an example has influenced his perceptions of what it’s needed for his job.

“Our head-teacher is a strong leader and he has influenced the way the school has gone in the last few years. It has done it in the same way I’m working with my team. He has started by trusting us, by bringing us along, by enabling us, distributing leadership and that’s a model I’ve copied with the people that are working my team as well. So he has influenced absolutely, tremendously really. The school wouldn’t be what it is without his leadership and the way he has built the team around him”

INTERVIEWEE’S PROFILE

One interviewee (interviewee 9), a female, 30, was employed in an all-girls’ school that is larger than other secondary schools and it is situated in the western suburbs of Coventry. She had 8,5 years of teaching experience, 4.5 years experience in organizational positions and her role at the time was a PE teacher. However, she left the school after her first interview and she wasn’t able to participate in the follow-up interview.

SCHOOL CONTEXT

The school that she was employed to at the time of her interview draws students from all areas of the city. The school is comprised of 18 departments and it has been awarded the Artsmark, International School Award, Sportsmark and Investors in People status and is designated as a specialist language college with a second specialism in applied learning. The main languages that students learn are Spanish, French, German and Japanese, but there are also opportunities to learn Urdu, Tamil, Italian and many more. Students have access to extensive computer software- as the school is wireless networked- and they, also, have access to a language laboratory and many native speakers as language assistants. The school has, also, fixed Learning Managers with different responsibilities in different years. For example, for year 7 the Learning Manager specializes in

transition from primary school, while in years 8 and 9 the Learning Manager concentrates on students' progress and in years 10 and 11 the Learning Manager works with students to ensure they are on track with their courses and have clear pathways to their future. Tutors, also, monitor the progress of students in their care and bring that knowledge to face-to-face meetings with parents. Furthermore, there is a Personalised Learning Centre and a large number of trained Teaching Assistants while in the core departments of English, mathematics, science and language there is, also, a full-time higher level teaching assistant.

Its last OFSTED assessment (2009) showed that this is a good school with some outstanding features. Attainment in the specialist modern languages subjects was above average and all students gain a qualification in at least one modern language. The school rightly identified underachievement by students of lower ability and targeted support is improving their rates of progress across the school. Furthermore, curricular provision was good and reflected the positive impact of the language specialist status. Moreover, programmes in religious education and personal, health and social education were found to greatly support the good personal development of the students and there were a number of enterprise activities, including work experience that gave the opportunity to students to work independently and cooperatively. The extensive range of extra-curricular activities and educational visits greatly enhanced the students' enjoyment and experience of school. Arrangements for care, guidance and support are strengths of the school. Good working relationships between the school and external agencies benefited students, ensuring their social and learning needs are met through effective programmes. Finally, the head-teacher has provided strong and collaborative leadership which has been driving improvements in the school. The key strategic priorities have been shared with staff so that there is a clear agenda for raising standards in all areas of the school. Rigorous systems of monitoring teaching and tracking students' progress have been raising standards, while the subject leaders have developed their roles so that they are more effective in their planning, supporting and monitoring responsibilities. Additionally, the school is

developing positive relationships with parents and carers and keeps good partnerships with community groups, external services, local schools and a wide range of employers.

INTERVIEWEE'S PROFILE

One male interviewee (interviewee 10), 51, was employed in an average sized secondary school in Coventry. He had a qualified teacher status and BSc and MSc degrees. He taught for 20 years in a FE college teaching A-level and a little bit undergraduate. He's taught in his current school for 12 years teaching mainly 6th form and a little bit of lower school. His role in the school was sociology and citizenship teacher.

Interviewee 10 was, also, among the most experienced interviewees. He had been in his current school for 12 years and, although, he has not been involved in significant organisational responsibilities he describes extensively in both of his interviews how school contexts and individuals' "shape each other". As an example he discusses how his previous school context, that was an FE college, shaped him as a professional with regards to establishing a relationship with students and how he feels that he has influenced, in turn, his current school on this matter. In particular, he acknowledges that "individual characteristics" such as having empathy, enthusiasm, humour and mostly of all the ability to create a relationship with children are the most important resources for his job. He admits that this way of thinking was reinforced by his previous school context. Despite, though, the significant differences between the two contexts of his old and current school, he was able to continue working in the same way as soon as it became acceptable and understood by his colleagues and the pupils. He discusses it in a greater extend in his first interview in which he was directly asked to describe a change in his career and discuss his sources of support. However, in his second interview he referred to the same part of his career and how it has influenced his perceptions of job resources without being asked directly to do so. Furthermore, he notes that "like-mindedness" within his department and the support he has had from some

colleagues in the past to his own “learning” have influenced his perceptions of job resources. Finally, he acknowledges that leadership’s capability to “shape schools” has influenced his perceptions of what he needs to do his job due to the clash between OFSTED’s requirements and the need for fostering a child-centred environment.

SCHOOL CONTEXT

The school’s curriculum is comprised of 10 faculties and there is access to additional vocational education for some of its Year 10 and 11 Students through Henley College and City College. The school’s last OFSTED assessment (2012) showed that it is a school that requires improvement as too many students completing examination courses in Year 11 are not achieving as well as they should be. Results show an improvement for rates of progress and attainment from 2011 but these results remain below national averages. The school’s accurate progress tracking system and evidence from lessons and students’ books, confirm that disabled students and those with special educational needs are currently achieving well as a result of well-targeted support and carefully designed interventions from well trained staff. Overall, though, the quality of teaching is good as since the school’s last inspection, leaders and managers at all levels, particularly the reconstituted senior team, have made sustained and highly effective improvements to the quality of teaching in the school. Evidence from the school’s robust monitoring system, discussions with teachers and students, and students’ work all indicate that improvements in teaching have been sustained over a period of time and progress rates for all groups of students are improving. Finally, the headteacher, supported by a highly capable senior team, provides good leadership and an ambitious vision, shared by all staff, for the school’s future success. The leadership and management of teaching is a particular strength, with systematic reviews of teaching quality that are informed by accurate judgements. Coaching is a key feature of the programme of improvement and the school continues to invest in training new coaches to support colleagues. What is more, the school

maintains a wide range of positive partnerships which impact very positively on students' achievement, including a link with the Ricoh Arena which saw students performing grounds men's duties during the Olympic Games.

INTERVIEWEE'S PERCEPTIONS OF JOB RESOURCES

He provided a description of the resources he needs to do her job reflecting on his overall career experience. He focused on "individual characteristics" that are important for him to do his job such as having empathy and an ability to create a relationship with the child.

"Enthusiasm, patience, knowledge, sense of humour. And also a bit of empathy you know you need to understand where the kids come from and the teachers need to be able to get down from their perch and actually regard the students as people which is quite difficult at times because teachers cling on to their teacher status in a sense to help them maintain order. I've just been seeing these new teachers just starting to work today in their first day of their jobs and one thing that the head was talking about: the important thing that they are going to need to develop is the relationship with the children because until is a relationship with a child the child is not going to learn".

School influence

He, also, focused on the shared ability of schools and their members "to shape each other", in terms of creating a more equal relationship with the children, in order to describe the way in which schools have influenced his perceptions of what he needs to do his job.

"I came to teach in a state secondary school after teaching in an FE college so I started out in a place that there was more of an equal relationship between students and teachers. And I think I brought that with me and initially it was difficult for me to bring that kind of equality to an institution which fundamentally was not used to that. And the children weren't used to that kind of adults but I think now that I've been here for a long time the institution is used to me, the kids know how am I like from year 7 and therefore I'm very well with the children here"

Department influence

Furthermore, he identified "likemindedness", in terms of working with likeminded people, as the way in which his department has influenced his perceptions of job resources.

"I think that within Humanities it has been kind of...historically there have been people like-minded".

Colleagues' influence

Moreover, he acknowledged colleagues' support to his "learning", in terms of learning new skills, as the way in which it has influenced his perceptions of job resources.

"I think there have been significant colleagues in the past from whom I have learnt skills but there are other colleagues that I don't get anything from and I'm trying to give to them"

Leadership influence

Finally, he describes how leaders' capability to "shape schools", by adjusting to the structural demands of OFSTED, has influenced his perceptions of what it's needed for his job.

“There have been some leaders that helped me along my path and there were others that did not like that but fundamentally and I think one of the problems with schools is that there are increasingly under the thumb of government and the room to manoeuvre them and be child-centred is restricted by the structural demands of OFSTED, those kind of issues so I think their leadership might like to be more child-centred but is too aware that the book stops with the exam results. So there is a kind of clash isn’t it? I feel that there is a clash between those two positions”.

10.5. Overview

This section presented the analysis of the follow-up interviews on the influence of interviewees’ school contexts on their perceptions of job resources as well as the profiles of the interviewees that participated in both interview rounds. As the purpose was to address interviewees’ perceptions of sources of support in their schools a review of the latest OFSTED assessments of the schools in which interviewees were employed at the time of the interview was, also, included in the analysis. A key finding was that teachers’ perceptions of job resources were much more closely related to their overall career experiences and career changes rather than the characteristics of one specific school context.

OFSTED reports highlight schools’ strengths and weaknesses in relation to the teaching practices followed and the degree to which leadership initiatives have been welcomed from the school staff adding to schools’ improvement. OFSTED assessment of the leadership in the schools was the only one that added to the understanding of interviewees’ influence of school context on their perceptions of job resources. Other than that, the information included in the OFSTED reports did not add significantly to the interpretation of interviewees’ responses as they do not provide information about how various initiatives may be perceived by all individual teachers in relation to their own career experiences and aspirations.

The enquiry, though, focusing on teachers' perceptions of their sources of support sowed that interviewees' perceptions of job resources have been influenced by various aspects of their school contexts. The greatest influence on teachers' perceptions of job resources is their own sense of having an impact on their school. This was manifested by individuals' stories that focused on individual attributes to describe what they need the most to do their job. Other perceived sources of influence included ability of schools to shape its members or their degree of acknowledging needed resources; the like-mindedness in their department; the team-playing among their colleagues and their support to their learning; and leadership's ability to shape school and teachers. These findings agree with the literature on teachers' learning and development that has established that teachers' collaboration and active participation in their schools are extremely important for both their own development and their school improvement.

Finally, interviewees described the influence that their school contexts have had on their perceptions of sources of support drawing from career experiences from both their current and previous school contexts. Therefore, they took a holistic view over their resources throughout their career acknowledging the influence of their school contexts in relation to their perceptions of support and their individual professional needs.

11.0) CHAPTER 11: CONCLUSIONS

11.1. Introduction

The present study explored teachers' perceptions of their job resources. In particular, analysis addressed five aspects of those perceptions based both on Demerouti's et al. (2001) generic definition of job resources as well as on the analysis of participants' individual answers. This chapter consists of three sections that will show how teachers' perceptions of different aspects of their work answers the study's research questions and discuss the study's limitations and contribution in the field of job resources research. The first section will focus on the study's main findings discussing how they addressed the study's research questions. The second section will focus on the study's limitations and suggest further research that could resolve them. Finally, the third section will present the contribution of this study in psychological and educational research in areas relevant to the definition of job resources.

11.2. Section A: Research findings and the study's research questions

The study's surveys and interviews were developed and analysed based on the generic definition of job resources but all themes that emerged from those analyses were grounded on participants' answers. These analyses described five aspects of teachers' job resources that answered the study's research question "what are teachers' perceptions of job resources?" On the other hand, the study's first round of interviews was, also, able to answer the study's research sub-question "Do their perceptions (teachers' perceptions of job resources) differ under perceived change demands?"

A.1. Research question: What are teachers' perceptions of Job resources?

Based on the generic definition of job resources and individuals' answers the present study was able to construct a definition of five aspects of teachers' perceptions of job resources:

- a) Teachers' perceptions of their schools as learning organisations,
- b) Teachers' perceptions of available school activities/arrangements,
- c) Teachers' perceptions of their sources of engagement support
- d) Potential relationships between teachers' positive psychological capital and their perceptions of job resources.
- e) The perceived influence that school contexts may have had on teachers' perceived sources of support

A.1.1. Generic definition of job resources: physical, psychological, social or organizational aspects of the job that may stimulate personal growth, learning, and development

Teachers' perceptions of supportive aspects of their work, as highlighted in the present study, were able to address the third part of the generic definition of job resources. This means that they described participants' perceptions of *“physical, psychological, social or organizational aspects of the job that may stimulate personal growth, learning, and development”*. Both surveys and the first round of interviews addressed those perceptions and confirmed the research propositions that were set in the beginning of the study. For example, pilot-study and survey-study participants identified the significance of their work (e.g. *“being in a position to influence change”*) and innovation (e.g. *“new ideas and challenges, “having the independence to develop my role) as a source of their engagement support. Interviewees, though, were able to reflect on their survey*

answers and described how their work role (e.g. *"...no 2 days are the same every year we change projects..."*) or their relationships with their colleagues (e.g. *"...one key factor is openness and respect to other teachers in terms of the styles, the pedagogies..."*) support their engagement in their work. Thus, they confirmed the research statement set upon the beginning of the study that *"perceiving aspects' of one's work as supportive will support one's engagement in his/her work"*.

Furthermore, the study's surveys explored teachers' perceptions of their schools as learning organizations. Addressing those perceptions was important as they are conceptually able to describe teachers' perceptions of aspects of their work that may stimulate personal growth, learning and development. This view of a learning organisation as a potential instrument for growth is, also, supported by Jafari and Kalanaki's (2012) research in a sample of 177 teachers and administrative personnel of the Roozbeh Educational Complex in Tehran showing. Their findings showed that Bowen's dimensions of schools as learning organisations are significantly related with readiness-to-change and that relationship is significantly stronger for the component of the "sentiment" dimension. In the present study in teachers' perceptions of job resources only some of the original sub-scales were used but results showed that they can still measure two distinctive aspects of individuals' perceptions of the way teachers work in their school ("action" and "sentiment"). This was important as the surveys further explored differences between individuals' scores on these two dimensions and their perceptions of available supportive school activities in their school.

Moreover, both surveys and the first round of interviews gave participants opportunities to discuss school activities/arrangements that are available and supportive to their professional development. The surveys gave the least opportunities to participants to discuss their perceptions of those activities but participants still mentioned some of them as supportive to their engagement in their work (e.g. *"departmental meetings"*, *"sufficient training"*, *"working with peers on specific projects"*).

In the first round of interviews, though, participants were asked directly to identify those school activities/arrangements that are most important for them and discuss why they believe so.

Educational research into teachers' professional development focuses more often on the relationship between such activities/arrangement and their professional learning rather than their individual needs. However, research findings about teachers' CPD among English teachers show that their effectiveness depends on the degree to which they are relevant to the specific needs of teachers within the contexts in which they are employed (e.g. Goodall et al., 2005; Day et al., 2007; Orfer & Pedder, 2010). This was prevalent in the present study, as well, and was clearly reflected in interviewees' responses regarding available sources of support (e.g. "*...if I think that I am participating in some decision making that gives me a kind of purpose to be here than just coming in doing a job and going...*", "*...I think for me mentoring and coaching is important...that makes the day-to-day when you have school much easier..*"), or their shortage: "*...one issue is that things haven't changed dramatically for me personally at the school for quite some time..*").

a) *Proposition: Perceiving aspects of one's work as supportive will support one's engagement in his/her work.*

Both surveys' and interviews' analyses supported the above theoretical proposition. However, interview analyses showed that participants' perceptions of school activities/arrangements are more than just perceptions of supportive aspects of teachers' work that support their engagement in their work. Indeed, analysis showed that teachers' perceptions of school activities arrangements describe physical, psychological, social or organizational aspects of the job that may stimulate personal growth, learning, and development (e.g. "*...the [parents] are welcomed to criticize...parents that we want to invite because they've got something to bring in the school*", "*we have federation day... we will get together and discuss technology...*").

Analysis of the surveys provided some information regarding teachers' perceptions of available school activities/arrangements and the support they perceive they have from them. In

particular, analysis highlighted significant relationships between teachers' perceptions of their school activities/arrangements and their perceptions of schools as learning organisations as well as their positive psychological capital. For example, participants' identification of school activities/arrangements such as participation in decision-making and departmental collaborations were related to their perceptions of schools as learning organisations (see tables 36, 37, 38, 41, 42, 43, 44) and their positive psychological capital (see tables 66, 67). Finally, both surveys' participants focused on their available school activities/arrangements as a source of engagement support (see table 80). The interviews, though, gave the opportunity to examine such perceptions in greater depth.

The interviewees described in more detail their school activities/ arrangements and adopted various perspectives to describe why they perceived them as important. The interviewees' perspectives were in accordance with the literature regarding teachers' supportive school contexts (e.g. Louis & Kruse, 1995; Harris & Muijs, 2005; Leithwood et al., 2009) and the generic definition of job resources as physical, psychological, social or organizational aspects of the job that may stimulate personal growth, learning, and development. In particular, interviewees adopted multiple perspectives to describe school activities/arrangements that were available to them for their professional growth and their importance for them (organisational perspectives, interpersonal perspectives, work-role perspectives, task perspectives). Educational research into teachers' work-lives has often highlighted the importance of working in a supportive school context and the difference forms that this support can take. For example, learning experiences tailored to the day-to-day teachers' work (Hawley & Valli, 1999), participation in school improvement processes (Louis & Kruse, 1995), collaborative work (Hargreaves, 1994), and appropriate leadership initiatives (Leithwood et al., 1993, Harris & Muijs, 2005) are among the most commonly cited supportive aspects of teachers' work.

Interviewees' descriptions of their sources of support showed that they identified support for their professional growth located in different levels of analysis within the organisation. This, also,

reflected survey participants’ descriptions of such school activities/arrangements that they also perceived as supportive to their engagement in their work (table 94).

Table 94: Illustrative examples of perceived supportive school activities/arrangements

Supportive school activities/ arrangements	
Surveys’ analysis	Interview analysis
<i>Examples</i>	<i>Illustrative Examples</i>
<p><i>-opportunities</i></p> <p><i>-time</i></p> <p><i>-training</i></p>	<p>“The arrangements of classes where one’s free lessons come the non-contact time can be absolutely perfect and have a very good and satisfying year..and another year you’ve got a very bad class first thing on a Monday morning or a last in a Friday” (interviewee 2)</p> <p>“Working with other schools and organisations certainly again it goes back to the IB really so...because I work with them like going to the other schools, I take the ideas of the other schools and bring them into here. And that really helps me” (interviewee 5)</p> <p>“we all have our preferred style of teaching and we work together to support that individuals improve their lessons and suggest ideas in departmental meetings” (interviewee 8)</p> <p>“Why these (working with other schools/agencies, curriculum development teams and action research) are more important than the others... because I think they link to this third goal that I talked about. Other than being paid for it my reason of being a teacher is to effect change, teaching is political activity, isn’t it?” (interviewee 10)</p>

A.1.2. Generic definition of job resources: physical, psychological, social or organizational aspects of the job that may be functional in achieving work-related goals

Analysis of the surveys and interviews showed how participants described their sources of support that they related with their professional achievement. In particular, the two surveys and the first round of interviews explored teachers’ perceptions of their sources of engagement support that were able to describe physical, psychological, social or organizational aspects of the job that may be functional in achieving work-related goals (Demerouti et al., 2001) (table 95).

Table 95: Illustrative examples of perceived sources of engagement support

Sources of engagement support	
Surveys’ analysis	Interview analysis
<i>Examples</i>	<i>Illustrative Examples</i>
-goal achievement (e.g. “personal sense of accomplishment”, “high standards/expectations”, “seeing results”)	<p>“I feel responsible for the students...what keeps me motivated is that making sure they do well” (interviewee 1)</p> <p>“It’s brilliant to see them following requests like when you ask them something they do it first time” (interviewee 2)</p> <p>“seeing children come out of my lessons or other I’ve worked with stronger, knowing more” (interviewee 6)</p>

Especially the analysis of the first round of interviews provided a description of sources of support that were related to different aspects of interviewees’ presence in the organisation and confirmed the study’s theoretical propositions. On the other hand, the analysis of the follow-up

interview showed how interviewees' experiences of their schools, departments, colleagues and leadership have influenced their perceptions of what they need to do their job. Overall, the present study showed that understanding where teachers' locate their sources of support within their organisation is important for accessing their perceptions of job resources as well as understanding the influence of their career experiences on those perceptions.

Proposition: Perceiving aspects of one's work as supportive will support one's engagement in his/her work.

The analysis of both surveys' and interview participants' responses on the question "what supports your engagement in your work" described aspects of teachers' work that they perceived as supportive to their engagement in their work. In particular, survey participants referred to supportive aspects of their work inside and outside the classroom and referred as well to supportive aspects of their school contexts (relationship with colleagues, leadership, supportive school activities/arrangements). The analysis, though, of the first round of interviews provided a description of those aspects of teachers' work as interviewees adopted multiple perspectives to describe their sources of engagement support (organizational, interpersonal, work-role, task-, and non-work related perspectives). Those perspectives reflected participants' school perceptions, work-perceptions and non-work related perceptions that had emerged at the stage of the surveys' analysis describing supportive aspects of teachers' jobs. Those findings meet the first part of the generic definition of job resources and are in accordance with the argument that job resources can be located in various levels of analysis within an organisation (Demerouti et al., 2001). The present study, though, suggests that a qualitative analysis of teachers' perceptions of job resources may provide a more accurate description of what individual teachers perceive as their job resources within their organisations.

A.2. Research sub-question: Do they (teachers' perceptions of job resources) differ under perceived change demands?

The present study addressed teachers' perceptions of sources of support asking participants to reflect on their experience of an event of a demanding change. The analysis of interviewees' reflections was able to answer the above research sub-question based on the second part of the definition of job resources. In particular, Job resources are expected to become more important when individuals are faced with high demands and counterbalance them and this was, also, manifested in interviewees' reflections of their sources of support when they faced a change.

A.2.1) Generic definition of job resources: physical, psychological, social
or organizational aspects of the job that may reduce job demands
and the associated physiological and/or psychological costs

Based on the above mentioned generic definition of job resources two theoretical propositions were formed that were examined in the first round of interviews:

“Perceiving that these aspects of the work can also support one when he/she faces change demands, will significantly support him/her”

“Perceiving having enough resources (irrespective of their source) during change is important for one's engagement in his/her work”

Interview analysis was able to describe interviewees' perceptions of their sources of support when they faced a demanding change confirming fully the first proposition and offering partial support for the second one.

a) *Proposition: Perceiving that these aspects of the work can also support one when he/she faces change demands will significantly support him/her.*

Dealing with small- or large scale change is part of teachers' daily work and so is their resilience and ability to maintain their motivation. For this reason, a theoretical proposition that was formed in this study and fully confirmed was that teachers' feel significantly supported by positive aspects of their work that can offer them specific support at an event of a demanding change.

Day et al. (2007) examined the stories of English teachers in relation to their resilience at times of changes and what primarily influences it. They found that teachers' resilience depends on one's scope of experience at the time of change, perceived competence and confidence in managing the emerging conditions, views on the meaning of the engagement, and the availability of appropriate support within the context of change. These elements of teachers' work were met, also, in the present study in teachers' perceptions of job resources. In particular, in the first round of interviews participants adopted different perspectives to describe those sources of support (organisational perspectives, interpersonal perspectives, work-role perspectives, task perspectives and non-work related perspectives). In the second round of interviews that took a place a year later interviewees were not asked directly their sources of support during change. However, the issue of "change" and working in a school context that offers the support they need appeared in all their stories in a positive or negative light (table 96).

Table 96: Illustrative examples of perceived influence of school contexts
on teachers' perceptions of job resources

Available sources of support	
Change	Sources of support
<i>Illustrative Examples</i>	<i>Illustrative Examples</i>
<p><i>"I came to teach in a state secondary school after teaching in an FE college so I started out in a place that there was more of an equal relationship between students and teachers"</i> (interviewee 10)</p> <p><i>- "In my previous school I didn't have any responsibilities so it was other people that had to make those decisions really not me. When I came in this school I became Head of Music.."</i> (interviewee 4)</p>	<p><i>"I think now that I've been here for a long time the institution is used to me, the kids know how am I like from year 7 and therefore I'm very well with the children here"</i> (interviewee 10)</p> <p><i>- My school is fairly supportive of music. So actually I have more time-free time than other teachers do. So they support me in this way and because in terms of resources we can raise money from putting on productions and other events we can use that money then to fund the next production or the next event so the school is helpful"</i> (interviewee 4)</p>

b) Proposition: Perceiving having enough resources (irrespective of their source) during change is important for one's engagement in his/her work.

This second proposition was partially supported. In particular, participants reflected on their sources of engagement support and their available support at an event of a change focusing on the availability of the support they needed rather than their engagement in their work. However, analysis did show that perceiving having enough resources (irrespective of their source) is a significant factor when dealing with change especially illustrated by teachers' perceptions of work-related and non-work related aspects of their lives (table 97).

Table 97: Illustrative examples of perceived available resources

Available sources of support	
Change support	Sources of support
<i>Illustrative Examples</i>	<i>Illustrative Examples</i>
<p>“and I thought ok trust me to do it and I’m gonna take it as a challenge and I put my conditions...in exchange I don’t want to be pressurised for this or that, I want to do it the way I want to do it. I don’t want people telling me do it in this way and not in that way” (interviewee 6)</p> <p>“it was good that we had a week’s transition. We sent people away, we set the holidays early so we could set up here and get ready...and it’s been great” (interviewee 8)</p> <p>“Technology in trampolining because we have video and kids can watch what they have just done and have another go and compare the two” (interviewee 9)</p>	<p>“we had to do departmental peer work, we had learning walls...to gain ideas from each other” (interviewee 3)</p> <p>“Co-teaching and team teaching has been very important ...Because we’ve been working with different subject areas (interviewee 4)</p> <p>“I’m hoping by the end of this term to have changed a lot of the way that children think and opening new ways of thinking ...” (interviewee 6)</p> <p>“so I had to think as the head of the department how I’m going to approach it and I always think what approach I’m going to use” (interviewee 8)</p>

This was also evident among those interviewees that perceived that their school and leadership did not offer the kind of support that he/she needed. In those cases, individuals focused more on aspects of their work and personal lives that offered them the support they need (table 98)

Table 98: Illustrative examples of identified sources of support

Available sources of support	
Leadership support-change support	Sources of support
<i>Illustrative Examples</i>	<i>Illustrative Examples</i>
<p>-I think we have a weak leader. I think she's not as good as she thinks she is" (interviewee 5)</p> <p>-I think leadership in this school is fundamentally driven by external factors... leadership in this school is organized to respond to Ofsted ...I don't think that I feel inspired by some charismatic leader, I think we have a lot of people that are panicking about filing, we try to fit around their issues (interviewee 10)</p>	<p>"Being determined really not to let them beat me really" (interviewee 10)</p> <p>"Greeting my team..., I think that colleagues were supportive and I think colleagues have also gone through that, that is the need to have a job" (interviewee 10)</p> <p>-Again the wider community...is also working with other schools and organisations again the IB is really help because you know I'm here, other schools the work I do with them through the IB so I expect a phone call in half an hour from another school and that has been really useful (interviewee 5)</p> <p>"my partner has been incredibly supportive and tells me just do whatever you want to do, if you need to leave then leave, If we need to move to a different country then we will move to a different country. People listen but in terms of actual support..." (interviewee 5)</p>

Such findings are in accordance with the argument that job resources gain their salience when they are under threat (Bakker and Demerouti, 2007). However, this argument was further confirmed by the comparisons among interviewees' answers in different parts of the study through the construction of individual profiles. Thus, gathering information about the context of teachers'

job resources requires developing an understanding of the ways in which individuals construct the importance that their sources of support may hold in their work-lives.

c) Themes' comparisons

Participants' reflections on their sources of support when they dealt with a change produced various themes that described how participants' perceived that they supported them. Those themes that were found in individual answers were compared with each other as well as with those found in individual answers in other survey- and interview- questions in order to answer the study's research sub-question.

Description of what one perceives that supports him/her when dealing with perceived change.

Vs

- 1) Description of one's perceptions of available school activities/ arrangements.*
- 2) Description of what one perceives as his/her available resources.*
- 3) Description of what one perceives that supports his/her engagement in his/her work.*

The perspectives that participants adopted described the same sources of support that they had described earlier in their answers but their descriptions were more focused. Specifically, participants identified more clearly supportive aspects of their work when they reflected on a specific situation where they faced a demanding change than when they were reflecting generally on supportive aspects of their work (e.g. sources of engagement support, school activities/arrangements).

d) School contexts and interviewees' profiles

The second round of interviews allowed a greater understanding of teachers' perceptions of job resources by exploring interviewees' perceptions of the influence of their school contexts. In contrast to previous stages of this research teachers did not refer to any school activities/arrangements that were available to them but they discussed their career experiences in order to describe how these have influenced their perceptions of support. For this reason, key themes that emerged from their second interview were seen in parallel with background information about their current school and individuals' stories in their first interview. For example, teachers discussed extensively about the way in which leadership support has influenced their perceptions of job resources as school leadership can "shape schools" and "shape teachers" (table 99). Teachers who felt they can impact activities in their schools not only described those leadership capabilities but, also, identified personal attributes as the main resource for their job.

Table 99: Illustrative examples of perceived leadership support and personal attributes on teachers' perceptions of job resources

Individual characteristics	Leadership: shaping schools and shaping teachers
<i>Illustrative Examples</i>	<i>Illustrative Examples</i>
<p><i>“Vision-see things clearly and be able to evaluate and be able to look critically, look on what’s going on, the positives and the things that need to be improved and then understanding how to make it happen” (Interviewee 1)</i></p> <p><i>“one of the things that I’ve learnt is to communicate change to other people and understanding that maybe not everyone sees it the way I see it and having to kind of adapt, introduce ideas to people” (interviewee 6)</i></p>	<p><i>“..One of the things that I’ve learnt is to communicate change to other people and understanding that maybe not everyone sees it the way I see it and having to kind of adapt, introduce ideas to people..” (Interviewee 1)</i></p> <p><i>“Our head-teacher is a strong leader and he has influenced the way the school has gone in the last few years. It has done it in the same way I’m working with my team. He has started by trusting us, by bringing us along, by enabling us, distributing leadership and that’s a model I’ve copied with the people that are working my team as well) (interviewee 6)</i></p>

On the other hand, colleagues and departments' influence were the least extensively discussed in interviewees' responses. Interviewees' referred to the "like-mindedness" in their department as well as the "team-playing" and "support for their learning" among their colleagues.

However, their descriptions were much less thorough than their first interview. Moreover, interviewees' descriptions of sources of support, as emerged after the analysis of their first interview, was much more informative to the findings of their follow-up interview than background information gathered through schools' websites and their OFSTED. Thus, teachers' perceptions of their sources of support and their career stories may be more informative to our understanding of the influence that school contexts may have had on their perceptions of job resources than an external report of a school.

11.3) Section B: Limitations & Further research

The present study explored different aspects of teachers' job resources but it also faced significant limitations. Its' most significant limitations are related to characteristics of its research design: a) the use of a mixed methods research design to address teachers' perceptions of job resources, b) the study's sample size and c) the study's data collection method.

B.1. Limitations

This research study adopted a mixed methods research design whose focus was on selecting those data collection methods that were fit-for-purpose. For this reason, the surveys' and interviews' questions were developed to focus primarily on the third part of the definition of job resources (physical, psychological, social or organizational aspects of the job that may stimulate personal growth, learning, and development) and allow inferences to be drawn from one method to another.

However, there were certain survey questions that were more open to such an analysis than others. Such questions in both surveys were the open-ended questions "what supports your engagement in your work?" and the list of school activities/ arrangements that asked participants to identify the ones that they can find in their school. Thus, teachers' work-perceptions that were addressed through those questions were able to inform the analysis procedures for the present research design. On the other hand, teachers' work-perceptions that were addressed through survey items that measured factors relevant to teachers' perceptions of their job resources were not open to a similar analysis. However, this approach allowed using the same terminology in both surveys and the first interview and, thus, explore teachers' responses on the same question (what supports your engagement in your work?).

Moreover, the data collection methods followed in the present study didn't allow testing for school-level assessment of job resources as that was beyond the focus of the present study's research questions and research purposes. A school-level assessment of job resources would require the development of research questions and a research design that seek to identify what are the actual resources in a school and examine teachers' involvement into them along with individuals' perceptions of those resources. For the same reason, questionnaires were not planned to be administered to all members of the staff in schools.

What is more, as the purpose of the present study was to gain an insight into teachers' perceptions of job resources through different means only a few items from Bowen's et al. (2007) assessment instrument were used. Thus, there was no assessment of the participating schools as learning organisations that would enable to draw safer conclusions regarding teachers' perceptions of job resources in more than one learning organisation.

Finally, due to the use of a mixed methods research design to explore teachers' perceptions of job resources there was, also, a smaller sample size than the one needed for a pure quantitative study and, subsequently, certain challenges in relation to data collection throughout a year. In particular, the present study's sample size didn't allow the execution of the statistical procedures required to examine the relationships among teachers' perceptions of their job resources, positive psychological capital and their levels of work-engagement. On the other hand, the state-nature of the construct of positive psychological capital means that it measures psychological states that are not as stable as personality characteristics over time. Consequently, individuals' scores are expected to fluctuate over time and, thus, the longer it takes to gather data on a state-like construct (such as PsyCap) the more challenging its interpretations become. As the quantitative data for the second survey were gathered in a period of a year it can be assumed that the overall PsyCap scores are not as trustworthy had all participants had completed the PsyCap scale in a period less than two months.

B.2. Further research

Further research in the area of teachers' perceptions of job resources should involve both quantitative and qualitative research methods and different sampling methods in order to resolve the above mentioned limitations. In particular, a larger sample of teachers employed in secondary schools in many UK counties would be required in order to understand the relationship between teachers' perceptions of their schools as learning organisations, their positive psychological capital and their work-related well-being. More attention needs to be paid to the time of the year that data collection is taking place as teachers' work-load and both teachers' and schools' priorities will be different at different times of the school-year.

On the other hand, a school-based sampling method would be required to examine in depth the relationships between teachers' perceptions of their school activities/arrangements and their perceptions of their schools as learning organisations. The way teachers are exposed and involved to school arrangements for their professional and leadership development may differ from one school to another. For this reason, a closer examination is required of the relationships between how those arrangements are set, teachers' actual access to them and the actual support that teachers perceive they have from them (Goodall et al., 2005; Day et al., 2007; Orfer & Pedder, 2010).

Finally, longitudinal research designs would be more appropriate for research in job resources for two reasons. Firstly, job resources and personal resources are often found to create positive spiral that can be examined by gathering quantitative data at different times (Xanthopoulou et al., 2008; Salanova et al., 2008). Secondly, a longitudinal design could allow qualitative data collection in ways that draw safer conclusions regarding teachers' perceptions of job resources aiming to count for smaller or larger changes either within a school or district or the educational system.

11.4. Section C: Contribution to the field

The present study expands psychological and educational research in job resources by exploring teachers' work-perceptions regarding different aspects of their jobs that can provide support in achieving work-related goals, reduce job demands and the associated physiological and/or psychological costs, and stimulate personal growth, learning, and development (Demerouti et al., 2001). Those aspects of teachers' jobs involved the "action" and "sentiment" component of their schools as learning organizations, their sources of engagement support, available supportive school activities/arrangements and their complex relationship with teachers' positive psychological capital. This is the first piece of research that examines all those aspects of teachers' work as an inherent part of their job resources.

C.1. Psychological research in job resources

The present study extended job resources research in the teaching profession by using both quantitative and qualitative research methods to form a definition of teachers' perceptions of job resources grounded on teachers' perceived experiences. The majority of psychological research in teachers' job resources has focused on various supportive factors drawing mainly from stress research and testing statistical models to predict employees' work-related well-being or other desirable outcomes. For example, Bakker et al. (2007) assessed 805 Finnish teachers' job resources, measuring them as job control, information, organizational climate, innovativeness, and appreciation. Their results showed that they were all directly related to teachers' vigour, dedication, and absorption; while all measured job resources except job control either moderated or interacted with the pupil misbehaviour regarding teachers' vigour, dedication and absorption. However, they have not addressed teachers' job resources in their schools as learning organizations. Indeed, recent conceptualizations and research in organizational learning and schools as learning organizations

have drawn attention to teachers' perceptions of the way they work and the support they receive (Bowen et al., 2007)

Research emanating from stress models often fails to identify the value of perceived resources in a meaningful way for people's day-to-day lives at work (e.g. Kira & Eijnaten, 2009) mainly due the exclusive use of quantitative research methods. Indeed, the present study provided a more in-depth insight of teachers' perceptions of job resources as it used both surveys and interviews to explore teachers' perceptions of various aspects of their job resources encouraging participants to reflect on the support they have offered to their work-lives.

Finally, the relationship between employees' job resources and personal resources is a development of the research field in positive organisational behaviour. The present research adopts this approach to address teachers' perceptions of job resources. There is some psychological research in teachers' job resources and personal resources (e.g. Prieto et al., 2008) but it doesn't focus on teachers' positive psychological capital while the personal resources assessed do not involve positive psychological states defined like teachers' positive psychological capital that the present research measured. This study is the first one that explored potential links between individual levels of positive psychological capital and teachers' perceptions of their schools as learning organisations, their work-engagement and their perceptions of school activities/arrangements. However, due to the small sample size those results were treated as indicative of potential relationships.

C.2. Educational research in areas related to the definition of Job resources

The present study suggests a different approach to research in teachers' job resources as it drew from a broader range of areas in research with teachers. Research in job resources have been carried out primarily adopting psychological research methods. On the other hand, educational research in physical, psychological, social or organizational aspects of the job that may do any of the

following: (a) are functional in achieving work-related goals; (b) reduce job demands and the associated physiological and/or psychological costs; (c) stimulate personal growth, learning, and development (Demerouti et al., 2001) is fragmented into different research areas (e.g. teachers' professional lives, work-motivation, school improvement etc). Furthermore, educational research in those areas is often school-based research and in some cases almost exclusively qualitative research.

The findings of the present study can add to our understanding of educational research in teachers' motivation and professional lives. In particular, the present study showed individual teachers' perceptions of school activities/arrangements available to them for their professional development illustrating why they perceived them as important. Furthermore, it showed individual teachers' perceptions of what supported them the most and kept them going at an event of a change and the reasons why. Therefore, the present study is, also, a self-assessment of available resources based on individuals' perceived importance of those resources rather than through relating them with desirable outcomes such as job satisfaction, organisational commitment or pupils' achievement. The advantage of such an approach is that it approaches teachers as "professionals" and members of their organisations and as such it values their perceptions of their sources of support.

A key finding was, for example, that teachers' not only referred to but described non work-related aspects of their lives as an important source of support. This was a theme that emerged from participants' responses in the question "what supports your engagement in your work" in both surveys and the first round of interviews. However, it did emerge in interviewees' follow-up interviews where the questions used was "what do you think you need to do your job". This suggests that researching teachers' sources of their engagement support may produce well-rounded descriptions of what individual teachers' perceive as important and valuable to them, while the use of the word "work" may allow teachers to reflect on more aspects of their work-lives than their classroom work.

The two most widely researched and most often cited features of school contexts in educational research are teachers' involvement in school activities and teachers' collaboration (e.g. Rosenholtz, 1989; Harvreaves, 1994; Louis & Kruse, 1995; Harris & Muils, 2005; Leithwood et al., 2009). Those features appeared repeatedly in this study as well. For example, survey- participants' identification of departmental collaborations and participation in decision-making committees were significantly related to their perceptions of the way teachers work in their schools. Furthermore, interviewees' perspectives on their sources of support in the first round of interviews explored further those perceptions; while the analysis of their follow-up interviews was largely tailored around their sense of involvement in their schools and their collaboration with their colleagues. This was especially shown in the analysis of the second round of interviews as they gave interviewees the opportunity to discuss the influence of their school contexts on their perception of their sources of support.

Finally, educational research into teachers' professional development have focused on similar aspects of teachers' jobs either using in-depth qualitative analyses or focusing on the influence of those aspects of teachers work on their learning (e.g. Pedder, 1996; Hollingsworth's, 1999; Bolam and Weindling 2006). There was less focus, though, on teachers' actual access to learning (Orfer & Pedder, 2010) or the degree to which it addresses appropriately their professional needs (Goodall et al., 2005; Day et al., 2007; Day & Gu, 2007; Orfar & Pedder, 2010). However, the present study showed that the use of the definition of job resources can allow the examination of teachers' perceptions of aspects of their work such as their perceived presence in the organization, work-role, collaborations and classroom work. These perceptions signal the different areas in individuals' work-lives that keep them going while at the same time the individual themselves recognise those areas as developing them further as a professional.

Therefore, carrying out research in job resources using educational research methods can address aspects of teachers' jobs that may be important for their professional growth. By doing so, it allows the researcher to approach individual teachers as professionals acknowledging that they have

diverse individual needs that are not always linked to the overall performance of one specific context and its priorities. The results showed that individual perceptions of sources of support are closely related with one's total career experiences. Those perceptions can, in turn, inform our understanding of teachers' job resources irrespective of specific characteristics of their current school context.

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Youssef, C. M., & Luthans, F. (2005b). Resiliency development of organizations, leaders and employees: Multi-level theory building for sustained performance. In W. Gardner, B. Avolio, & F. Walumbwa (eds.). *Authentic leadership theory and practice: Origins, effects and development*, 303-343. Oxford, UK: Elsevier

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APPENDIX 1 Appendix 1

MPhil, PhD, EdD Research Students and Masters by Research: Ethical Approval

All research undertaken by the students and staff within WIE must conform to the University's ethical guidelines. There are separate procedures for staff and students. This guidance addresses the latter.

All students receive training in research ethics and are required to complete the appropriate form before undertaking research, including small projects, dissertations and theses as appropriate. The completion of the form is an opportunity to discuss ethical issues with your supervisor/tutor and is intended as a learning exercise as much as an administrative process to ensure compliance with WIE's policy.

The amount and type of training in research ethics is proportionate to both the qualification and the research project; the content of the forms varies accordingly. In general, undergraduates will be expected to undertake research projects which give relatively common and straightforward ethical issues while doctoral studies may raise complex, challenging ethical issues. As most studies involve children and young people, research ethics pertaining to vulnerable participants is a common issue.

You should complete the ethical approval form for the research project appropriate to your programme. These may be obtained from the WIE website or from the designated secretary:

BA Early Childhood Studies	Paula Clarke-Bennett
MA (Taught)	Gill Hayward
MA (Research) MPhil/PhD, EdD	Louisa Hopkins

For *EdD* students, separate forms are required for each specialist study (8000 words) and the thesis

You should complete the form, which should then be signed by yourself and countersigned by your tutor/supervisor. Completion of the form will be guided by your tutor/supervisor and is intended to help you consider the ethical issues concerned, and you should, therefore, provide full details. The form should then be returned to Louisa Hopkins in the Research Office (WE1.32) for processing. Please note as the form requires signatures you should not email it – the paper original is required.

The ethical approval form will then be reviewed by the member of staff delegated for the purpose, Professor Geoff Lindsay. The proposal may be approved, approved subject to minor amendments or declined. The form will then be returned to the Research Office for recording and then returned to your course secretary who will report the outcome to yourself and tutor/supervisor. If any changes are required you should undertake these in consultation with your tutor/supervisor. The form should then be resubmitted to the Research Office, when it will be reviewed.

Further Guidance

Further guidance and support is available from the University's website:

<http://www2.warwick.ac.uk/services/rss/services/ethics/statement/guidance/>

<http://www2.warwick.ac.uk/services/rss/services/ethics/governance/codeofconduct/>

<http://www2.warwick.ac.uk/services/rss/services/ethics/statement/guidance/#>

and from the ethical codes of appropriate organisations including the British Educational Research Association, British Psychological Society and the British Sociological Association, see

www.warwick.ac.uk/services/rss

www.bera.org.uk

www.bps.org.uk

www.britisoc.org.uk

NB: doctoral Students

Doctoral students are initially registered for an MPhil/PhD and transfer to the PgD subject to the completion of a successful Upgrade. Ethical approval should first be sought early in the MPhil and certainly before any fieldwork. The Upgrade provides a second opportunity to review the ethical issues of your research. A completed ethical approval form should therefore accompany your Upgrade paper.

**Application for Ethical Approval for Research Degrees
(MA by research, MPhil/PhD, EdD)**

Name of student: Maria Armaou

MA By research	EdD	MPhil/ PhD X
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Project title: Teachers' perceived job resources for organisational learning and the sustainability of their work-engagement.

Supervisor: Janet Goodall and Mary Briggs

Funding Body (if relevant)

Please ensure you have read the Guidance for the Ethical Conduct of Research available in the handbook.

Methodology

Please outline the methodology e.g. observation, individual interviews, focus groups, group testing etc.

This research project will employ a mixed methodology: an across-school survey & a case study. The survey methodology will include a large-scale survey that will be carried out in several rounds during one school-year. Its sample will be secondary school teachers working in Warwickshire schools. The case study will be designed to provide an in-depth analysis of the phenomena under examination and will take place in one of those schools and will employ individual interviews of teachers and maybe organisational data as a triangulation method (e.g. analysis of archival data)

Participants

Please specify all participants in the research including ages of children and young people where appropriate. Also specify if any participants are vulnerable e.g. children; as a result of learning disability.

The participants in the across-school survey will be teachers working in around 10 Warwickshire secondary-schools, so that there is a representation of the selective, non-selective and faith schools of the local authority. Sampling will be kept to the local authority to increase representativeness and minimise the potential influence of other development factors in organisations. The participants of the case-study will be teachers employed in one school among those participating in the across-school survey.

Respect for participants' rights and dignity

How will the fundamental rights and dignity of participants be respected, e.g. confidentiality, respect of cultural and religious values?

Participation to both the across-school survey and the case study will be on a voluntary basis and cultural or religious issues will not be discussed or brought up as part of this research project at any point. If such issues by any chance arise they will be treated with discretion. Furthermore, all survey and interview responses will be anonymous and only basic demographic information will be gathered. This will be used only for research purposes and not identifiable information will be disclosed to third parties. No other personal information will be gathered.

Privacy and confidentiality

How will confidentiality be assured? Please address all aspects of research including protection of data records, thesis, reports/papers that might arise from the study.

All participating schools will remain anonymous. In addition, all participants in the surveys and interviews will remain anonymous. However, they will be identifiable to the researcher through a unique research code so that their interview and survey responses can be traced along the study. Participants responses will be used only for research purposes and all data will be presented in further reports and papers in an aggregated basis. If archival data are to be examined information gathered from those data will be treated with confidentiality, as no one else besides the researcher will have access to them, no information will be passed to third parties and only information needed for this research will be gathered. With regards to data records, only the researcher will have access to them and any feedback provided to the schools or to the participants or any research papers will not include identifiable information. Finally, identifiable survey data and all interview data will be disposed after the research has finished.

Consent - will prior informed consent be obtained?

- from participants? Yes/No from others? Yes/No

- explain how this will be obtained. If prior informed consent is not to be obtained, give reason:

Informed consent will be obtained by the head teachers that will allow us access to the schools and from the participating teachers. Furthermore, participants and schools will be debriefed with regards to the purposes of this research. In addition, contacts with schools involved in the across-school survey will be kept throughout the various stages of the survey to ensure its completion and answer questions that may arise.

- will participants be explicitly informed of the student's status? Yes

Competence

How will you ensure that all methods used are undertaken with the necessary competence?

Previous research training included survey-methods and interviewing, while currently appropriate training when needed is sought from WIE (e.g. FRM & ARM), Graduate School and other departments (e.g. training in structural equation modelling techniques that will be employed for the analysis of the across-school survey). Additionally, all methods employed will be carried out based on literature and previous practice, alongside trialling of instruments used and getting feedback from those involved in trialling. Those instruments will include an instrument constructed by the researcher that will also form a basis of the case study, interview schedules and a battery of questionnaires that will be used in the across-school survey. The questionnaires included in this battery are already tested and validated instruments. Their properties as published demonstrate good internal validity and reliability.

Protection of participants

How will participants' safety and well-being be safeguarded?

Any participant can withdraw at any point during the research. Moreover, the overall interview schedules will be constructed with a provision to breaks to be scheduled as needed. In addition, the required fieldwork will be programmed, after consultation with the participating schools, in such a way so as not to be tiresome for the participants or cause any serious disruptions in the school life.

Child protection

Will a CRB check be needed? Yes/No (If yes, please attach a copy.)

yes - scales - t

? teachers

Addressing dilemmas

Even well planned research can produce ethical dilemmas. How will you address any ethical dilemmas that may arise in your research?

Questionnaires will be administered to the participants for each round of the survey through contacts with the schools and their research code may need to be matched to a mailing address. For this reason, participants' addresses and research codes will be grouped in a different database so that their anonymity can be protected, while their responses remain identifiable to the researcher.

heads, ser... of the... that they will withdraw.

not a response to the question

Misuse of research

How will you seek to ensure that the research and the evidence resulting from it are not misused?

First of all only the researcher will have access to the identifiable data of the research. Furthermore, the heads of the schools and all participants will be debriefed with regards to the research purposes. Indeed, as the field work will involve teachers' perceptions over their work environment no identifiable information with regards to participants' responses will be given back to the schools. Finally, it will be told explicitly to all participants that there are no better or worse answers to any of the questions and to all participating schools that this research and the feedback that they will get does not intend to evaluate any practices or provide solutions regarding the schools' immediate problems.

Support for research participants

What action is proposed if sensitive issues are raised or a participant becomes upset?

Generally, no sensitive issues are anticipated to be raised. However, if they are raised, then there will be either a break or an ending to the interview. Moreover, if a certain part of this research project is found to make participants nervous that part will be re-examined and appropriate actions will be taken in order to make amendments to that process.

Integrity

How will you ensure that your research and its reporting are honest, fair and respectful to others?

All schools will be debriefed about the research objectives and aggregated feedback will be provided. Furthermore, no schools or groups of teachers will be identified and presented as better than others. Apart from that, all reporting of this research will be always linked to the research questions and purposes and any analysis or judgments will regard only the analysis of the data gathered and by no means will be judgmental to those involved.

What agreement has been made for the attribution of authorship by yourself and your supervisor(s) of any reports or publications?

PhD is solo authorship, papers whilst student will be joint authorship

Other issues?

Please specify other issues not discussed above, if any, and how you will address them.

The questionnaires that will be used in the main booklet for the across-school survey will involve the Utrecht Work Engagement Scale (Schaufeli & Bakker, 2003), the Psychological Capital Questionnaire (Luthans et al. 2007) and sub-scales from the School Success Profile Learning Organization (Bowen et al., 2007). They are all free for research purposes and permission to use them has been granted.

Also, the Utrecht Work Engagement scale and the Psychological Capital questionnaire are used by researchers globally across various occupational groups and form large databases. The scores of those two questionnaires in the end will also become part of these databases.

No identifiable data will be shared.

Signed

Research student: Maria Armaou

Date

Supervisor

Hy Briggs

Date

25/02/10

Action

Please submit to the Research Office (Louisa Hopkins, room WE132)

Action taken

-
-
-

Approved

Approved with modification or conditions – see below

Action deferred. Please supply additional information or clarification – see below

I found the handwritten response very difficult to read - I am aware my writing may also be the same!

14/12

see note - If you plan to follow up respondents you will need to have their names etc to identify them. So the info sheet requires correction

Name

Date

Signature

Stamped

Notes of Action

This is generally ok but please address the following.

1. Do not dispose of your data until degree is awarded. Furthermore, you will need the data to produce papers - it is not necessary to destroy the data. Rather, the obligation is to keep it but safe + confidential
2. The teacher also need to be given the opportunity to refuse to be a participant or to remove themselves from the study later if they wish
3. CRB not necessary if teachers are the participants
4. Please address the issue of determination - re-read the questions + answer this
5. Papers may well be written after you complete the PhD - you need to agree the system of this period also. Normally I'd expect joint authorship, you as 1st author, for papers from the doctoral research

Notes of action addressed:

1) The actual data won't be destroyed. They will be all kept safe and confidential. ~~in~~ in a separate database identifiable data (e.g. e-mail addresses, names of schools etc) will be kept safely ~~separately~~ so that they can be matched with specific research codes and the main database will keep on being updated. That separate database (and only this) will be discarded eventually. ~~eventually~~

2) All participants can withdraw at any point of the research. They will be reminded about it each time. For example, see ~~attached~~ the attached paper designed to accompany a survey that I plan to run this year. (Even if this is a longitudinal research and certain questionnaires will be distributed several times in order to test specific hypotheses about the same participants' scores). *①

~~However~~ The material, though, gathered from this year's survey ~~is~~ ^{is} a value of ~~its~~ ^{its} own and it is not in my ~~intention~~ ^{intention} to get any identifiable data so that I can match my participants' responses with their own responses further on.

This is why in the last question in that case I mention that there ~~is~~ are no identifiers on the survey.

3) CRB may not be necessary when teachers are the participants, but distribution of the questionnaires, any debrief sessions for extra questions and all the interviews will take place ~~at~~ inside the schools. CRB can be used as a safeguard for schools ~~to~~ feel safe about me getting inside the schools for my research.

① If you intend to send more than my questionnaire, as part of a completed pkg, to the same teacher then your info sheet is wrong - you must know who they are in order to follow up.

Survey: Exploring teachers' perceptions on aspects of their work-environment important for their development

Introduction

What is the purpose of this survey?

This survey includes 36 items. It aims to explore teachers' perceptions on what keeps them engaged in their work and what supports their own development, as well as that of their schools. It is part of a PhD research project investigating the role of the school context for teachers' engagement as perceived by the teachers themselves.

Who is conducting this survey?

This survey is conducted across secondary schools in Warwickshire by Maria Armaou, PhD student in Education at the University of Warwick.

What do you want me to do?

We would like you to complete this survey. It should take you no more than 10-15 minutes. This is not a test. There are no right or wrong answers. Please try to answer every question.

Must I participate?

No. Your participation is voluntary. However, we encourage your participation. Your views and opinions are very important to providing an accurate description on how teachers' engagement in their work can be sustained.

What will happen to my answers?

Your answers will be stored to a research database and will be used only for research purposes. Only the researcher responsible for this project will have access to any identifiable data.

Will you know who I am?

No. Your answers on this survey are anonymous. No identifiers are included on the survey.

4) No serious ethical dilemmas are likely to arise. Among the few, though, that may arise involve ^{dealing with} ~~potential~~ requests from the heads of the schools to get de-briefed about the outcome of the research in their school and e) dealing with participants' responses once they have dropped out.

As far as de-briefing requests are concerned, it will be made explicit to all participants and schools that ^{the goal of any} ~~the~~ de-brief session scheduled will be to provide information and answer questions about the research per se and maybe towards the end to provide some ~~extra~~ information about the overall findings with regards to the ~~purpose~~ purpose of the research in the first place. ~~Such~~ Such de-brief sessions will be used to cultivate schools' and teachers' engagement with the overall research project as it will take one year to be completed.

~~Requests~~ Requests about getting specific information about one school or teacher's ^{individual} assessments ^{will not} be accepted.

As far as withdrawn participants' responses ^{are concerned} will be treated according to normal practice. ~~For~~ For example, they will be included in the longitudinal analysis, but we will exclude ~~less~~ specific characteristics (e.g. gender, age, tenure) related (in a statistical manner) with such drop-out ~~behaviour~~ behaviour.

The final, though, conclusions will be based on the responses of the participants that ~~participated~~ participated with the end

5) Yes, we have agreed with my supervisors about authorship for any outputs resulting from my PhD research, before and after completion of my research, to be as ^{joint} ~~joint~~ authorship with me as first author.

APPENDIX 2



UNC
SCHOOL OF SOCIAL WORK

THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

SCHOOL SUCCESS PROFILE
CAMPUS BOX 3550
TATE-TURNER-KURALT BUILDING
CHAPEL HILL, NC 27599-3550

T 919.962.6542
F 919.962.3689
<http://ssw.unc.edu>
glbowen@email.unc.edu

January 25, 2010

GARY L. BOWEN, PH.D., ACSW
Kenan Distinguished Professor

RE: Permission to Use SSPLO ©2005 Scales

Maria Armaou
Ph.D. Student
Education
University of Warwick

Dr. Gary L. Bowen gives permission to the above named researcher to use scales from the School Success Profile Learning Organization (SSPLO) ©2005 for purposes of her research in meeting academic requirements at the University of Warwick. He also grants permission to the above named researcher to include these scales from the SSPLO in publications that result from this work, including publications that may be published and sold. In all publications, SSPLO items and scales must be properly referenced.

For purposes of general citation, please use the following reference when referring to the SSPLO survey:

Bowen, G. L., Ware, W. B., Rose, R. A., & Powers, J. D. (2007). Assessing the functioning of schools as learning organizations. *Children & Schools*, 29, 199-208.

I would appreciate receiving an electronic copy (PDF) of publications that result from your use of SSPLO measures, including an electronic copy of your dissertation. I also request permission to list your publications on the SSPLO-related publication listings, such as the SSP Website @ schoolsucceessprofile.org.

Best wishes for a successful dissertation project.

Thank you.

Gary L. Bowen, Ph.D., ACSW

APPENDIX 3



Survey: Exploring teachers' work-perceptions

What is the purpose of this survey?

This survey will explore teachers' work-perceptions that may be important for their engagement in their work. It is part of a PhD research project investigating aspects of teachers' work that can be related to their work-related well-being.

Who is conducting this survey and where?

*This survey is conducted across secondary schools in Warwickshire by Maria Armaou, PhD student at the **Institute of Education, University of Warwick**.*

What do I need to do?

Please complete this survey. It should take you no more than 5-7 minutes. There are no right or wrong answers. Please try to answer every question.

Must I participate?

No. Your participation is voluntary. However, I encourage your participation. Your views and opinions are integral to providing an accurate description on how teachers' engagement can be sustained.

What will happen to my answers?

Your answers will be stored to a research database and will be used only for research purposes. Only the researcher responsible for this project will have access to it.

Will you know who I am?

No. Your answers on this survey are anonymous.

9	Do you think any of the above listed activities or arrangements supports your engagement in your work?	Yes	No
<p>If yes, which ones?</p> <p>If no, why not?</p>			

C) Please read each statement carefully and indicate the extent to which you agree or not with it.

1	2	3	4	5	6
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

Professional development activities that take place in my school...		1	2	3	4	5	6
1	...influence my professional learning.						
2	...impact on my school's improvement.						
3	...support my engagement in my work.						
Professional development activities that take place outside the school...		1	2	3	4	5	6
4	...influence my professional learning.						
5	...impact on my school's improvement.						
6	...support my engagement in my work						
	Collaborative work with other teachers...						

7	...influences my professional learning.	1	2	3	4	5	6
8	...impacts on my school's improvement.	1	2	3	4	5	6
9	...supports my engagement in my work	1	2	3	4	5	6
Participation in activities that improve aspects of my work-life...							
10	...allows me to have a part in shaping the direction of my school.	1	2	3	4	5	6
11	...allows me to work in concert with other stakeholders in shaping the future of the organization.	1	2	3	4	5	6
12	...impacts on my school's improvement.	1	2	3	4	5	6
13	...supports my engagement in my work.	1	2	3	4	5	6

D) Please indicate the extent to which you agree that each characteristic is descriptive of the school at which you are employed. For purposes of responding, "WE" REFERS TO ALL EMPLOYEES AT THIS SCHOOL.

1	2	3	4	5	6
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

At my school, we:							
1	Welcome and appreciate new ideas	1	2	3	4	5	6
2	Have an open mind about new ways of doing things.	1	2	3	4	5	6
3	Are willing to experiment with new practices.	1	2	3	4	5	6
4	Seek ideas and opinions from students	1	2	3	4	5	6
5	Work with parents as partners in the educational process.	1	2	3	4	5	6
6	Engage and collaborate with community agencies and organisations.	1	2	3	4	5	6
7	Share ideas and information with one another about how to make this school more effective.	1	2	3	4	5	6

8	Feel comfortable sharing our learning experiences with one another.	1	2	3	4	5	6
9	Maintain open lines of communication	1	2	3	4	5	6
10	Show kindness and thoughtfulness to one another	1	2	3	4	5	6
11	Offer care and support for one another in times of personal need.	1	2	3	4	5	6
12	Treat one another as both colleagues and friends.	1	2	3	4	5	6
13	Value the opinions of all staff	1	2	3	4	5	6

E) Please answer the following questions:

What supports your engagement in your work?

APPENDIX 4



Exploring teachers' work perceptions.

What is the purpose of this survey?

This survey is part of a PhD research project investigates teachers' perceptions of their work lives.

Who is conducting this survey?

*This survey is conducted across secondary schools in Coventry and Warwickshire by Maria Armaou, PhD student at the **Institute of Education, University of Warwick.***

What do you want me to do?

We would like you to complete this survey. It should take you approx. 10 minutes to complete. This is not a test. There are no right or wrong answers. Please try to answer every question.

What will happen to my answers?

*All questionnaires are anonymous. You will be identified by a unique research code. **Participant will be invited to participate in a follow-up interview and for this reason you are asked to provide an e-mail address.** Your participation is voluntary. However, we do encourage your participation as your views and opinions are very important to providing an accurate description of teachers' work perceptions that can be important for their well-being at work. **Your e-mail address will only be used to contact you again at the time of the interview and match your answers to your unique research code.** Only the researcher responsible for this project will have access to your answers.*

PARTICIPANT E-MAIL ADDRESS:

-I am willing to discuss my survey responses with the researcher in an individual interview: Yes No

Initials: ____ (Only for individual interview volunteers)

Consent form for interviewee-participation.

Introduction

*You are receiving this consent form as you volunteered to take part in a research interview, run by Maria Armaou, PhD student at the **Institute of Education, University of Warwick**.*

What is the interviews' purpose?

The interviews' purpose is to explore further the information gathered through the questionnaire making it more relevant to teachers' professional lives.

What do you want me to do?

Individual Interviews will take place some time after your completion of the survey and they will last around 15 minutes. The researcher will contact you again in order to arrange a day and a time that you can meet with her in the school premises.

Are there any risks to me?

No

What if I am harmed by the study procedures?

You will not be harmed by this study. In case though you feel distressed at any point during the interviews you can take a break or terminate the session.

Are there any benefits to me?

You will not receive any benefit from taking part in this study. However, your participation will provide valuable insight on how a school as an organization can support teachers' well-being at work.

Will there be any costs to me?

Aside from your time, there are no costs involved in taking part in the study.

What will happen to my answers?

A tape recorder will be used in the interview but you will remain anonymous. Your records will be confidential. You will not be identified in any reports or publications resulting from the study. Your e-mail address will be used ONLY as a contact method for the present research and a way to update your participation records.

May I change my mind about participating?

Your participation in this study is voluntary. You may decide to not begin or to stop the study at any time.

Whom can I contact for additional information?

You can obtain further information about the research or voice concerns or complaints about the research by contacting the researcher directly at M.Armaou@warwick.ac.uk (alternative e-mail address: vavel7@yahoo.gr) or alternatively her supervisors Professor Mary Briggs: mary.briggs@warwick.ac.uk and Dr. Janet Goodall: janet.goodall@warwick.ac.uk

Your signature

By signing this form, I affirm that I have read the information contained in the form, that the study has been explained to me, that my questions have been answered and that I agree to take part in this study. I do not give up any of my legal rights by signing this form.

Name

Signature

Date signed

Background information:

Age: Years of teaching experience:
 Gender: M/F Years of organisational/ managerial responsibilities:
 Current role:

A) Please tick what you think about the characteristics of the school at which you are employed.

1	Professional development activities take pace...			
	<input type="checkbox"/>	... inside the school		
	<input type="checkbox"/>	... outside the school		
	<input type="checkbox"/>	... both		
2	Tick the activities that you can find in your school:			
	<input type="checkbox"/>	Induction for newly qualified teachers and/or new staff members		
	<input type="checkbox"/>	Mentoring/Coaching		
	<input type="checkbox"/>	Action-research and/or teacher enquiry		
	<input type="checkbox"/>	Co-teaching/Team teaching		
	<input type="checkbox"/>	Peer-review of teaching practices		
	<input type="checkbox"/>	Interdepartmental collaborations among teachers		
	<input type="checkbox"/>	Participation in decision-making committees		
	<input type="checkbox"/>	Curriculum development teams		
	<input type="checkbox"/>	Work with other schools or agencies/organisations		
	<input type="checkbox"/>	Workshops for leadership development skills		
	<input type="checkbox"/>	Parents involvement provision		
	<input type="checkbox"/>	Funding for graduate or postgraduate courses		
	<input type="checkbox"/>	Other:		
3	The arrangements for the above activities are...			
	<input type="checkbox"/>	... departmental		
	<input type="checkbox"/>	... school-wide		
	<input type="checkbox"/>	... both		
4	Do you think any of the above listed activities or arrangements supports your engagement in your work?		Yes	No
	If yes, which ones?			

If no, why not?

B) Please read each statement carefully and indicate the extent to which you agree or not with it.

1	2	3	4	5	6
Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree

Developmental activities/arrangements inside my school...							
1	...influence my professional learning.	1	2	3	4	5	6
2	...impact on my school's improvement.	1	2	3	4	5	6
3	...support my engagement in my work.	1	2	3	4	5	6
Developmental activities/arrangements outside my school...							
4	...influence my professional learning.	1	2	3	4	5	6
5	...impact on my school's improvement.	1	2	3	4	5	6
6	...support my engagement in my work.	1	2	3	4	5	6
Collaborative work with other teachers...							
7	...influences my professional learning.	1	2	3	4	5	6
8	...impacts on my school's improvement.	1	2	3	4	5	6
9	...supports my engagement in my work.	1	2	3	4	5	6

C) Please indicate the extent to which you agree that each characteristic is descriptive of the school at which you are employed. For purposes of responding, "WE" REFERS TO ALL EMPLOYEES AT THIS SCHOOL.

At my school, we:							
1	Welcome and appreciate new ideas.	1	2	3	4	5	6
2	Have an open mind about new ways of doing	1	2	3	4	5	6

	things.						
3	Are willing to experiment with new practices.	1	2	3	4	5	6
4	Seek ideas and opinions from students.	1	2	3	4	5	6
5	Work with parents as partners in the educational process.	1	2	3	4	5	6
6	Engage and collaborate with community agencies and organizations.	1	2	3	4	5	6
7	Share ideas and information with one another about how to make this school more effective.	1	2	3	4	5	6
8	Feel comfortable sharing our learning experiences with one another.	1	2	3	4	5	6
9	Maintain open lines of communication.	1	2	3	4	5	6
10	Show kindness and thoughtfulness to one another.	1	2	3	4	5	6
11	Offer care and support for one another in times of personal need.	1	2	3	4	5	6
12	Treat one another as both colleagues and friends.	1	2	3	4	5	6
13	Value the opinions of all staff.	1	2	3	4	5	6

D) Below are statements that describe how you may think about yourself right now. Indicate your level of agreement or disagreement with each statement.

1	I feel confident analyzing a long-term problem to find a solution.	1	2	3	4	5	6
2	I feel confident in representing my work area in meetings with management.	1	2	3	4	5	6
3	I feel confident contributing to discussions about the organization's strategy.	1	2	3	4	5	6
4	I feel confident helping to set targets/ goals in my work area.	1	2	3	4	5	6
5	I feel confident contacting people outside the organization to discuss problems.	1	2	3	4	5	6
6	I feel confident presenting information to a group of colleagues.	1	2	3	4	5	6
7	If I should find myself in a jam at work, I could think of many ways to get out of it.	1	2	3	4	5	6

8	At the present time, I am energetically pursuing my work goals.	1	2	3	4	5	6
9	There are lots of ways around any problem.	1	2	3	4	5	6
10	Right now I see myself as being pretty successful at work.	1	2	3	4	5	6
11	I can think of many ways to reach my current work goals.	1	2	3	4	5	6
12	At this time, I am meeting the work goals that I have set for myself.	1	2	3	4	5	6
13	When I have a setback at work, I have trouble recovering from it, moving on.	1	2	3	4	5	6
14	I usually manage difficulties one way or another at work.	1	2	3	4	5	6
15	I can be "on my own," so to speak, at work if I have to.	1	2	3	4	5	6
16	I usually take stressful things at work in stride.	1	2	3	4	5	6
17	I can get through difficult times at work because I've experienced difficulty before.	1	2	3	4	5	6
18	I feel I can handle many things at a time at this job.	1	2	3	4	5	6
19	When things are uncertain for me, at work I usually expect the best.	1	2	3	4	5	6
20	If something can go wrong for me work-wise, it will.	1	2	3	4	5	6
21	I always look on the bright side of things regarding my job.	1	2	3	4	5	6
22	I'm optimistic about what will happen to me in the future as it pertains to work.	1	2	3	4	5	6
23	In this job, things never work out the way I want them to.	1	2	3	4	5	6
24	I approach this job as if "every cloud has a silver lining".	1	2	3	4	5	6

E) The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. **If you have never had this feeling, cross the "0" (zero) in the space provided next to**

the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month	a few times a month	once a week	a few times a week	every day

	At my work, I feel bursting with energy.
	At my job, I feel strong and vigorous.
	I am enthusiastic about my job.
	My job inspires me.
	When I get up in the morning, I feel like going to work.
	I feel happy when I am working intensely.
	I am proud of the work that I do.
	I am immersed in my work.
	I get carried away when I'm working.

F) Please answer the following question:

What supports your engagement in your work?

APPENDIX 5

Agreement for Permission to Use the Psychological Capital Questionnaire (PCQ) 2007-Version 1.0

Introduction: The Psychological Capital Questionnaire (PCQ) has undergone significant validation efforts to demonstrate that it is both reliable and construct valid. Permission to use the PCQ free of charge and for a limited period is provided for research purposes only. Such use is conditional on submitting the Abstract of Research Project and adhering to the following conditions:

Research Use Conditions:

1. The PCQ will be used in its exact form without any changes to the instructions, rating scale/anchors, order or number of items. All of the items listed in survey must be used.
2. If the researcher is translating the PCQ into another language, the PCQ must be back translated into English by an independent specialist and reviewed by Dr. Fred Luthans, fluthans@unlnotes.unl.edu, in order to assure the PCQ items have been properly translated. A translation agreement must be signed and sent to Mind Garden, Inc., 855 Oak Grove Ave., Suite 215, Menlo Park, CA 94025, info@mindgarden.com before starting the translation work.
3. The researchers must submit the Abstract of Research Project form, which is a brief description of their specific use of the PCQ. This description needs to include the following: The main thrust of the research, hypotheses; the sample/organization(s) characteristics including number of participants and demographics, type of organization, country in which data are being collected, language, and how the data were collected such as by paper and pencil survey, Web, etc. If the PCQ is to be put on the Web then the conditions at <http://www.mindgarden.com/how.htm#instrumentweb> need to be met. Where the Web conditions indicate compensating Mind Garden, put that the Abstract of Research Project form has been submitted as the compensation.
4. The researchers agree to use the PCQ **only for the specific study** that has been requested. There will be no further use of the PCQ without resubmitting the Abstract of Research Project form for *additional permission* to use the PCQ with additional studies.
5. The researcher will not provide the PCQ to any other researchers without submitting the Abstract of Research Project form for *permission*.
6. The researcher agrees to provide the raw data collected with the PCQ to Dr. Fred Luthans, fluthans@unlnotes.unl.edu, at the Gallup Leadership Institute to be added to the normative data base maintained for use by *other researchers*. The data set should be in ASCII format, and include just the raw data for the 24 items indicating the following: Those ratings that are self, supervisor, peer, follower, or other. Code rating level as self = 0, supervisor = 1, peer = 2, follower

= 3, other = 4 (and indicate the meaning of "other"). Any additional demographics on the sample that can be included in the data file would be appreciated. Include a full description of the demographic questions and how the responses are coded.

7. The citation to be used for the source of the PCQ is Luthans, F., Youssef, C.M., & Avolio, B.J. (2007). *Psychological Capital* (pp. 237-238). New York: Oxford University Press; Also see Luthans, F., Avolio, B.J., Avey, J.B., & Norman, S.M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60,541-572.

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Questionnaire (PCQ) Authors: Fred Luthans, Bruce J.

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Sincerely,

Robert Most
Mind Garden, Inc. www.mindgarden.com

APPENDIX 6

Work & Well-being Survey (UWES) ©

The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

- _____ At my work, I feel bursting with energy
- _____ At my job, I feel strong and vigorous
- _____ I am enthusiastic about my job
- _____ My job inspires me
- _____ When I get up in the morning, I feel like going to work
- _____ I feel happy when I am working intensely
- _____ I am proud of the work that I do
- _____ I am immersed in my work
- _____ I get carried away when I'm working

Shaufeli & Bakker (2003). The Utrecht Work Engagement Scale is free for use for non-commercial scientific research. Commercial and/or non-scientific use is prohibited, unless previous written permission is granted by the authors

APPENDIX 7

Interview schedule

1) What supports your engagement in your work? (*probe for tasks, explanations, for other people if mentioned*).
Example:... (What happened?, when?, where?, who?, why?)

2) I'd like to ask you some questions about the school arrangements/activities that you identified in the survey-list. You have identified:.... (if more than 5, ask about the 5 most important ones).
Potential probes:

What/who does it involve? What is your role in it? Why is it important for you?

Example....

3) Next, I'd like you to describe me briefly a change that you experienced recently in your current workplace.

-What did involve and how did you experience it?

-What helped you most to adjust?

(potential probe: Did you find such help at your school or your work?)

4) Do you think that any of the previously discussed activities/arrangement provided such help to you at the time?

5) How would you define leadership support for you?

APPENDIX 8

Interview schedule:

- 1) What do you think you need to do your job?
- 2) How have the schools you have been in during your career influenced your perceptions of what you need to do your job?
- 3) How have the departments you have been in during your career influenced your perceptions of what you need to do your job?
- 4) How have the colleagues you have had in your career influenced your perceptions of what you need to do your job?
- 5) How have the leaders you have had in your career influenced your perceptions of what you need to do your job?