

A Thesis Submitted for the Degree of PhD at the University of Warwick

Permanent WRAP URL:

<http://wrap.warwick.ac.uk/145364>

Copyright and reuse:

This thesis is made available online and is protected by original copyright.

Please scroll down to view the document itself.

Please refer to the repository record for this item for information to help you to cite it.

Our policy information is available from the repository home page.

For more information, please contact the WRAP Team at: wrap@warwick.ac.uk

Textuality and Functional-Based Languages in Italian School.

Institutional reforms, curricula, schoolbooks and related case
studies from the 1990s until the present day

by

Carmine Matteo Ciglio

A thesis submitted in fulfilment of the requirements for the degree
of Doctor of Philosophy in Italian

University of Warwick, Department of Italian
September 2019

Table of Contents

Acknowledgements and Declaration	7
Abstract.....	9
Introduction.....	11
1. Reforming the school system and a new Italian language curriculum for a ‘European’ Italy.....	23
1.1 The influence of Programmi Ministeriali 1979 -1985 on the debate around the curriculum.....	23
1.2 Age of experimentation: the ‘Progetto Brocca’ (1988-1992).....	27
1.3 Background to the reform.....	32
1.4 The ‘commissione dei saggi’.....	34
1.5 Law 30/2000.....	36
1.6 Didactic autonomy and discussion of the new curricula (2001)	38
2. Reforms and curricula. From ‘Piani di studio personalizzati’ (2004) to the latest curricula.....	47
2.1 ‘Legge 53/2003’: from autonomy to isolation?.....	48
2.2 Curriculum again... Giuseppe Fioroni and the reform of Primary School.....	55
2.3 The curriculum during the Financial Crisis: ‘riforma Gelmini’.....	59
3. The Italian language assignment for the final exam for secondary school: new methodologies of teaching and learning.....	67
3.1 Teaching the new: textual linguistic ideologies that influenced the changes to the final exam.....	70
3.2 Creative vs. Functional Writing.....	76
3.3 Teaching the new: what is linguistic variety and what it its place in textuality and the final exam for secondary school.....	80

4. Textbooks and grammar schoolbooks for secondary school of the first cycle and language varieties: functional writing before and after the reform of the final exam.....	87
4.1 Methodological framework.....	90
4.2 Textbooks before 1997/2000.....	93
4.2.1 <i>L'ora di italiano – 1992</i>	94
4.2.2 <i>Italiano insieme – 1995</i>	101
4.3 Textbooks in use in 2011/2012.....	108
4.3.1 <i>Datti una regola – 2011</i>	110
4.3.2 <i>L'italiano passo passo – 2010</i>	117
5. Functional-based writing in contemporary Italian schools of every level of education. Definitions and features of scientific language and case studies.....	124
5.1 Definitions and features of sectorial based languages.....	125
5.2 Italian and the language of science.....	134
5.2.1 Lexicon.....	135
5.2.2 Morphosyntax.....	138
5.2.3 Syntax.....	140
5.2.4 Textuality.....	140
5.3 The sociolinguistic level of analysis.....	141
5.4 Teaching for teachers: Continuing education courses with the Marino Golinelli Foundation.....	142
5.4.1 The scientific poster and examples of text types.....	145
5.4.2 The writing laboratories.....	148
5.4.3 Follow-up in schools.....	153
a) <i>Planned writing: Appendix 6 and 7</i>	154
b) <i>Medical leaflets: Appendix 8 and 9</i>	156

6. A case study of technical-based writing experiences	
in secondary schools of the first cycle.....	159
6.1 The <i>teachability</i> of written Italian.....	160
6.2 Methodology and levels of analysis.....	163
6.2.1 The structure of the project.....	164
6.2.2 The method of enquiry.....	165
6.2.3 The addressees of the project.....	166
6.2.4 The main features analysed.....	168
6.3 Methodologies and topics of the different cases.....	170
6.4 Linguistic and sociolinguistic results of the different cases.....	177
6.5 Questionnaires.....	186
7. Conclusion.....	191
8. Bibliography.....	197
9. Appendix 1.....	207
10. Appendix 2.....	208
11. Appendix 3.....	209
12. Appendix 4.....	210
13. Appendix 5.....	211
14. Appendix 6.....	212
15. Appendix 7.....	213
16. Appendix 8.....	214
17. Appendix 9.....	215
18. Appendix 10.....	216
19. Appendix 11.....	217
20. Appendix 12.....	218
21. Appendices 13 and 14.....	219
22. Appendix 15.....	222
23. Appendix 16.....	223
24. Appendix 17.....	224
25. Appendix 18.....	225
26. Appendix 19.....	226
27. Questionnaires and answers.....	227

Acknowledgments

I would like to express my gratitude to Professor Simon Gilson for his constructive suggestions and valuable assistance during the planning and the writing of the dissertation. I would also like to thank Dr Mila Milani and Dr. Alessio Cotugno for the great advice, that have been greatly appreciated. I wish to thank Professor Jennifer Burns and Doctor Naomi Wells for the helpful suggestions regarding the methodological framework and the first chapter of this thesis. The important teaching opportunity given by Professor David Lines and Dr Cecilia Muratori was very valuable and of great help. I would like to express gratitude to Dr Gioia Panzarella and Gianmarco Mancosu, for providing academic insights and support during my first years at Warwick. I am also particularly grateful to Professor Matteo Viale, who stimulated my interest in the subject of this dissertation. I wish to thank the technical staff of the library who assisted me in consulting the books analysed in my research at the Biblioteca Nazionale in Rome. I also wish to acknowledge the help and support I received from the Golinelli Foundation in Bologna, that allowed me to be part of their annual teacher training courses. The same can be said about the very considerable help I received from the teachers and headmasters that I contacted for the case studies of this dissertation: their help was greatly appreciated. I wish to express gratitude to Giovanna Spinazzola, who helped me to put the research in the right direction, during the initial phases of my studies. The great advice and confidence given to me by uncle Professor Massimo Veltri were also very appreciated. I wish to thank Niccolò Candelise, who provided me helpful scientific information for the part dedicated to scientific language. I would like to thank my parents: Antonella Veltri for her unconditional support throughout my studies and Massimo Ciglio, who made me aware of some educational theories and put me in contact with the schools of one of the case studies in this work. Finally, I wish to express my gratitude to Gigi, who has supported me more than anyone else throughout my studies.

Declaration

The work presented (including data generated and data analysis) was carried out by the author except when clearly specified. The materials included in this work are not published in any other work by the author or any other author. One case in chapter 5 was included in previous unpublished research by the author. The thesis has not been submitted for a degree at any other university.

Abstract

The dissertation analyses the crucial points of debate upon Italian curriculum for every school cycle with particular regards to secondary school and regarding functional-based languages, textuality and multidisciplinary teaching from the 1990s to the present day. These ideas were part of a vast process of reforms, beginning in 1997 with the Berlinguer educational reform, which developed ideologies that can be dated to the 1970s. The dissertation investigates whether and if so to what extent these ideologies and related ideas about Italian language pedagogy informed school practices between 1992/94 and 2018. The investigation deals with reforms and curricula between 1997 and 2012 (chapters 1-2), the Italian language assignments, proposed by the new reform in 1998 (chapter 3), and, finally, the outcomes in the classroom environment of the debate within the school system and practices. These outcomes are addressed by undertaking an analysis of the following: 1. grammar schoolbooks for secondary school before and after the changes to the final exam assignment for the final exam of secondary school (chapter 4); 2. the role of teachers' courses in articulating and driving institutional directives within the school system for every school level (chapter 5); and 3. the status of multidisciplinary teaching and functional-based language within the school system with regards to the old 'Scuola Media' (chapter 6). The analysis of curricula and official documentation of chapters 1-3 demonstrates that the discussion upon functional-based languages can be re-traced to the early linguistic discussion of the 1970s. Having set this context, the case studies of chapters 4-6 explore the presence and impact of related ideas in school practices between 1992/94 and 2018 through study of textbooks, and of continuing education courses for teachers and laboratories. The findings of this research highlight with new evidence provided the tensions between theory and practice and how these have been addressed (or not addressed) in school practices. The thesis also considers how these tensions might have generated and how to address the channels in which they are more evident.

Introduction

The Italian language, like any other language, is made up of a number of varieties, which are defined by both internal and external features of linguistics.¹ While branches of linguistics such as lexicon, morphology, syntax and morphosyntax are key examples of internal varieties, this thesis focuses mostly (but not exclusively) on external features, such as time, space, communication vehicles, social groups, and communicative situations. The main focus of the thesis is to underpin the extent to which modern linguistic ideologies, curricula and textbooks are put into practice by state schools in the secondary school cycle, with regards to sectorial-based languages and textuality. Therefore, this dissertation addresses a very particular type of linguistic variety, one related to sectorial-based language and, in particular, its written variety and its applications within Italian School environments.² As mentioned, the focus of the thesis is on secondary schools of the first cycle. However, especially in chapters 1, 2 and 3, material regarding primary schools and secondary schools of the second cycle is also taken into account, to have an exhaustive picture of the pedagogical implications of the subject. The main research questions of the thesis regard the context and the extent to which educational policies of the given time frame (1996/2000 until present day), as far as textuality and sectorial-based language teaching/learning are concerned, have found applications within the current teaching habits and methodologies. The main aims of the dissertation are: 1. to investigate which major institutional changes contributed to developments in awareness in schools about textuality and sectorial-based languages within secondary schools of the first cycle; 2. to study how grammar and textbooks for secondary schools have reacted to the changes of the Italian written assignment in the

¹ For an up-to-date overview of what is meant for sectorial-based languages and variety in this thesis, see ‘SILFI 2018: Linguaggi settoriali e specialistici: sincronia, diacronia, traduzione, variazione’, in *XV Congresso della Società internazionale di Linguistica e Filologia italiana*, Genoa 28-30 May (book of abstracts available online at: http://www.silfi.eu/SILFI_2018/pdf/ABSTRACT_SILFI_2018.pdf [Accessed March 2019]). For a fuller definition of language variety and its meaning in sociolinguistics, see Majorie Meecham and Janie Rees-Miller, ‘Language in Social Context’ in *Contemporary linguistics*, ed. by William O’Grady, John Archibald, Mark Aronoff and Janie Rees-Miller, (Boston: Bedford/St. Martin’s, 2001), pp. 537-590; and see also the foundational work by Peter Trudgill, ‘Standard English: what isn’t’, in *Standard English: The Widening Debate*, ed. by Tony Bex and Richard J. Watts (London: Routledge, 1999), pp. 117-128. For a more historical view, see Gregory Michael and Susanne Carroll, *Language and situation: Language varieties and their Social Context* (London: Routledge, 1978).

² For a definition and explanation of linguistic variety in this work, see also 3.3.

final exam (around 1998) at the end of secondary school; 3. and to present and interrogate the current status of teaching methodologies, regarding textuality and sectorial-based languages within the formerly called ‘Scuola Media’. The thesis is divided into two main parts: part one (chapters 1-3) is concerned, above all, with methodological and theoretical backgrounds and, as mentioned, regards official indication for the curricula for every school cycle; part two (chapters 4-6) is dedicated to a more synchronic analysis of current data offered by contemporary practice in Italian secondary schools of the first cycle. While in the case studies of chapter 5 I took on the role of external observer and the design of the learning experiences was left to the tutors of the course, in chapter 6 not only did I collect the data from the results, but I also designed the activities, proposed the strategies and implemented the experiments. The two parts are not, however, distinct from one another but rather are closely interconnected. Thus chapters 1-3 aim to set out, contextualise and pinpoint issues and tensions with respect to the teaching habits, interactions and theories that will be studied in the analysis of the data in chapters 4-6. This introduction outlines the chapter partition, the content of each chapter and methodologies utilised, keeping under constant consideration the literature on the subject. I will now discuss the content and the methodologies utilised in the two parts.

Chapters 1-3 share the same methodological framework: they set up the discussion regarding educational policies and school curricula in relation to textuality and sectorial-based languages. The primary aim of these early chapters is, therefore, to compare and analyse whether the vast process of reform of 1996/2000 contributed to bringing sectorial based languages and different textual varieties to the educational system. Chapter 1 examines both the 1979 and the 1985 school programmes, which, mention, for the first time, the idea of multidisciplinary teaching/learning. This chapter also focuses on the early stages of the discussion upon linguistic education and thus makes use of a range of institutional documents such as the *Dieci tesi per l’educazione linguistica democratica* (1975) by GISCEL,³ that, with its revolutionary content, not only is a major object of this study, given the way it encouraged educators to ‘coinvolgere nei fini dello sviluppo delle capacità linguistiche non una, ma tutte le materie, non uno ma tutti gli insegnanti (Educazione fisica, che è fondamentale se è fatta su serio, compresa),’⁴ but also

³ ‘Gruppo Intervento e Studio nel Campo dell’Educazione Linguistica’.

⁴ GISCEL, *Dieci tesi per l’educazione linguistica democratica*, ‘Tesi VII - Limiti della pedagogia tradizionale’,

This document most recent ‘home’ is the GISCEL official website, <<https://giscel.it/>> [Acc. Jan. 2019], which includes updates on all the activities this association undertakes.

represented the main reference for the official documentation and curricula between 1979 and 1985. Moreover, the chapter focuses mainly on the process of educational reform that started in the early 1990s, with documents such as *Green Paper on The European Dimension of Education* (1993)⁵, and ended with the so-called ‘Berlinguer’ reform (1996-2000). Chapter 2 addresses how new reforms and curricula took different orientations during a time when Italian educational policies underwent significant political changes (2001-2012), with the analysis of two reforms (Legge 53/2003 in 2003 by Minister of Education Letizia Moratti, and the subsequent so-called ‘Gelmini’ reform in 2010) and two very different ideologies of conceiving school curricula for every school cycle: the ‘piani di studio personalizzati’ (2003) and ‘Indicazioni nazionali’ (2010), which is the format of curricula still in use today. Chapter 3 looks back at what is believed to be the crucial moment for written language methodologies, namely the changes that affected the exam for secondary schools, formerly known as ‘esame di maturità’ (1996-2000) and then provides a comparative analysis between the Italian assignments for the final exam before and after these changes.

For the purposes of this dissertation, the most significant change that arose from the process of reforms to the Italian education system, is a newly fashioned final examination for students aged 17-18 after the 5 years of ‘scuola secondaria di secondo grado’. Chapters 3 and 4 focus around a similar methodology, i.e. an analysis of materials both before and after the ‘Berlinguer’ reform. This is undertaken in relation to Italian final exam assignments for secondary schools in chapter 3 and to grammar textbooks for secondary schools of the first cycle in chapter 4. Chapter 3 assesses Italian language written assignments from the early 1990s and mentions the long-lasting tradition of teaching methodologies which contributed to create a certain kind of teaching habits such as the ‘pensierini’ or the ‘tema’, which tended to be distant from any real-life purposes.⁶ The term of comparison, in chapter 3, is the new format of the written exam and the ways in which it helped to stimulate discussion around sectorial-based languages. Chapter 4 aims to compare what is believed as one of the most powerful indicators of relevance of the new educational policies, the grammar textbook, throughout a time frame that sees a number of significant changes, including the reform of the final exam. Grammar textbooks are powerful and meaningful instruments to understand how the institutional

⁵‘Green Paper on The European Dimension of Education’, available online at: <<http://aei.pitt.edu/936/>> [Acc. September 2019].

⁶ Perhaps the most meaningful document of these methodologies is the classic Don Lorenzo Milani and the ‘Scuola di Barbiana’, *Lettera a una professoressa* (Turin: Einaudi, 1967).

changes and ideologies that are examined in chapters 1-3 were absorbed within the educational system. At the same time, it must be remembered that whether certain features (which will be referred to in the chapter) are present or absent in the corpus of textbooks for secondary schools of the first cycle analysed in chapter 4 is not necessarily a reliable indicator of whether these features were/are actually taught in everyday didactic activities. This chapter also addresses some important methodological doubts that arise when highlighting similarities and differences, with regard to the approach to technical and functional writing and with an emphasis on the relationship between schoolbooks, linguistic ideologies and legislation. Among the methodological issues tackled here, the attention will regard the question about what kind of grammar, or what grammatical assumptions teachers were/are implying, which textbooks to use in the analysis, (given the variety of publications) and, finally, how to handle the difficulties raised by the limited availability of some of the material.⁷ Answers to these questions are strictly related to each other. For this analysis, it was adopted a chronological approach with textbooks belonging to two different timeframes, both before and after the important changes of the end of the 1990s. The types of grammars, therefore, will vary, as theories are superseded by other theories and, as teachers and scholars respond and/or rethink the conception of grammar they have. While this chapter outlines the theoretical and ideological backgrounds involved, the main focus, from a methodological point of view, is on the teachers and their efforts at keeping their methodologies up-to-date. This is why a diachronic approach for chapter 4 was favourite, taking a sample of publications from 5-6 years before the final exam reform (2 examples) and a further sample from 10-12 years afterwards (2 examples). As far as the choice of the selection of textbooks is concerned, thanks to the help received from Italian publishers such as Giunti and La Scuola and thanks to previous studies such as Dalila Bachis' *Norma e uso nella grammaticografia scolastica attuale* (Florence: Le Lettere, 2010/11), it was adopted an approach that would focus on those known to be the most heavily utilised within secondary schools, in the given time frames.⁸ Finally, when approaching a comparative and chronological type of analysis, it is important to bear in mind that the evolution of linguistic theories does not

⁷ Chapter 4 gives an indicative list of grammar ideologies and phenomenology on this regard.

⁸ There were notable difficulties in accessing these texts, even with the most utilised ones, and this helps to explain the small sample size. As chapter 4 shows, schoolbooks of any kind, when out of print, are archived in the 'Biblioteca Nazionale' in Rome as 'minor' publication and therefore kept away from the main building of the library. The process of access to these publications, which I deal with in chapter 4, helps to gain greater insights into the difficulties of this area of study.

imply that the new ones are more efficient than the old ones. It is believed that every paradigm is relevant and important not only for comparative reasons, but also to contextualize certain teaching/learning habits that are seen as recurrent in the case studies. The linguistic features analysed in chapter 4 are the definition of communicative situations/communicative goals, the difference between different language media, the presence and definition of sectorial-based languages, the presence and definition of text versus context, the description of how to build a text, and the presence/absence of textual varieties explanation. As can be seen, these features differ to some degree from the traditional mono-linguistic approach to textbooks analysis because of the focus on textuality and, more generally, on socio-linguistic aspects of grammar. A final point to bear in mind is that, despite the fact that Italian written assignments generated major discussions in academia, in governmental institutions, day-to-day practices such as frontal lessons or schoolbooks, might not have seen the same level of renovation. For this reason, it was believed that the inquiry should go further and highlight not only how or, indeed, whether textbooks and grammar schoolbooks adapted to these changes (chapter 4) but also whether and, if so, how teachers became more engaged with the new methodologies suggested by the final exam (chapter 5).

Accordingly, chapters 5 aims to report experiences of teachers from Italian state schools of every level, with particular emphasis secondary schools of the first cycle. The activities were designed by academics from the University of Bologna and the Golinelli Foundation and were witnessed and observed in person by myself. For the activities of chapter 5 I played the role of external observer, whereas the activities of chapter 6 were personally designed and, in some cases, observed within the classroom environment. To be more specific, chapter 5 focuses on an experience of teaching for teachers that involved a group of teachers from the areas around Bologna, Italy. The project 'I Lincei per una nuova didattica nella scuola: una rete nazionale' started in 2010, initially designed by the Lincei Academy, with the aim of creating continuing education courses for teachers that focused on the newest educational theories in every subject throughout the entire Italian territory. In 2017/18, the Lincei Academy stopped its operations, but the project continues and, in Bologna, is carried on by the Marino Golinelli Foundation. In Bologna, during the academic year 2017/18 (and following the example of the same project for the academic year 2014/2015), it was possible to observe and collect data from the activities of the module of the project dedicated to the multidisciplinary interactions of language

education. As a result, a number of scientific posters,⁹ produced by a total of 270 participants¹⁰ were delivered by teachers belonging to different school cycles. The trainers and the designers of the module adopted the Inquiry Based Learning approach as a tool to engage in a collaborative and interactive environment, with the intent of stimulating interest and curiosity amongst the trainees.¹¹ The final aim of the chapter is to collect data through the observation of the writing laboratories of the project, in which the different groups of trainees had to verbalise a scientific experience. In order to do so, the trainers recommended the IMRaD structure of the scientific poster.¹² A number of relevant linguistic and sociolinguistic outcomes can be seen in the analysis of the case study of chapter 5, thanks to the fact that the posters present different communicative goals and imagine different communicative situations. What is more, the linguistic characteristic of the posters, such as the use of passive forms, the use of specific lexicon or morphosyntax, highlight significantly and give even more relevance to the sociolinguistic aspects, such as the event in which the text occurs, the readers of the text, the communicative context in which the text occurs. This chapter is, therefore, concerned with the reception of this new methodology and researches significant features generated from the written production of the teachers/participants. From a methodological perspective, strictly linguistic features (such as lexicon, syntax, morphosyntax, etc.) will have to be addressed in these final chapters, in order to properly set up a discussion around sectorial-based languages and their application within the current Italian educational system. Given the importance of sectorial-based languages as the main focus of the debate, two chapters are dedicated to the status of linguistic education within the current educational system in Italy with regards to such languages and their respective forms of textuality. It will be therefore necessary to approach a specific language (in this case, the language of science), considering its main features and what makes it differ from other languages and from the 'standard' language. However, for the case studies of chapters 5 and 6, the analysis was

⁹ For the importance of the poster and collaborative teaching/learning see 5.5.1.

¹⁰ A selection of them is available in the Appendix of this work.

¹¹ Holman Bennet, 'Context-based approaches to the teaching of chemistry: What are they and what are their effects?', in *Chemical education: Towards research-based practice*, ed. By John K. Gilbert (Dord: Kluwer Academic, 2002), pp. 165-184; see also: Jonathan Osborn, Justin Dillon, *Science Education in Europe: Critical Reflections* (London: King's College Publications, 2008), available online at: <https://www.nuffieldfoundation.org/sites/default/files/Sci_Ed_in_Europe_Report_Final.pdf> [Acc. April 2018].

¹² Amongst a vast bibliography, see at least Luciana B. Sollaci and Mauricio G. Pereira, 'The Introduction, methods, results, and discussion (IMRaD) structure: a fifty-year survey', in *Journal of the Medical Library Association* v.92 (3), July 2004, pp. 364-371.

focused also upon the sociolinguistic levels.¹³ In particular, as is mentioned in chapter 5, for sociolinguistic levels of analysis, it is meant the importance of the *vertical* dimension of sectorial based languages, as originally addressed by Michele Cortelazzo in 1994. It is believed that, by following a scale of *rigidness*, it is possible to contextualize in the relevant communicative situation the different selection of texts that are analysed in the case studies of chapter 5 and 6.

The activities of the case study of chapter 6 answer one of the central research questions underpinning this dissertation, namely the extent to which curricula's and textbooks' modern ideologies are put into practice by state schools in the secondary school cycle, with regards to sectorial-based languages. chapter 6 analyses a sample of activities, which I designed involving five classrooms covering the entire Italian peninsula (Lombardy, Emilia-Romagna, Lazio, Calabria and Sicily). My role for the activities documented in this chapter was both of external observers and coordinator of the activities. It must be said that, despite my role of coordinator, I decided to leave the teachers the freedom to adapt their own educational needs to the project I proposed. The case study is limited and does not include an analysis of rural areas, border and bilingual schools, therefore care needs to be taken in drawing broader conclusions from its findings. Nonetheless, it is believed that the divers regional geographies represented in the case study and the similarities of certain outcomes provide meaningful results for the purpose of the research. As for the previous case studies, although the project is intended to be divided into scientific laboratory and collective creation of scientific poster, the focus is mainly on its linguistic features.¹⁴ The main aspects analysed, therefore, are linguistic ones (such as lexicon, morphosyntax, syntax), but also those that have textual and contextual relevance, so as to underline the importance that this dissertation aims to give to the sociolinguistic analysis. Accordingly, the aim of the case study of this chapter is to present teachers and students with a controlled task that is able to assess the current status of Italian language education for secondary schools with regards to textuality and sectorial-based languages. Undertaking an analysis within the school system helped to understand whether documents which are believed (and previously addressed as) crucial for the purposes of the research, such as the latest curricula indications (2010, 2012, 2018), are still a pedagogical reference to address teachers' practices.

¹³ This is evident in 5.3 The sociolinguistic level of analysis.

¹⁴ As explained in chapter 6, my physical presence was limited to the cases of Cosenza and Palermo. The other teachers/classes were kept engaged in an ongoing email exchange and they compiled a report and questionnaire.

With regards to the sources utilised, it must be remembered that the governmental documents, in the first three chapters, are analysed with specific attention to textuality and sectorial-based languages. Both reforms and curricula are complex and wide-ranging texts which include an extended range of topics that may not have connection with the purposes of the dissertation. Therefore, features that concern the purposes of this research were isolated in an attempt to contextualise the framework in which they occur. What is more, in order to analyse the discussion and the debate in which most reforms occur, a range of other materials, such as teachers' online blogs publications or drafted 'work in progress' texts that were used as guidelines for the creation of the reform, are included. The sources used in this dissertation thus include official documents, decree laws, legislation, curricula, as well as online forums, opinion exchanges and drafted texts. This is because it is believed that the environments and the cultural atmosphere in which these types of documents are generated play a crucial role in the impact that they have when applied to the educational system. The discussions and debates that took place within 'unofficial' environments, such as the highly engaged posts and discussion papers of linguist and teacher Adriano Colombo's website,¹⁵ or the final drafted text of the meeting between experts and teaching associations that took place in Bologna in 2003, regarding the proposed Moratti reform,¹⁶ are appropriate examples for this research. Finally, as regards sources used, it must be remembered that, whereas the process of documentation regarding the reforms and the programmes is fairly accessible, because it has been computerised and archived in the official website of the Ministry of Education, University and Research as part of the official releases of the Italian government,¹⁷ the documents related to discussion and opinion are certainly more complicated to retrieve, given that there are often issues of storage and the materials predate or come from the early days of the internet.

With regards to the reasons for choosing the written variety of sectorial-based languages for secondary schools, three main motivations can be highlighted: 1) the written medium: 2) the educational and didactic environment: and 3) the sectorial-based variety of the language. With regard to the written peculiarity of the language, the focus

¹⁵ It is available online at: <<http://www.adriancolombo.it/>> [Acc. January 2019].

¹⁶ See the section 2.1 of this work.

¹⁷ Mostly within the archive of the Ministry of Education, available online at: <http://www.istruzione.it/archivio/web/istruzione/home@p_p_id=visualizzazione_news_miur&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-6&p_p_col_count=1&visualizzazione_news_miur_d-49520-p=6.html> [Acc. January 2019].

here is on what is called the *diamesic* variable, that is, the medium in which the language is communicated.¹⁸ It is an important distinction, as it will be seen in the following chapters, because it tends to exclude all the aspects of orality, which play an important role in Italian educational history.¹⁹ What is more, written language in Italian schools has always been concerned with teaching writing skills through the ‘tema’ or the ‘pensierini’,²⁰ namely essays on free topics, and in ways that have tended to be remote from methodologies crucial to build writing skills in pupils’ for their future professional life. This thesis aims to provide evidence of current pedagogical situations and enhance the understanding of present-day and past teaching of written Italian. To do so, it has been necessary not only to problematize the tensions and contradictions that have arisen within this particular institutional framework in current teaching methodologies at school with significant field research and case studies, but also to scrutinize the interactions between government debate on Italian curricula, linguistic theories and the effect of those same theories on everyday teaching at school.

The second main reason for concentrating on the written variety is to explore the didactic dimension of the findings, by addressing, on the one hand, how ideologies and teaching strategies have developed in school curricula in a given timeframe, and, on the other, presenting a more synchronic analysis, one that focuses on current textbooks and functional-based production of written texts in secondary schools. The aim here is to analyse the crucial points of the debate upon the Italian curriculum between educators, linguists and ministerial documentation, starting from the vast process of school reforms that began in the late 1990s. Although it is true that linguists and philosophers such as Bruno Migliorini and Giacomo Devoto had already brought into the public debate the limitations of the traditional way of teaching Italian grammar as early as the 1920s,²¹ their analysis found little practical application. This can be explained in part by the level of literacy at the beginning of the twentieth century, which was under the 40 per cent of the total population,²² and by the creation of a ‘middle language’ for use in schools that was

¹⁸ This is discussed in chapter 3.3, following William Labov, *Sociolinguistic Patterns* (Philadelphia: University of Pennsylvania Press, 1972).

¹⁹ Cristina Lavinio, ‘L’impegno del GISCEL nel “Laboratorio di scrittura”’, in *Laboratorio di scrittura. Non solo temi all’esame di stato. Idee per il curricolo*, ed. by Anna Rosa Guerriero (Milan: La Nuova Italia, 2002), p. XIX.

²⁰ Luca Serianni, Giuseppe Benedetti, *Scritti sui banchi* (Rome: Carocci, 2009).

²¹ Matteo Viale, ‘Migliorini tra grammatica ed educazione linguistica’, in *Bruno Migliorini, l’uomo e il linguista. Atti del convegno* ed. by Matteo Santimpolo and Matteo Viale (Rovigo: Accademia dei Concordi Editore, 2009), pp. 291-311.

²² Tullio De Mauro, *Storia linguistica dell’Italia unita* (Bari: Laterza, 1974).

later called ‘Scholastic Italian’ by linguists.²³ It is not the aim of this study to analyse the peculiarities of this particular form of language.²⁴ However it is important to remind that, given the perceived need to ‘sradicare la malerba dialettale’,²⁵ Italian teachers between the 1920s and the late 1960s, in this scenario, tended to deploy hyperboles, embellishments and orotund expressions with the conviction that they could elevate the language of school to a higher level of culture. As Mengaldo (1994) pointed out: ‘l’abitudine scolastica all’eufemismo e alla perifrasi contro la parola schietta prepara inevitabilmente ad accettare, magari senza neppure accorgersene, gli analoghi procedimenti che infestano la lingua politica, burocratica, ecc.’²⁶ In other words, it is perhaps the use of a middle language that helped to explain the pronounced cultural gap between academic and scientific research on linguistic theories on the one hand, and teaching or pedagogical methodologies and the world of education, on the other.

The final motivating factor underpinning the methodological framework adopted regards the choice of sectorial-based language for the variety of language. The definition of sectorial-based language is, to this day, still ambiguous. The traditional definition is given by linguists such as Migliorini and Devoto, who addressed the language of sport as a ‘lingua speciale’ in the journal *Lingua Nostra* (1939).²⁷ However, nowadays, the debate is still very lively, as it is shown by the recent interest of the ‘Società Internazionale di Linguistica e Filologia Italiana’ which dedicated their 2018 fifteenth annual conference to sectorial-based languages.²⁸ The definition given by Cortelazzo in his 1994 volume²⁹ *Lingue speciali. La dimensione verticale* (Padua: Unipress, 1994), which is quoted by

²³ Paola Benincà, Gabriele Ferraboschi, Giovanni Gaspari, Laura Vannelli, ‘Italiano standard o italiano scolastico?’, in *Dal dialetto alla lingua, Atti del IX Convegno di studi Dialettali Italiani (Lecce 1972)* (Pisa: Pancini, 1974); and Pier Vincenzo Mengaldo, ‘Il Novecento’, in *Storia della lingua italiana* (Bologna: Il Mulino, 1994).

²⁴ Michele Cortelazzo, ‘Un’ipotesi per la storia dell’italiano scolastico’, in *Scritture bambine*, ed. by Quinto Antonelli and Egle Becchi (Roma-Bari: Laterza, 1995) pp. 237-252.

²⁵ De Mauro, *Storia linguistica*, pp. 88-89.

²⁶ Mengaldo, *Il Novecento*, pp. 22-23.

²⁷ See *Indici di ‘Lingua Nostra’*, ed. by Luigi Crocetti (Florence: Sansoni, 1961), pp. 1-164.

²⁸ Genoa, 28-30 May. To this day (October 2019), only the book of abstracts is available (See note 1).

²⁹ This was updated in Cortelazzo, *Lingue Speciali. la dimensione verticale* (Padua: Unipress, 2007), p.8.

Cortelazzo himself in his paper³⁰ and by Gaetano Berruto,³¹ finds validation in many of the papers presented at the conference. However, it can be noted that Riccardo Gualdo, for example, seems to prefer an analysis of sectorial-based language focused more onto synchronic and diachronic aspects: ‘La variabile del mezzo, dunque, appare troppo importante e autonoma rispetto alle altre per essere messa a margine nello studio dei linguaggi specialistici’.³² In this dissertation, as far as sectorial-based languages are concerned, we accept Cortelazzo’s definition (‘varietà funzionale di una lingua naturale, dipendente da un settore di conoscenze o da una sfera di attività specialistiche, utilizzata, nella sua interezza, da un gruppo di parlanti più ristretto della totalità dei parlanti la lingua di cui quella speciale è una varietà’), but it is also given attention to the specific sectorial-based meta-language in a sociolinguistic perspective, keeping under close examination the linguistic medium and the communicative circumstances, underpinning the importance of these languages in the sociolinguistic structure of current Italian, within the school system and beyond it.

³⁰ Michele Cortelazzo, ‘L’italiano dei libri di divulgazione scientifica’, in *SILFI Conference 2018* (book of abstracts), p. 4.

³¹ Gaetano Berruto, ‘Uno sguardo sociolinguistico sui linguaggi settoriali’, in *SILFI Conference 2018* (book of abstracts), p. 3. Other useful resources from Berruto’s paper are: *Sociolinguistic Perspectives on Register*, ed. By Douglas Biber and Edward Finegan (Oxford: Oxford University Press, 1994); Massimo Cerruti, Elisa Corino, Cristina Onesti (Ed. by), *La variazione di registro nella comunicazione elettronica* (Rome: Carocci, 2011), pp. 36-56.

³² Riccardo Gualdo, ‘Un equivoco terminologico’, in *SILFI Conference 2018* (book of abstracts), p. 4.

1. Reforming the school system and a new Italian language curriculum for a ‘European’ Italy

The following section will examine how institutional reforms and political changes affected the creation of curriculum and teaching methodologies in Italian schools. The main focus will be on the national curricula for every school cycle, but with specific regards to the secondary school level. This is because the case studies of chapter 5 and 6 will concentrate mainly on experiences intended for secondary schools. Furthermore, in this chapter, the focus will be on the significant impact of reform and school improvement carried on from the late 1990s, a process which is still ongoing and is part of a vibrant debate. The main reason for this chronological arc is related to the importance of these years in shaping Italian cultural identity within the landscape of European unification with regard to every aspect of social, political and economic life. In fact, the Italian school system, as well as financial, cultural and the everyday life, underwent sustained re-examination within the European dimension in a way that was aimed at balancing the quality (and the quantity) of education and the access to equal rights across all EU citizens. Italy had to adapt to this period of transformation and radically change its educational framework, which, with some significant exceptions was, at the end of the century, quite similar to how it had been at the beginning.

1.1 The influence of *Programmi Ministeriali* 1979 -1985 on the debate around the curriculum.

Among several theoretical influences upon the *Dieci tesi per l'educazione linguistica democratica*, the one that most closely interests this study is related to the ministerial programmes for the ‘scuola media’ of 1979 and those for the ‘Scuola Elementare’ in 1985. These programmes remained in force until the long process of reform which led to the ‘riforma Berlinguer’ in 2000. That is why they are crucial elements in helping to contextualize the intellectual and philosophical environment in which the reform arose. Emblematic, in this sense, are the opening lines of the 1979 programmes, dedicated to language education that declaim: ‘l’insegnamento dell’italiano si inserisce nel più vasto quadro dell’educazione linguistica, la quale riguarda, sia pure in diversa misura, tutte le discipline e le attività’.³³ It is impossible not to see in these words a form of continuity

³³ ‘Ministero della pubblica istruzione’, *I programmi della scuola media*, 1979. The document is available to download on the in Ministero della pubblica istruzione web site:

and reaction to the criticism of traditional pedagogy carried on by the manifesto of the *Dieci tesi*. It can be read:

La pedagogia linguistica tradizionale pretende di operare settorialmente, nell'ora detta "di italiano". Essa ignora la portata generale dei processi di maturazione linguistica (tesi 1) e quindi la necessità di coinvolgere nei fini dello sviluppo delle capacità linguistiche non una, ma tutte le materie, non uno ma tutti gli insegnanti (Educazione fisica, che è fondamentale se è fatta su serio, compresa).³⁴

While, on one hand, the official programs of 1979 pointed out that language teaching 'tende a fare acquisire all'alunno [...] l'uso del linguaggio in tutta la varietà delle sue funzioni e forme nonché lo sviluppo delle capacità critiche nei confronti della realtà',³⁵ on the other hand, this idea has been well highlighted by the GISCEL manifesto which stated that 'lo sviluppo e l'esercizio delle capacità linguistiche non vanno mai proposti e perseguiti come fine a se stessi, ma come strumenti di più ricca partecipazione alla vita sociale e intellettuale'.³⁶

Law n. 348 of 1977, apart from bringing some significant changes within the 'scuola media', pointed out the importance of an intensive teaching of linguistic education, 'attraverso un più adeguato sviluppo dell'insegnamento della lingua italiana - con riferimenti alla sua origine latina e alla sua evoluzione storica - e delle lingue straniere'.³⁷ It is interesting to note that the idea is recalled with the same words in the text of 1979 programmes,³⁸ and, most significantly, it seems to be enhanced by the presence of multidisciplinary methodologies, crucial to building a discourse upon textual varieties.

As can be read, in fact:

I vari insegnamenti esprimono modi diversi di articolazione del sapere, di accostamento alla realtà di conquista, sistemazione e trasformazione di essa, e a tal fine utilizzano specifici linguaggi che convergano verso un unico obiettivo educativo: lo sviluppo della persona nella quale si realizza l'unità del sapere.³⁹

<http://www.istruzione.it/archivio/web/istruzione/home.html> [Acc. June 2019]. (hereafter cited as 'scuola media' and page number).

³⁴ GISCEL, *Dieci tesi per l'educazione linguistica democratica*, 'Tesi VII. Limiti della pedagogia tradizionale'. <<https://giscel.it/dieci-tesi-per-leducazione-linguistica-democratica/>> [Acc. June 2019]. (hereafter only the thesis number will be cited).

³⁵ 'Tesi VII'.

³⁶ 'Tesi VIII'.

³⁷ 'Legge 16 giugno 1977, n. 348'. The present and the following references to laws and educational decrees are available on the 'Ministero della pubblica istruzione' web site <<http://www.istruzione.it/archivio/web/istruzione/home.html>> [Acc. June 2019].

³⁸ 'Scuola media', p. 7.

³⁹ 'Scuola media'. p. 9.

Moreover, with specific relation to language education: ‘I vari linguaggi infatti concorrono - attraverso il processo di comunicazione e utilizzando contenuti, attività, strumenti specifici a seconda della disciplina - all'acquisizione di un sapere unitario’.⁴⁰ It is clear that this represents the starting point thanks to which it is now possible to talk about concepts like cooperative teaching and multidisciplinary. Bearing the legacy of the *Dieci Tesi*, this official document, in a section not strictly dedicated to language education, highlights one of the most important points of contemporary education:

Di conseguenza possono stabilirsi modalità di cooperazione tra i diversi insegnamenti evitando comunque accostamenti forzati e puramente estrinseci. Tale cooperazione dovrà consentire di perseguire, per vie diverse, gli obiettivi della programmazione educativa, e di mettere a disposizione di altre discipline i contributi specifici dell'uno e dell'altro ambito. Riuscirà pertanto pedagogicamente e didatticamente utile programmare le interrelazioni delle varie discipline in vista di un approccio culturale alla realtà più motivato e concreto, volto all'acquisizione di un sapere articolato ed insieme unitario.⁴¹

Furthermore, with specific connection to language education, the document is keen to evidence the crucial role of sectorial-based languages and multidisciplinary teaching: ‘si considerino ad esempio il contributo che l’educazione linguistica può dare alla comprensione dei termini scientifici e del linguaggio matematico; o, viceversa, il contributo che il metodo scientifico e le operazioni tecniche possono dare al chiarimento dell'espressione verbale’.⁴² The concept that both education and teaching (not only Italian teaching) have to be related to an idea of ‘pragmatism’ that allows the school system to unify disparate fields of knowledge, is something that lays the foundation of functional-based writing and textuality. With due differences, in documents such as this and the *Dieci tesi*, it is still possible to find both the reasons and the solutions for how these theses have not been operational. According to Cristina Lavinio, in fact, the relevant institutional and ideological changes of this era did not become effective on a vast scale:

[...] tutto ciò non è diventato senso comune, neppure tra gli insegnanti, né si è tradotto in una prassi didattica che, in modo diffuso e generalizzato, abbia completamente allontanato dalla scuola, almeno nelle ore di lingua (e di italiano in particolare) quella ‘pedagogia linguistica tradizionale’ criticata dalle Dieci Tesi e tutta incentrata sulla lingua scritta (dei pensierini e dei temi da far produrre, dei testi solo letterari da far leggere), sulla grammatica normativa del ‘si dice/non si dice’, con l’ossessione della lingua ‘corretta’ che finiva spesso per ridursi a un’attenzione per i soli errori di ortografia (come se le capacità di scrittura si esaurissero nel solo controllo tecnico-ortografico); una pedagogia caratterizzata da una concezione monolitica della lingua, priva

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² ‘Scuola media’, pp. 9-10.

di qualunque attenzione per il variare degli usi linguistici (tra parlato e scritto, tra varietà geografiche, sociali ecc.), in una scuola che ha guardato a lungo con fastidio alle lingue locali diverse dall'italiano, cioè ai dialetti, visti come una 'malerba da estirpare' piuttosto che come una ricchezza o una base a partire dalla quale (e tenendo conto della quale) costruire la capacità di padroneggiare lo stesso italiano.⁴³

Although the 1979 programmes for the 'scuola media' seem more relevant for this analysis because they are closer to the period in which it is believed students crucially build their 'linguistic consciousness', it must not be neglected to take into consideration the 1985 programmes for the 'Scuola Elementare'. Crucial, in fact, in the programmes of 1985, is the inclusion of a new consideration on the variety of languages, which include both verbal and non-verbal forms of communication, as well as the preoccupation that the student is expected to master, to be familiar and take possession of the ability of the written language. It is extremely significant (even for the 'scuola elementare') that the emphasis is given to verbal and non-verbal communication (graphic, mimic, musical, sign and body language), especially considering a situation in which the old 'programmi' were instead much more concerned with written forms of communication like the 'dettato'. Even more significant is the fact that, when it comes to talk about written form of communication, the 1985 programmes state that the student:

deve saper ricercare e raccogliere informazioni da testi scritti; seguire la descrizione, il resoconto, il racconto e saperne cogliere l'essenziale; apprezzare l'efficacia linguistica ed espressiva dei vari tipi di scrittura. Il fanciullo deve saper scrivere: comunicare a distanza con interlocutori diversi, registrare e organizzare dati e istruzioni, esprimere impressioni, valutazioni; produrre testi di tipo descrittivo, narrativo, argomentativo.⁴⁴

The reference to the ability of students to be able to write different types of texts is of course essential to explore the nature and extent of the connections between linguistic discussion with both official documentation and teaching methodologies.

⁴³ Cristina Lavinio, 'Per un rilancio dell'educazione linguistica democratica', in *Lingua, scuola e società. I nuovi bisogni comunicativi nelle classi multiculturali*, Atti del Convegno organizzato dall'Istituto Gramsci del Friuli Venezia Giulia con il patrocinio dell'Università degli Studi di Trieste, Trieste 6-7 ottobre 2006, ed. by Elena Pistolesi (Trieste: Istituto Gramsci del Friuli Venezia Giulia, 2007) pp. 30-31.

⁴⁴ 'Ministero della pubblica istruzione', *I programmi della scuola elementare*, 1985. The document is available to download on the in Ministero della pubblica istruzione web site: <http://www.istruzione.it/archivio/web/istruzione/home.html> [Acc. June 2019], p. 10.

1.2 Age of experimentation: the ‘Progetto Brocca’ (1988-1992)

Having examined the most important features of 1979/1985 programmes, as well as their relationship with the linguistic debates of the 1970s, the *Dieci tesi* and the problematic incorporation of these within the school system, the focus will be now on the most important legacy of that period: an undeniable will for experimentation, encouraged by a less binding, more liberal and international school system, designed to meet the needs of a society radically changed in less than thirty years. The ‘Progetto Brocca’ was a governmental project aimed to redefine and reform the ‘scuola secondaria’. It was named after the deputy minister Beniamino Brocca and it gave rise to two important official documents between 1988 and 1991: the ‘programmi Brocca’ for the ‘Biennio’ (i.e. the first two years of secondary school) and for the ‘Triennio’ (i.e. final three years). These programmes will be here analysed because they represent a crossing point between an age of interesting experimentation and the first attempt to reform the school curriculum of secondary school (along with other school levels) in an effective manner with the reforms of the 1990s. Furthermore, from a linguistic and educational point of view, these programmes were to become a landmark to all the school reforms of the following years.

Coordinated by Beniamino Brocca, supervised by the Minister of Education Riccardo Misasi and redacted with a staff of highly expert collaborators (such as Giuseppe Bertagna and, regarding Italian, Francesco Sabatini, Tullio De Mauro, and others among linguists, academics and educators), the programmes pointed out the necessity of a reformed ‘scuola secondaria’ in every aspect: from the Curriculum to the number of hours assigned to every discipline, from the subjects of study of each discipline to the management of structures and facilities. Nonetheless, the most important goal of both documents was to reconnect the orientation of the ‘scuola secondaria’ to its main purpose, which was the desire for knowledge and the willingness to build a conscious civic sense in all pupils. Although they represented a document of great importance at a theoretical level, the ‘Brocca’ programmes might have had the deficiency of being too ambitious.⁴⁵ Nonetheless, it has to be said that the ‘programmi Brocca’ tried to highlight that very risk. As can be read, in fact, ‘il testo dei programmi nazionali non indica di per sé un percorso didattico già definito. Per definirlo bisogna fare una serie di operazioni che sono comunemente indicate con il termine programmazione.’⁴⁶ It can be noted here one of the

⁴⁵ Adriano Colombo, ‘I programmi Brocca di Italiano’, in *Lingua e nuova didattica*, Vol. XXIII, n. 3 (Rome: LEND, 1994) p. 8.

⁴⁶ Commissione Brocca, ‘Piani di studio della scuola secondaria superiore dei primi due anni’, in *Studi e documenti degli annali della pubblica istruzione*, Vol. 56 (Florence: 27

very first example of a distinction between ‘programma’, intended as list of contents to be followed, and ‘programmazione’, intended as a way for students to navigate and experience contents in every social situation within the school system. Looking in more detail at the Italian section of the ‘programmi’ of the ‘Biennio’, it seems evident that this document is conceived in a very harmonious, meticulous and clear way. The ‘Biennio’ is without any doubt the most critical period of secondary school when it comes to linguistic education. It is there that all the skills and linguistic consciousness built in the ‘scuola media’ come to fruition. For that reason, the programmes subdivide the Italian teaching into three macro-areas: ‘abilità linguistiche’, ‘riflessioni sulla lingua’ and ‘educazione letteraria’. It is interesting to see how the general background of the entire Italian section is represented by a short paragraph that seems to be taken directly from the *Dieci tesi* or the ‘scuola media’ programmes of 1985:

L’insegnamento dell’italiano si colloca nel quadro più ampio dell’educazione linguistica, la quale coinvolge tutti i linguaggi, verbali e non verbali, e impegna tutte le discipline. La connessione fra i diversi linguaggi e la varietà dei contenuti e delle situazioni di apprendimento, a cui la pratica dei linguaggi va collegata, costituiscono punti di riferimento obbligati in ogni fase del percorso formativo. In particolare la lingua primaria, come strumento fondamentale per l’elaborazione e l’espressione del pensiero dell’intero patrimonio personale di esperienze e di cultura, si offre come terreno di intervento diretto per tutti gli insegnamenti.⁴⁷

It is true that the paragraph above does not contain any revolutionary concept regarding linguistic education because it makes use of the tradition of the 1970s borrowing ideas such as multidisciplinary teaching, functional varieties, contexts, but it is undeniable that these ideas had been valid only on paper, in a theoretical way or within linguistic discussions. The school system, although the debate was by that time at such an advanced level, had not the chance to assimilate these concepts, and it seemed essential to put them into this documentation. From an educational point of view, it is also interesting to observe the distinction that these programmes underline between ‘obiettivi’, ‘contenuti’ and ‘finalità’. As seen previously, the ‘finalità’ within the linguistic context, ‘vengono presentate distinguendo i tre settori istituzionali delle abilità linguistiche della riflessione sulla lingua e dell’educazione letteraria’⁴⁸ always aiming at some interconnection between each other rather than giving particular

Stabilimenti tipografici ‘E. Ariani’ and ‘L’arte della stampa’ by ‘s.p.a.’ Armando Paoletti), p. 126.

⁴⁷ Commissione Brocca, ‘Programmi per il Biennio’ (hereafter cited as ‘Biennio’ with page number), p. 102.

⁴⁸ ‘Biennio’, p. 100.

priorities to any. ‘Contenuti’ represent a point still strongly related to the old ‘programmi’ rather than being concerned with the more efficient ‘programmazione’ (following the distinction that was mentioned above). As for the ‘obiettivi’, they ‘svolgono un ruolo di *mediazione* tra i contenuti e le finalità, nel senso che indicano prestazioni manifeste (osservabili e, a volte, misurabili) su certi contenuti a partire dalle quali si può esprimere un giudizio sulla presenza/assenza delle qualità non immediatamente manifeste’.⁴⁹ Looking at the above-mentioned differentiation between the three macro-areas of ‘abilità linguistiche’, ‘riflessione sulla lingua’ and ‘educazione letteraria’, it can be noticed how the document underlines several times the importance of not keeping them separated but in a constant relation with each other, in a way that will naturally involve both ‘obiettivi’ and ‘contenuti’. Among the ‘abilità linguistiche’, the document highlights the distinction between ‘obiettivi’ and ‘contenuti’ in oral communication (‘ascolto’, ‘parlato’), reading and writing. The focus here is once again on the writing targets:

Nella pratica della scrittura lo studente deve raggiungere: 8. una adeguata consapevolezza e capacità di controllo delle differenze tra formulazione orale e formulazione scritta del pensiero con particolare riferimento ai rapporti tra fatti prosodici e punteggiatura, tra sintassi ellittica e sintassi esplicita tra lessico comune e lessico preciso o tecnico; 9. la capacità di realizzare forme di scrittura diverse in rapporto all’uso. Alle funzioni e alle situazioni comunicative, distinguendo tra scritture più strumentali e di uso personale e scritture di più ampia diffusione e di diversa funzione, che richiedono più attenta pianificazione; 10. la consapevolezza della flessibilità del progetto di scrittura e la conseguente capacità di modificarlo quando occorra; 11. la capacità di utilizzare intelligentemente e correttamente informazioni, stimoli e modelli di scrittura, ricavati da altri testi.⁵⁰

This paragraph, along with the one dedicated to the ‘obiettivi’,⁵¹ shows the vital importance of debates within linguistic theory and how it can affect official documentation (and vice versa). Here the most important points of the discussion of the 1970s related to textual writing and linguistic education can be found highlighted: the idea of language varieties, sectorial-based languages, different type of texts for different communicative situations, the importance of having a plan for composition, as well as to being able to always review the work, etc. The sentence ‘la riflessione sulla lingua [...] va invece rivalutata come fondamentale forma di indagine sul rapporto fra i contenuti di pensiero e le forme linguistiche e sulla realtà della

⁴⁹ ‘Biennio’, p. 125.

⁵⁰ ‘Biennio’, p. 131.

⁵¹ Ibid.

comunicazione'⁵² underlines how the position of the reflection upon language should be a process of research and experimentation rather than a mere set of concepts and mnemonic practices. What is evident is the urgent need to build a table of contents, a 'vertical curriculum' that would refer not only to the 'Biennio' but to every school cycle. Moving from the 'obiettivi' to the 'contenuti', it seems appropriate to underline the 'abilità linguistiche' within textuality and writing which, as can be seen, are supposed to be the natural development of the 'obiettivi':

Per la scrittura le attività consistono nella produzione di vari tipi di testo, allo scopo di accostarsi alle utilizzazioni e alle finalità che la scrittura trova nella vita reale e che possono essere così indicate: - dare, registrare e chiedere informazioni, in forme testuali quali appunti di lezioni e di conferenze, verbali di discussione, annunci e comunicazioni di carattere privato o pubblico, ecc.; - dare istruzioni per eseguire operazioni o regolare attività; descrivere in termini oggettivi o soggettivi luoghi, oggetti, persone, eventi; - sviluppare argomentazioni su tema dato, secondo istruzioni compositive indicate; - trasferire contenuti di testi in altra forma, mediante parafrasi, diverse; - riscritture, riassunti di varia dimensione e secondo prospettive interpretare e commentare testi, redigendo recensioni di libri, film, spettacoli, note esplicative e osservazioni valutative 'a margine' di testi; rielaborare in modo creativo esperienze personali, informazioni oggettive ed elementi fantastici, in forma di diari, dialoghi, racconti, sceneggiature ecc.⁵³

At the level of textuality, these indications are profoundly important because they help to identify a willingness to reform, within the official documentation, that reflects the linguistic debate on the problems, and as such overcomes the traditional teaching of writing, preferring instead more up-to-date and coherent methodologies. More importantly still, the linguistic skills are not an end in themselves, but, at least in the world of possibilities and theorization represented by these programmes, find a dedicated space of reflection within the part of 'riflessione sulla lingua'. This means that students and teachers should not only be able to achieve or demonstrate given skills, but they should also find time to reflect on them in possible scenarios. As can be read, in fact:

Diventano argomenti di particolare o nuova trattazione: -le caratteristiche fondamentali di un 'testo' (unità, completezza, coerenza. coesione che ne realizzano l'informatività) e le sue possibili articolazioni, sia nelle forme dell'oralità, sia in quelle della scrittura; - la varietà dei tipi di testo ('tipologia dei testi'), che conduce ad esaminare il rapporto tra la forma del testo e il suo contenuto; - gli aspetti retorici, legati particolarmente a valori semantici, nei diversi usi della lingua; - le implicazioni principali del rapporto tra semantica e sintassi nella struttura della frase: legami tra i costituenti, reggenze, concordanze modali, temporali e aspettuali dei verbi; - punti fondamentali nella vicenda storica della lingua italiana, dalle sue origini latine ad oggi, e dei suoi rapporti con i dialetti e con altre lingue; - le varietà sociali e funzionali

⁵² 'Biennio', p. 9.

⁵³ 'Biennio', pp. 133-134.

della lingua (standard scritto, uso medio. usi regionali, linguaggi settoriali)
anche in relazione alle esperienze presenti negli studenti.⁵⁴

To conclude, the document for the 'Biennio' points out something that should not be underestimated: 'Per quanto riguarda la distribuzione della materia nei due anni, [...] spetta alla programmazione indicare quali strategie adottare e quali itinerari seguire per garantire la gradualità, l'organicità e la produttività dell'azione didattica'.⁵⁵ It can be noticed here the beginning of the process of 'programmazione' (planning), in which every teacher, at least on paper, should feel free to establish connections, activities and methodologies in order not to supply fragmentary or incomplete knowledge to pupils. Moreover, it is again up to the teachers to consider Italian education as part of language education, in which multidisciplinary teaching plays a crucial role and thanks to which students would be able to have important achievements in the entire educational and formative process. It is only through a collaboration between all disciplines that students would be able to achieve such results and the 'programmi Brocca' are highlighting these aspects in a very specific manner. As a result, it can be stated that the experimentation period, begun in the 1970s, left in the 1990s a weightier legacy, heavier than at first appeared. With hindsight, in fact, it can be said that the experimentation led the school system to a form of autonomy (within structures, school orientation and, mostly, teaching methodologies), which will be the crucial point of the Berlinguer reform.

Before going further, it is appropriate to examine the main points of the programmes addressed within the 'Triennio' (1991). The major concern of the 'programmi' was to find a solution for the inexplicable lack of linguistic education within the 'Triennio'. In fact, the final three years have always been concerned with the history of literature, which was more in line with a literature-oriented final exam for the cycle. It becomes clear that 'quanto il programma del biennio è un riferimento valido per le innovazioni in corso, tanto questo del triennio è discutibile in certe sue scelte (o non-scelte) e può prestarsi sia a stimolare, sia a frenare le innovazioni'.⁵⁶ However, the document is helpful for analysing the theoretical and methodological reasons that have led this study to focus on the programmes. In fact, the authors considered it necessary to underline weaknesses and strengths of the old 'programmi' in order to justify the redaction of the new ones. The document seems more concerned with the weaknesses:

La debolezza principale dipende dal fatto che nei piani di studio di entrambi i tipi di scuola sono assenti o sono scarsamente rappresentate componenti

⁵⁴ 'Biennio', pp. 134-135.

⁵⁵ 'Biennio' p. 248.

⁵⁶ Adriano Colombo, 'I programmi Brocca di italiano', p. 11.

culturali ritenute oggi essenziali per la formazione dell'uomo e del cittadino. Al liceo mancano del tutto le componenti economiche, giuridiche e sociologiche, necessarie per comprendere la realtà presente; nel contesto dell'impianto storicistico non ha adeguato spazio la formazione scientifica, che è invece parte molto rilevante della cultura e della vita contemporanea.⁵⁷

Hints to the importance of language variation can be noted in this section. And this is not only addressed as a sociolinguistic concept, but also as something related to textuality and writing. This section shows that language variation should be connected not only to the world of creativity but, more importantly, to the *functional* purposes of the language, facilitating the student and the teacher in covering the entire range of textuality.

While continuing to try to build possible relations between literature and linguistic education, the document shows the most interesting (for the purposes of this research) features when it highlights textual variation and possible types of texts for the 'Triennio'. While the use of the word 'tema' to define a generic text type may seem outdated, it is interesting to see how this document suggests a new dimension for it, that would include better understanding of the teaching/learning methodology behind it:

Si sottolinea che il tipico 'tema', componimento di più ampio respiro, indicato nella lista delle forme di produzione scritta, richiede particolari istruzioni per la sua preparazione e realizzazione e deve essere comunque affiancato e integrato dalle altre forme di addestramento, più direttamente connesse alle utilizzazioni che la scrittura trova nelle attività di studio e di lavoro.⁵⁸

Nine years before the reform of the final exam, which would include a broader variety of texts, these programmes pointed out the importance of going beyond mono-linguistic approaches and methodologies, favouring instead a detailed and more useful differentiation of textual genres. To quote Colombo (1994), what emerged is the view that 'se tema ha da essere, che almeno si insegni a scriverlo'.⁵⁹

1.3 Background to the reform

During the 1990s, Italian political views, social changes and, above all, the school system became the breeding ground for an important process of reform that, among internal reasons, has to be seen as a result of the debate upon the identity, unity and cooperation of the EU (EC in the 1990s) countries. In fact, European directives pointed out the

⁵⁷ Ministero della Pubblica Istruzione, *Piani di studio della scuola secondaria superiore e programmi dei trienni. Le proposte della Commissione Brocca*, <https://www.orientamentoirreer.it/sites/default/files/norme/1992%20brocca%20trienni_o.pdf> [Acc. June 2019] (hereafter cited as 'Triennio' and page number).

⁵⁸ 'Triennio', p. 130.

⁵⁹ Adriano Colombo, 'I programmi Brocca di Italiano', p. 12.

importance of education within a new European society, whose values needed to be built on international relationships and on a transnational, globalized, multicultural, multi-linguistic and multinational education. Between 1993 and 2000, in fact, a few notable European documents (*Green Paper On The European Dimension Of Education*,⁶⁰ *White Paper: Growth, competitiveness, employment - The Challenges and ways forward into the 21st Century*, *Teaching and learning towards the learning society*)⁶¹ caused a vibrant debate which, along with the election of a centre-left government, triggered the process of an educational reform in Italy. As Anna Erminia Briguglio points out: ‘Il comune denominatore di queste iniziative è il loro carattere propositivo, non obbligatorio e non cogente, che tuttavia non ammette fraintendimenti e dilazioni da parte dei governi degli stati membri, sia rispetto alla legislazione dei singoli Paesi sia per quanto riguarda le indicazioni, le raccomandazioni ed i programmi che concorrono a sostanziare la natura stessa dell’idea di *unione* in Europa da cui non si può prescindere’.⁶² In other words, it seemed that the EU was trying to suggest to its members that they could act autonomously, without leaving aside the new dimension of citizenship and multiculturalism of the whole European context. This dimension was expressed with the development of mobility programs for students such as ‘Leonardo da Vinci’, ‘Force’, ‘Petra’, ‘Eurotecnet’, ‘Iris’, ‘Erasmus’, ‘Lingua’, ‘Eurydice’, etc. Under the influence of the rising EU, Italy became part of a more democratic world which was willing to overcome ‘ogni forma di autoritarismo deresponsabilizzante, [...] l’affermazione di regole, strutture e metodi capaci di coinvolgere e responsabilizzare sia gli operatori che i diversi servizi in cui si articola la vita economica, politica e sociale’.⁶³

As seen above, then, the idea of autonomy was the foundation of the entire process, and, as such, it spread throughout each setting or area of knowledge in this period. The same point applies for the pedagogical reasons. Despite the fact that these pedagogical instances were elaborated to improve the Italian school system and bring it to the same

⁶⁰ COM (93) 457, September 1993.

⁶¹ COM (95) 590, November 1995.

⁶² Anna Erminia Briguglio, ‘Dal Ministero Berlinguer alla Riforma Gelmini: note cursorie per riflettere sugli itinerari della formazione e dell’istruzione in Italia’, in *Quaderni di Intercultura* (Anno III/2011 DOI 10.3271/N24), (Messina: Università degli Studi di Messina Press, 2011), pp. 2-3.

⁶³ Ercole Baraldi, Elio Baudo, Bartolomeo Bellanova, *Per la scuola dell’autonomia al servizio degli utenti*, (Modena: Centro Programmazione Editoriale, 2000), pp. 4-5 in ‘La trasformazione della scuola nell’ultimo decennio. Aspetti normativi, pedagogici e didattici’, ed. by Carmine Iannicelli <http://www.edscuola.it/archivio/ped/trasformazione_scuola.pdf> [Acc. June 2019], pp. 18-19.

level as other European ones, as well as every other field, they nonetheless represented the methodological changes in which the present study is most interested in. It is essential to point out, following Iannicelli, that ‘con l’autonomia didattica si indica il principio della libertà d’insegnamento che si articola nel potere del docente di scegliere metodologie, strumenti didattici e di organizzazione dei modi e tempi d’insegnamento, consentendo un fecondo apprendimento da parte degli studenti’.⁶⁴ Alongside the setting-up of bureaucratic and organisational changes, the reform brought a new way of conceiving the process of teaching/learning. The student becomes the primary focus of teaching and, most importantly, from an idea of ‘trasmissione’ of knowledge, it moved towards a more up-to-date and efficient ‘acquisizione’ of methodologies, competences, skills that would set the student free to create their own way into careers and professional world. As Dal Passo summarizes well:

La riflessione ha riguardato, innanzi tutto, la funzione stessa della formazione che, in un contesto di relativa ‘stabilità’ quale quello del passato, ha avuto come suo nucleo fondamentale la ‘trasmissione’ di un insieme consolidato di conoscenze. Le continue rapide trasformazioni in ogni settore della vita sociale ed economica che caratterizzano il nostro tempo, infatti, hanno fatto emergere la necessità di sostituire al modello tradizionale quello dell’integrazione, della ‘trasmissione’ di conoscenze con l’acquisizione di competenze e metodi.⁶⁵

‘Competenze’, ‘Saperi’, ‘Abilità’ became the new key words for the European school of autonomy through which the Education Minister Berlinguer decided to deal with the process of reform, namely, by making use of a long-lasting debate on educational matters and trying to listen to every voice involved in the school system.

1.4 The ‘commissione dei saggi’

In January 1997, the Minister of Public Education announced the desire to propose a general reform of the school system in Italy. The main point of the proposed reform was the so-called ‘riordino dei cicli scolastici’ that aimed to bring the compulsory years of school to the same level as that of every other European country. The proposed reform developed on a very favourable ground thanks to a long and meaningful period of experimentation and to a long-lasting debate amongst experts. Berlinguer himself that summarizes the general feeling of the time:

⁶⁴ Iannicelli, ‘La trasformazione’, p. 12.

⁶⁵ Fabrizio Dal Passo, ‘Storia della scuola italiana’, in *Il codice della scuola, Vol 2*, ed. by Livia Barberio Corsetti, Giampiero Paolo Cirillo, Evelina Ciarrapico, Domenico Croce, Giuseppe Scribano (Brescia: La Scuola, 2011), p. 29.

L'ampia partecipazione al dibattito ha evidenziato la bontà della scelta di non presentare direttamente un disegno di legge, nella considerazione che i temi della scuola non appartengono ad una maggioranza politica, ma sono tesoro comune di tutte le formazioni che costituiscono e sostengono la comunità nazionale. Compito del Governo non è quello di imporre, bensì quello di interpretare i temi e le esigenze prevalenti nella società e di formulare al Parlamento proposte tali da dare risposte efficaci, salvaguardando le libertà e le specificità delle diverse formazioni.⁶⁶

Keeping in mind the experiences of the 'programmi' 1979 and 1985 and 'Brocca', the general intent of the reform seemed to be responsive to new social contexts:

Quello che la scuola propone ai ragazzi è dunque un sapere disinteressato, ma non fino al punto di trasformarsi in un sapere astratto e inutile. La sua utilità, la sua spendibilità non saranno però da calcolare solo in termini di immediata collocazione nel mondo del lavoro (questa era semmai l'idea funzionalista che stava alla base dei primi documenti della Comunità Europea), ma piuttosto di promozione di competenze non facilmente piegabili alle logiche passivizzanti della globalizzazione. La scuola non può inseguire i saperi utilitaristici, ma deve piuttosto lavorare su competenze 'durature', sui nuclei forti delle conoscenze.⁶⁷

With the aim of listening to all the voices from the school system, the Ministero put together a commission of forty-four who were termed 'saggi' by the media, and who, between the months of January and May 1997, had several meetings and, finally, produced a document (and a floppy disk) which was delivered into the hands of the Minister Luigi Berlinguer on 13 May 1997. Reading the 500 pages of the document, it appears clear that the aim of the 'Commissione' was to 'delineare un quadro complessivo di competenze e conoscenze irrinunciabili':⁶⁸ identity, teaching democracy, multi-disciplinarily teaching, social, cultural and environmental sustainability, technology innovations, and so forth. Whilst reflecting on re-organizing the school structure, the reform was doing something more: it wanted to intervene in the creation of new objectives, 'che preveda[no] l'indicazione dei traguardi irrinunciabili e una serie succinta di tematiche portanti'.⁶⁹ Regarding the purpose of the current research, of remarkable

⁶⁶ Luigi Berlinguer, 'Relazione' on the 'Legge quadro in materia di riordino dei cicli scolastici', 1999, < <https://www.edscuola.it/archivio/norme/programmi/riformarl.html> > [Acc. June 2019], p. 1.

⁶⁷ Giancarlo Cerini, 'Saperi, curriculum, competenze', in < <https://www.edscuola.it/archivio/riformeonline/saperi.html> > [Acc: June 2019].

⁶⁸ Berlinguer, 'Relazione', p. 6.

⁶⁹ Roberto Maragliano, 'Sintesi dei lavori', 1998, < <http://www.edscuola.it/archivio/software/maragliano.html> > [Acc. June 2019], p. 4.

interest are indications for the curriculum such as: ‘una particolare attenzione va dedicata alla comprensione e alla produzione del discorso parlato e scritto, in tutta la pluralità di testi possibili, sollecitando sia l'efficacia della comunicazione sia il controllo della validità delle argomentazioni. La pratica degli *usi funzionali* più diversificati della lingua parlata e scritta significa familiarizzare con i *diversi generi di discorso*: un'esperienza da iniziare presto nella scuola di base, ma che andrà continuata, ripresa e approfondita ai livelli ulteriori’.⁷⁰ On textual variety, the document reports that ‘occorre provvedere alla sostituzione, almeno parziale, di alcuni sistemi legati alla didattica tradizionale: il ‘tema’ come composizione retorica in molti casi *non è idoneo* agli scopi ora indicati, e può con efficacia essere integrato in forma crescente (fino alla sua eventuale sostituzione) da attività di scrittura breve, *funzionale*, di rielaborazione e via dicendo’.⁷¹ With regards to the diffusion of textbooks, they are recommended to be ‘di buona divulgazione, per tutti gli ambiti disciplinari, scritti con abilità narrativa e capaci di attrarre l’interesse degli allievi.’⁷²

1.5 Law 30/2000.

In order to understand the great importance and impact of the reform, it is essential to highlight the role of ‘autonomy’ within the whole process. As mentioned, it is only through the autonomy (both bureaucratic/institutional and didactic) that the reform could become established. The idea of autonomy, as seen above, overcomes the restriction of the school system, and integrates itself into the broader ambit of general autonomy, designed for the public administration by Franco Bassanini with the ‘legge delega’ 59/1997. After a long period of centralized power, this law gave local authorities the power to operate and make law within their own territories. The main point of the Berlinguer reform was to unload the responsibilities of the central power, and, at the same time, give local bodies the chance to participate actively in local life. To do so, art. 21 of 59/1997 declared:

l'autonomia delle istituzioni scolastiche è garanzia di libertà di insegnamento e di pluralismo culturale e si sostanzia nella progettazione e nella realizzazione di interventi di educazione, formazione e istruzione mirati allo sviluppo della persona umana, adeguati ai diversi contesti, alla domanda delle famiglie e alle caratteristiche specifiche dei soggetti coinvolti, al fine di garantire loro il successo formativo, coerentemente con le finalità e gli obiettivi generali del

⁷⁰ Maragliano, ‘Sintesi’, p. 6 (*italics mine*).

⁷¹ Maragliano, ‘Sintesi’, p. 4 (*italics mine*).

⁷² Ibid.

sistema di istruzione e con l'esigenza di migliorare l'efficacia del processo di insegnamento e di apprendimento.⁷³

As Gian Candido De Martin points out,⁷⁴ this fundamental law belonged to a first part of the reform process that he calls 'a costituzione invariata'. It is only with the changes to the 'Titolo V della Parte II della Costituzione Italiana', in 2001, that the 'Costituzione' was amended in articles 114 and subsequently there began what De Martin calls the period of the 'riforme costituzionali', where general autonomy had its maximum realization.

In this light, it appears clear that the redefinition of the school cycles had deeper implications and more articulated effects than simply reorganising the system. In fact, as Dal Passo points out that

Riflettendo sulle caratteristiche che differenziano il nostro tempo dalle epoche precedenti, la legge sottolinea il superamento dell'idea di 'trasmissione delle conoscenze', nucleo fondamentale della Scuola italiana, a favore del concetto di 'trasmissione-acquisizione di competenze'. I rapidi progressi della scienza e l'incessante sviluppo tecnologico, infatti, hanno messo in crisi il concetto stesso di 'stabilità delle conoscenze' e fatto emergere il problema, talora drammatico, della obsolescenza di saperi e abilità'.⁷⁵

Again, in these words, it can be seen the crucial distinction between a mere transmission of knowledge and a conscious and lucid acquisition of it. In this light, learners are not seen as empty boxes to fill up with knowledge, but active participants of school life.

Alongside the idea of economical, institutional, functional and didactical autonomy and the reorganisation of school cycles, another goal of the reform was to acknowledge and encourage the work of teachers. To do so, the minister convened an examination aimed to incentivize the work of senior teachers in order to support them with a substantial pay rise. Every teacher, with at least ten years of activity, through this exam, along with a curriculum check and a situational check, could have had the opportunity to receive a salary increase of £6.000.000. Even though not essential to the goals of this study, the so-called 'concorstone' represented one of the reasons why the reform failed only one year after its approval. Unions and school's association did not look upon the pay rise, which

⁷³ DPR 275/1999, art. 2, comma 1.

⁷⁴ Gian Candido De Martin, 'Autonomia dell'istruzione e riforme istituzionali: note introduttive', in Atti del Convegno 'Autonomia dell'istruzione ed autonomia regionale dopo la riforma del Titolo V della Costituzione', Università degli studi di Trento, 14 novembre 2003, <https://www.regione.emilia-romagna.it/affari_ist/rivista_2_3_2004/217-227%20De%20Martin.pdf>, [Acc. June 2019].

⁷⁵ Fabrizio Dal Passo, 'Storia della scuola italiana', p. 31.

was targeted only at one section of the didactic personnel with any real consensus, and consequently, opposition developed towards the entire reform that eventually led to a political change and culminated with the election of a new centre-right government in 2001.

1.6 Didactic autonomy and discussion of the new curricula (2001)

The expression ‘didactic autonomy’ indicates a new level of responsibility given to teachers and school staff. Therefore, it can be stated that didactic autonomy is closely related to the educational offer that schools provide. As Iannicelli states, ‘[l’*autonomia didattica*] è finalizzata al perseguimento degli obiettivi generati dal sistema nazionale di istruzione, nel rispetto della libertà di insegnamento della libertà di scelta educativa da parte delle famiglie e del diritto ad apprendere’.⁷⁶ Accordingly, the expression ‘programmi nazionali’ has no reason to exist, because the flexibility of the new reform gives school, and, most of all, teachers, the power to build a specific curriculum around every class or every student. The number of hours allocated to each discipline, the methodologies utilised, the personalisation of the curriculum, the option of multidisciplinary teaching, cooperative teaching, became part of the POF (‘Piano di offerta formativa’), on which schools had significant autonomy.

Con l’*autonomia* i ‘Programmi Nazionali’ vengono sostituiti da ‘Indirizzi’ o ‘Indicazioni nazionali e orientamenti per la scuola dell’infanzia’, che devono essere molto essenziali nella loro parte prescrittiva e dal curriculum didattico elaborato dalle scuole all’interno del Piano dell’Offerta Formativa. Spetta alle singole istituzioni scolastiche autonome definire ed attuare un curriculum di scuola, da intendersi quale sintesi progettuale ed operativa delle condizioni pedagogiche, organizzative e didattiche che consentono di realizzare un insegnamento efficace ed adeguato agli alunni.⁷⁷

To understand the importance of the ‘Indirizzi per l’attuazione del curriculum/curricoli della scuola di base’ (2001), it is crucial to look at them through the lens of the documents written between 1997 and 1998 by the so-called ‘Commissione dei saggi’. One of these, called ‘I contenuti fondamentali per la formazione di base’ presented to the Lincei Academy in Rome on 20 March 1998, has the merit of reflecting on the importance of the ‘contenuti essenziali’, but, as Colombo points out, ‘il risultato è che ne elenca otto, scoprendo in sostanza che tutto è ugualmente importante. Si tratta dello stesso approccio seguito, al livello della scuola secondaria superiore, dalla Commissione Brocca, con la

⁷⁶ Iannicelli, ‘La trasformazione’, p. 26.

⁷⁷ Iannicelli. p. 27.

conseguenza di disegnare curricula sovraccarichi, di prendere un ideale pool di premi Nobel come riferimento per definire i saperi essenziali del cittadino comune'.⁷⁸ Conceiving the disciplines as isolated within themselves would make useless the whole process of teaching. According to Colombo, the only way to look at the creation of a complete curriculum is to think of the relation teaching/learning in terms of 'competenze' not bound to any particular discipline, but linked to the idea itself of knowledge.

The European Council that took place 23-24 March 2000 in Lisbon had a substantial impact on new educational policies within the EU countries. The main focus of the council regarded new ways to improve the quality of employment, economic reform and social cohesion. The strategy to set these goals, as has been pointed out, was 'to become the most competitive and dynamic *knowledge-based* economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion'.⁷⁹ Setting a new way to build the economy and political reforms on *knowledge* is crucial for all European educational policies. For this reason, the new autonomy of Italian schools had to deal with the necessity to conceive a curriculum around every school and every student. From a political point of view, after the reform was approved, Berlinguer left his ministry to the linguist Tullio De Mauro. Another centre-left government was led by Giuliano Amato, but it only lasted one year until the end of the legislature. Nevertheless, De Mauro had the opportunity to complete the work of Berlinguer and specifically concerned himself with the dimension of didactic autonomy. In fact, the reformed school aimed to conceive a curriculum whose main goal was to 'offrire strumenti di conoscenza e occasioni di esperienza anche applicativa, pratica, operativa che consentano a ciascuno di apprendere e continuare ad apprendere, a scuola e oltre la scuola, e a interagire e a operare nella società e nel mondo produttivo'.⁸⁰ Operating in an active and productive world makes the school able to consider the curriculum not as a list of 'saperi' that needs to be taught to the student, but as an active field where teaching and learning become a process and the final aim of education is knowledge beyond the subject. While the old 'Programmi' 'indica[no] un insieme di contenuti definiti centralmente',⁸¹ the new curriculum

⁷⁸ Adriano Colombo, 'Contenuti essenziali o abilità essenziali?', in *Scuola e città* (Rome: La Nuova Italia, 1998), p. 451.

⁷⁹ Lisbon European Council, 23 and 24 March 2000, Presidency Conclusions <http://www.europarl.europa.eu/summits/lis1_en.htm>, [Acc. June 2019], p. 1.

⁸⁰ 'I curricula della scuola di base. Indirizzi per l'attuazione del curricolo', Documento del Ministro, 28 febbraio 2001, p. 4. (hereafter cited as 'I curricula' and page number).

⁸¹ 'I curricula', p. 6.

parte anch'esso naturalmente dai contenuti, ma delinea l'articolato e complesso processo delle tappe e delle scansioni dell'apprendimento. I contenuti stessi divengono così non tanto la guida dell'insegnante, quanto la via per far conseguire alle allieve e agli allievi conoscenze solidamente assimilate e durature nel tempo. È qui che la professionalità del docente trova tutto il suo spazio poiché può esplicitarsi nel nuovo quadro di libertà culturale e progettuale, di flessibilità organizzativa e didattica garantito dall'autonomia.⁸²

Finally, moving from 'Programma' to curriculum means that educational policies are concerned particularly with the 'diritto all'apprendimento', aimed not only at the final diploma, but also at achieving a more general and effective skill to handle the 'contenuti dell'apprendimento'. Moreover, the main objective of these new conceptions of teaching/learning was to build a curriculum that would be able to closely follow every step of education from 'scuola dell'infanzia' to 'scuola secondaria'. In other words, it is what Colombo,⁸³ Cerini and others called 'curriculum verticale' which has found its perfect dimension in the development of the 'Istituti Comprensivi'⁸⁴ and which included pupils until thirteen years of age. Not surprisingly, then, it can be seen a link between the official document 'I contenuti essenziali della formazione di base' (March 1998) and the new curricula. In the 1998 document, redacted by the so-called 'Commissione dei Saggi', can be read in fact:

la scuola deve diventare un luogo di vita e di apprendimento per docenti e studenti: per far questo ci vogliono spazi e tempi adeguati e vivibili. Va progettato un grande lavoro collaborativo imperniato sull'interazione nei due sensi fra scuola da un lato e università e centri di ricerca dall'altro. Gli obiettivi di questo sforzo consisteranno nella riqualificazione culturale dei docenti (accompagnata dalla drastica eliminazione dell'attuale cumulo di inutili procedure burocratiche) e nella riapertura delle vie di passaggio tra scuola e università. La professione dell'insegnamento dovrà tornare ad essere culturalmente e socialmente desiderabile, grazie anche a nuovi profili di carriera e adeguati riconoscimenti economici.⁸⁵

The result of that last point, as previously seen, was an attempt to increase salaries of experienced teachers and, consequently, a major contribution to the reform's failure. However, a curriculum that is 'essenziale e progressivo' strongly contrasts with one based on contents, focusing more on the 'competenze', intended as 'essenziali', which also means an 'alleggerimento dei contenuti disciplinari' (linked with the 'Contenuti

⁸² Ibid.

⁸³ Adriano Colombo, *Per un curriculum verticale di riflessione sulla lingua* (Padua: G&D - Grammatica e Didattica, N. 4 - 5), pp. 25-42.

⁸⁴ Experimental from 1997 to 1999, the 'Istituti Comprensivi' are now fully operational and include children and students from 'scuola dell'infanzia' to 'scuola secondaria di primo grado'. On this: Cerini, 'Saperi, curricolo, competenze', pp. 8-9.

⁸⁵ 'Ministero P. I.', *I contenuti essenziali della formazione di base*, p. 2.

essenziali' of the 1998 document) and which is 'progressivo', and can be spread and developed throughout all the school cycles.⁸⁶ However, the main points of the new curriculum seem to be crucial for the development of a new attitude towards teaching/learning process and the school system in general. In fact, the document, besides pointing out the main changes of the new school curriculum, summarises new values within the relationship between the act of teaching and the act of learning, in the light of didactic and institutional autonomy (the curriculum 'verticale', the life-long learning process, the personalization of the curriculum, the process of evaluation, the importance of citizenship education, and the respect towards ethnic and other forms of differences).

As can be read, in fact:

La riforma concilia il contrasto fra insegnamento ed apprendimento. In passato hanno prevalso due tendenze. Una prima assimila l'apprendimento all'insegnamento: non ci sarebbe nessuna possibilità di apprendimento fuori di un contenitore strutturato di insegnamento. Una seconda tendenza ritiene che insegnamento e apprendimento siano due modalità di esperienza reciprocamente incompatibili. Di fronte a queste ricorrenti e diffuse alterazioni di prospettiva, nella scuola autonoma e riformata insegnamento ed apprendimento si propongono come un unico processo, nel quale alle condizioni di forza culturale ed efficacia didattica che rendono l'insegnamento valido devono corrispondere quel coinvolgimento personale, anche emotivo e affettivo, e quella ricchezza delle occasioni che fanno dell'apprendimento un cammino di cui la persona che apprende possa sperimentare quotidianamente l'utilità ed il piacere.⁸⁷

What seems even more interesting for this research is that the ideas above are closely related to multi- and inter-disciplinary aspects of the curriculum, which, as the document highlights, become crucial: 'occorre che chi insegna [*le discipline*] insegni anche a sperimentarle e apprenderle non come gabbie separate ma come terreni da cui osservare, capire ed interpretare la cultura, come dispositivi di ricerca e di metodo e come fonti della capacità di mettere in discussione, reimpostare e perfino trasgredire gli abituali corredi

⁸⁶ Cerini points out that the risk is evident: 'Non è però facile definire un quadro di sintesi dei saper fondamentali per la formazione di base, cioè dei 'saperi' considerati irrinunciabili [...]; emerge il rischio di una sottovalutazione dell'importanza dei contenuti' in Cerini, 'Saperi Curriculum, Competenze', p. 4. Furthermore, Colombo seems to agree, pointing out that 'la ricerca dell'essenziale nell'educazione dovrebbe a mio parere seguire un'altra strada. Partire non dalle discipline o aree, ma da nuclei concettuali trasversali alle discipline, dalle abilità cognitive generali da sviluppare. Si tratta di chiamare gli esperti, disciplinari e non, a disegnare una mappa di questi assi portanti, per poi verificare su questa le ipotesi di curricoli e contenuti. Al livello primario, si tratta di individuare e sviluppare le categorie cognitive di base, tali da poter essere impiegate nei contesti più diversi.' in Adriano Colombo, 'Contenuti essenziali', p. 451.

⁸⁷ 'Ministero P. I.', *I curricoli della scuola di base*, p. 19.

teorici e metodologici.’⁸⁸ What seems to be a revolutionary statement in an official document is nothing more than what has been said within linguistic discussions and educational debates (and often official documentation) ever since the *Dieci tesi*. The new dimension of autonomy and the reformed school cycles could have been a fertile ground to build these new ideas based on the ‘trasversalità’ of the curriculum. The reform and the national curricula for every school level were abrogated in late 2001. Moreover, the document here analysed referred to a reformed school cycle of seven years called ‘Scuola di Base’, which was meant to take the place of the old ‘Scuola Elementare’ and ‘scuola media’. As the curriculum points out: ‘lungo il ciclo settennale il tempo-scuola acquista difatti una sua specifica valenza sia in relazione alle indicazioni curricolari nazionali, sia in relazione ai modi e ai ritmi diversi con cui gli allievi imparano, sia, infine, in relazione alle specifiche condizioni socio-ambientali degli alunni e delle loro famiglie’.⁸⁹ In this light, the ‘Scuola di Base’ was supposed to be a first step towards experimenting with new ideas such as the ‘alfabetizzazione culturale’⁹⁰ and the difference between ‘discipline’ and ‘ambiti disciplinari’, that are crucial to understand the transition from the old ‘Scuola dell’Infanzia’ to the old ‘Scuola Elementare’. Italian teaching is assimilated into the ‘ambito linguistico-espressivo’, and it is set out in two macro-areas related respectively to the first two years, and to the final five of ‘Scuola di base’. Regarding the first two years it is essential to underline the meaning given in this context to the word ‘ambito’, which is a first form of aggregation of different but integrated disciplines. For instance, it can be read that ‘le funzioni espressive e comunicative dei linguaggi, proprie della lingua italiana e della prima lingua europea moderna’⁹¹ easily connects up with music, visual arts, thereby creating a broader ‘ambito linguistico-espressivo’. As far as concerns the ‘italiano’ for the first two years of the cycle, it is interesting to highlight how the document discriminates between ‘Ascolto e parlato’, ‘Lettura’, ‘Scrittura’ and ‘Riflessione linguistica’. Because the addressees are very young learners, very specific notions on the subject are not included, but it is still interesting to note how the curriculum suggests to read and analyse ‘vari testi informativi *purché brevi e su argomenti noti*’⁹² which is

⁸⁸ I curricoli, p. 20.

⁸⁹ I curricoli, p. 42.

⁹⁰ I curricoli, p. 40: ‘Il progressivo dominio delle discipline non si risolve nella mera acquisizione di informazioni e nemmeno di quadri concettuali, ma consiste, per quanto possibile in relazione all’età e al grado di sviluppo cognitivo degli alunni, anche nella conquista delle abilità procedurali delle discipline stesse e nell’acquisizione delle modalità di pensiero che le caratterizzano’.

⁹¹ I curricoli, p. 44.

⁹² I curricoli, p. 47 (*italics mine*).

something that appears in contrast with the traditional way to teach written language. Still regarding textuality, during the first two years the student was supposed to ‘cominciare a riconoscere a grandi linee la differenza tra i vari tipi e forme di testo’.⁹³

The new concept of ‘obiettivo specifico di apprendimento’ is introduced and emphasized especially in the section regarding the final five years. It seems quite closely related to the idea of the transition from ‘ambito disciplinare’ to ‘disciplina’. In other words, pupils should be now able to distinguish and get oriented through a vaster range of disciplines, not only ‘ambiti’. The section dedicated to ‘italiano’ for the final years is deeply interesting because it includes several, advanced sociolinguistic concepts such as ‘uso’, ‘norma’ and ‘situazione comunicativa’. In fact, according to this document and regarding the ability of *listening* and *speaking*, pupils should be able to ‘ascoltare e produrre testi di vario tipo (narrativi, descrizioni, testi poetici, informativi, ecc.) in circostanze e per scopi diversi’⁹⁴ and ‘riconoscere e utilizzare differenti funzioni dei discorsi orali (ad esempio: esortativo, regolativo, informativo, creativo)’. Concerning the ‘obiettivi specifici di apprendimento’ of *reading*, pupils are expected to ‘comprendere e utilizzare le sequenze informative di testi regolativi (ad esempio fogli di istruzioni per l’uso, regole di giochi, ricette); ricavare informazioni da semplici grafici, schemi, tavole e tabelle e utilizzare in modo opportuno immagini e apparati iconografici; comprendere e confrontare: testi narrativi, di cronaca, biografie, diari, individuando le caratteristiche essenziali relative a personaggi, sequenze temporali, ambienti e relazioni’. With regard to *writing* skills, the document emphasizes a range of textual genres that pupils should be able to handle by the end of this school cycle: ‘testi narrativi e descrittivi sia realistici sia fantastici; cronache, resoconti di esperienze; testi regolativi per la progettazione e realizzazione di attività legate ad esperienze note individuali e di gruppo; testi creativi in prosa o in versi; varie modalità di sintesi: discorsive o per punti, sotto forma di schemi, tabelle, mappe’. It can be seen here that this document tries to filter a broad range of advanced linguistic concepts into programmatic indications for the curriculum. It is interesting to highlight how educational, as well as linguistic ideas, were being developed in the light of official documentation and the discussion on it. It must be underlined the importance of cooperative learning/teaching, multi-disciplinary learning/teaching and milestones of linguistic education such as textual and language varieties. It is not by chance, in fact, that the document has a whole section dedicated to the ‘riflessione sulla lingua’, which demonstrates the significance for grammar teaching of both the linguistic

⁹³ I curricoli, p. 48.

⁹⁴ I curricoli, p. 63.

process and the meta-linguistic reflections on it. Significantly, in this section, explicit references to textuality and varieties can be easily found. By the end of the cycle, in fact, pupils should ‘conoscere e valutare gli elementi fondamentali della comunicazione; riconoscere la funzione e gli scopi di un testo; saper individuare nei testi parlati gli elementi che rinviano al contesto situazionale; avere percezione delle differenze fra usi formali e informali’.⁹⁵ Even if these ideas could have already been found in the ‘Programmi’ of 1975 and 1985 and in official and unofficial documentation, this new way to propose them, within the context of autonomy and the new reform, make them more likely to be achieved. The new extended cycles could have facilitated the creation of a ‘curriculum verticale’ in accordance with the directives of the European Community which, as previously said, was suggesting the need for life-long learning.

Before going further, it is relevant to remember in what cultural environment the proposal for the new curricula was born. As noted by the former minister Berlinguer himself, the reform and the curricula arise from a public discussion within associations, experts and people who belonged to the world of school in general. Both the profile of the new reform and the new curricula, in fact, were written by commissions of experts respectively the forty ‘saggi’ and three-hundred specialists amongst teachers and school staff. In May 1999, a ‘giornata nazionale sui curricoli’ represented the chance for debating and sharing opinions and possibilities about the future curriculum. Furthermore, for this occasion a group/association called ‘Forum delle associazioni disciplinari della scuola’⁹⁶ produced a document for the ‘Progetto per la scuola’ called ‘Per la definizione di un glossario minimo in vista della stesura di norme curricolari nazionali per discipline’⁹⁷ that evidently represented a significant inspiration for the final proposed official document. The reaction to the discussion around the new curricula of Adriano Colombo, who actively participated in the debate, summarizes well the high expectations held for them: ‘Ho detto che le proposte sono ambiziose, ed è bene che lo siano; ma se ci limitassimo ad affiancare e sommare le competenze indicate dai vari documenti (e per lo più sono solo esemplificazioni parziali), rischieremmo un curricolo enciclopedico, stracarico, ingestibile, ricadremmo cioè nel difetto più volte imputato ai programmi Brocca. Un rimedio può venire dai moduli interdisciplinari, un altro dalla modularità interna ai

⁹⁵ I curricoli, p. 68.

⁹⁶ Evidence can be found online at: < <http://www.forumdisciplinari.org/> >, [Acc. June 2019].

⁹⁷ See the section ‘Glossario’ of the document.

curricoli disciplinari, intesa come possibilità di opzioni’.⁹⁸ Moreover, a few months before the publication of the proposal for the curriculum, Colombo reviewed and criticized in advance what now might seem the most significant deficiency of the ‘Curricoli della scuola di base’:

Ripeterò per l’ultima volta che compito delle norme curriculari in regime di autonomia è indicare pochi ‘obiettivi specifici’ prioritari, verificabili e vincolanti (nel senso che le scuole - non i singoli alunni - siano chiamati a rispondere su quelli): il minimo garantito di omogeneità nazionale. Altri obiettivi di arricchimento dell’offerta formativa vanno lasciati all’autonomia delle scuole, eventualmente indicandone alcuni come ‘di eccellenza’ (o espressione simile), per evitare appiattimenti sul minimo.⁹⁹

Although interesting, these veiled criticisms do not mention that the plan of the government was to make active the curriculum and the reform within five years. For this reason, the Government called the five-years plan ‘ipotesi di lavoro’, which represented a way to supervise closely the changes started by the reform. On this subject, Cerini stated:

D’altra parte lo stesso Parlamento si è mostrato molto cauto nel prefigurare l’articolazione interna del settennio, rubricandola a semplice ‘ipotesi di lavoro’, da far valere soprattutto in funzione delle scelte organizzative e didattiche. L’ampia discrezionalità lasciata ad ogni scuola può assicurare rispetto ad eventuali diktat centralistici immotivati, ma può anche creare notevole sconcerto tra gli operatori: quali saranno le scelte del Collegio dei docenti? Come influirà su queste scelte il ‘pensiero’ del dirigente scolastico? Come si concilierà questa ampia flessibilità con l’esigenza di disporre di alcuni criteri stabili per allestire libri di testo, materiali, eventuali prove standardizzate di apprendimento?¹⁰⁰

In 2001 the former minister Berlinguer reflected upon the impact and the main features of five years of ministry and reforms, publishing a book called *La scuola nuova*.¹⁰¹ The book is an attempt to claim merit for the vast process of reforms, from the reform of the ‘Esame di Stato’¹⁰² to the ‘Statuto dei diritti e dei doveri degli studenti’¹⁰³ and so on, summarising the results by stating that ‘dal 1996 la qualità del confronto politico in materia scolastica è cambiata rispetto al passato e credo che la ragione principale sia che

⁹⁸ Adriano Colombo, ‘Attraverso i curricoli delle associazioni disciplinari’, in *Coordinamento del Forum delle associazioni disciplinari, Progettare la scuola*, <<http://www.adrianocolombo.it/compemodu/compemodu04.pdf>> [Acc. June 2019], pp. 37-39.

⁹⁹ Ibid.

¹⁰⁰ Giancarlo Cerini, ‘La riforma come ipotesi di lavoro’, <<http://www.edscuola.it/archivio/riformeonline/ipolav.html>> [Acc. June 2019], p. 3.

¹⁰¹ Luigi Berlinguer, Marco Panara, *La scuola nuova* (Roma-Bari: Laterza, 2001).

¹⁰² Berlinguer, *La scuola nuova*, p. 22.

¹⁰³ *La scuola nuova*, p. 26.

in passato non esisteva un progetto'.¹⁰⁴ As Colombo points out in his review of the book, the work of the former minister is not without contradictions. While it is the same author that remembers the strong resistance that the reform had to face,¹⁰⁵ it is undeniable that in the only year of its being in operation the reform was not so idyllic and heroic as pointed out by Berlinguer.

Quando si legge 'Liberare il sistema dal vecchio burocratismo, dalle circolari e dall'eccesso di omogeneità' (p. 36), non si può non ricordare che le circolari erano passate da 380 nel 1995 a 784 nel 1996 a 941 nel 1997 (un numero superiore a qualunque capacità umana non dico di applicarle, ma di leggerle): si direbbe che qualcuno avesse interpretato la tendenza all'autonomia come il dare alle scuole disposizioni sempre più dettagliate a cui dovevano uniformarsi per essere autonome. Del resto, per qualche anno nelle scuole 'autonomia' ha significato la rincorsa a una miriade di progetti promossi dal centro, per assicurarsi i relativi finanziamenti, con un'estenuante produzione cartacea.¹⁰⁶

The most important criticism related to this subject of study, though, concerns the curriculum that, even if extremely promising in its theoretical standards, was perhaps too detached from the reality of schools. Colombo, who was part of the commission designated to address the new curricula, emphasises that in his final reflection of the Berlinguer/De Mauro experience within the curriculum, pointing out that 'la commissione 'dei 300' non ha trovato fissati, e non ha saputo rapidamente definire, appunto i 'paletti' che definissero i modi stessi in cui le norme curricolari andavano redatte, e non si è avuto il tempo per un confronto sistematico tra gli esperti delle diverse aree disciplinari'.¹⁰⁷ However, it is undeniable that the reform initiated a new approach in rethinking and improving the school system, that had to be addressed in the following years. In the next chapters, it will be examined what influence this process of reforms had upon the more recent curricula, Italian assignments for the final exam of secondary school, textbooks and teaching methodologies.

¹⁰⁴ *La scuola nuova*, p. 139.

¹⁰⁵ Adriano Colombo, *Berlinguer ti ho voluto bene. Sette anni di interventi sulla scuola*, (Turin: Trauben, 2002), <<http://www.adriancolombo.it/poliscola/poliscola06.pdf>> [Acc. June 2019]: 'quelle delle varie lobby della formazione professionale, degli 'esamifici' (scuole private che offrono diplomi facili), 'la fortissima pressione corporativa all'interno dei Conservatori' [...], oltre ovviamente all'opposizione politica della destra, priva in questo come in altri campi di un proprio disegno, ma pronta a scatenare violente campagne di opinione e tattiche parlamentari dilatorie contro qualunque iniziativa riformista. Ma più interessanti sono i ripetuti accenni alle resistenze e ai ritardi culturali della stessa sinistra'.

¹⁰⁶ *Ibid.*

¹⁰⁷ *Ibid.*

2. Reforms and curricula. From ‘Piani di studio personalizzati’ (2004) to the latest curricula

After having considered in the previous chapter the very early stages of linguistic discussion in curricula and educational policies from the end of the Seventies to 2000, the focus of this chapter will be on how new governments and new linguistic ideologies developed some of these ideas, beginning with the ministries gravitating around the centre-right executive of Silvio Berlusconi. In order to do so, in the following section there will be an analysis of two reforms and some of the most significant changes in the educational system that affected teaching practices, with regards to language education for every school cycle. Firstly, the attention will be on the ‘piani di studio personalizzati’, through which the Moratti reform tried to build upon the achievements of the Berlinguer ideas on autonomy. Secondly, the analysis will focus on the new arrangements for primary school by the transitory ministry of Giuseppe Fioroni. Finally, the emphasis will be on the 2010 and 2012 ‘Indicazioni nazionali per il curricolo’, which represented, until 2018, the most recent curricula for respectively primary and secondary (for the first cycle) schools.

At the outset, it is also worth mentioning that the beginning of the century represented for Italy and for Europe a crucial period not only for educational policies. The Lisbon European Council in 2000 intended to redefine the European economy by taking education as the cornerstone to do so: Italy, as well as other EU countries, dealt with the aim of modernising its institutional structure, investing in education and in an active social state; in fact, according to the conclusion,

Europe's education and training systems need to adapt both to the demands of the knowledge society and to the need for an improved level and quality of employment. They will have to offer learning and training opportunities tailored to target groups at different stages of their lives: young people, unemployed adults and those in employment who are at risk of seeing their skills overtaken by rapid change. This new approach should have three main components: the development of local learning centres, the promotion of new basic skills, in particular in the information technologies, and increased transparency of qualifications.¹⁰⁸

Interestingly, this document does not refer to the need for schools to adapt to methodologies and structures to a changing transnational and multilingual world, and it

¹⁰⁸ Lisbon European Council, 23 and 24 March 2000, *Presidency Conclusion*, <http://www.europarl.europa.eu/summits/lis1_en.htm> [Acc. June 2019].

leaves aside the cultural varieties so vital for any contemporary educational system. However, with specific pertinence to language education, in November 2001, a European Union Council Resolution suggested for governments and educational policies to make use of the Common European Framework of Reference for Languages for general evaluation and assessment of languages teaching/learning. This was a guideline to assess achievements in a foreign language redacted between 1989 and 1999 in order to find a common linguistic standard across all Europe.¹⁰⁹ Understandably this had a major influence on both the reception of new curricula among teachers and the creation of new language curricula, as schools (including Italian schools) began to use this system of standards as a crucial point of reference for skills development.

2.1 ‘Legge 53/2003’: from autonomy to isolation?

Less than six months after ‘Legge 30/2000’, on 4th July 2001, the new centre-right Minister of Education Letizia Moratti withdrew the old reform in order to re-create a new school system, leaving out the new perspectives and features set out in Berlinguer’s reform that were due to become effective in September 2001. While, with this new reform, major changes were to be made to the old school system and new methodologies were envisaged, it is correct to say that, after years of preparation, meetings, national assemblies and debate, what could have been the fresh start for Italian school was put on standby and re-drawn by a government with different orientation and perspectives. Schools and teachers, on the other hand, were not silent regarding these sudden changes. In this section, the main focus will be on comments and opinions on the Moratti reform as discussed officially by groups of national associations that, among other occasions, have met in Bologna almost immediately the final version of the ministerial documentation was released.¹¹⁰

The government’s first attempt after the abrogation of L. 30/2000 involved convening a general assembly with delegates from all members of education and civil society (students, parents, teachers of every level of education) in order to brief and comment upon, in a broad (and perhaps ambitious) way, the changes that had been proposed by the old reform. These changes were then reconsidered and edited by a small

¹⁰⁹ For a more articulated description, see the Council of Europe Language Policy Portal, <http://www.coe.int/t/dg4/linguistic/Cadre1_en.asp> [Acc. June 2019].

¹¹⁰ Forum delle associazioni disciplinari della scuola, *Indicazioni nazionali e profili educativi, Pareri e commenti delle associazioni disciplinari sui documenti ministeriali per il primo ciclo di istruzione* (Bologna, 2003), <<http://www.italia-liberazione.it/novecento/LibroBianco.pdf>> [Acc. June 2019].

group appointed by Minister Moratti and led by Giuseppe Bertagna who was involved in the 'Programmi Brocca' as well. Proposals and ideas from this group were voiced in the 'Decreto Ministeriale 672/2001': as expected, nursery and primary schools were the very first object for change in a general reform that included at least six 'decreti legge'.¹¹¹ The most interesting feature of these new documents is their structure. D. Lgs 59/2005, for instance, affected nursery schools and 'scuole del primo ciclo', but the structure proposed for this level is far more complex and aims to redefine the 'livelli essenziali di prestazione', basic levels of preparation for every level and school (including private). This 'decreto legislativo' included four attachments that are crucial for this part of this work because they represent the didactic and pedagogical part of the reform and they introduce the new ideas of 'piano di studio personalizzati' and 'profili'. These are: attachment A), B) and C) called 'Indicazioni per i piani di studio personalizzati' and attachment D) called 'Profilo', for the development of educational, cultural and professional profile of students in their first cycle of education.

It is not the aim of this study to discuss the structural changes within the school system that were proposed by the new reform. It will suffice to point out how, despite differing views about the final outcome of the document, the reform was planned meticulously in its different components and, as far as concern didactics and methodologies, this was done in continuity with the old 'programmi'. In fact, the first aspect that is noteworthy, looking at the executive summary redacted by Bertagna, is the new pedagogical lexicon, one which casts light on the new driving forces behind the reform.¹¹² First it can be noted the distinction between 'scienza, materia e disciplina di studio'. This is important not only because it represents the pedagogical background upon

¹¹¹ D.Lgs 59/2004 "Definizione delle norme generali relative alla scuola dell'infanzia e al primo ciclo dell'istruzione, a norma dell'articolo 1 della legge 28 marzo 2003, n. 53"; D.Lgs 286/2004 "Istituzione del Servizio nazionale di valutazione del sistema educativo di istruzione e di formazione, nonché riordino dell'omonimo istituto, a norma degli articoli 1 e 3 della legge 28 marzo 2003, n. 53"; D.Lgs 77/2005 "Definizione delle norme generali relative all'alternanza scuola-lavoro, a norma dell'articolo 4 della legge 28 marzo 2003, n. 53"; D.Lgs 226/2005 "Norme generali e livelli essenziali delle prestazioni relativi al secondo ciclo del sistema educativo di istruzione e formazione, a norma dell'articolo 2 della legge 28 marzo 2003, n. 53"; D.Lgs 76/2005 "Definizione delle norme generali sul diritto-dovere all'istruzione e alla formazione, a norma dell'articolo 2, comma 1, lettera c), della legge 28 marzo 2003, n. 53"; D.Lgs 227/2005 "Definizione delle norme generali in materia di formazione degli insegnanti ai fini dell'accesso all'insegnamento, a norma dell'articolo 5 della legge 28 marzo 2003, n. 53".

¹¹² Giuseppe Bertagna, 'La progettazione della Riforma: lessico pedagogico di riferimento', in *In-Riforma*, Indire 2004, <http://www.marche.istruzione.it/allegati/sintesi_riforma.pdf> [Acc. June 2019].

which the reform is built, but also because it will become essential to understand the role that ‘obiettivi specifici di apprendimento’ and ‘obiettivi formativi’ play. In this document, ‘scienza’ is ‘vedere la realtà da un punto di vista determinato’¹¹³ and ‘il riferimento ad un preciso metodo di lavoro’,¹¹⁴ and ‘materia’ is the *material* way we have to deal with science that can be investigated by any subject. Relying on the etymology of ‘disciplina’ (*disco*, Latin for learning), it can be seen how science and ‘disciplina’, according to the document, merge into discipline:

È possibile nella scuola, tanto più con soggetti in età evolutiva, non trattare la ricerca scientifica (scienza) alla stregua di contenuti materiali (materia), ma utilizzarla, senza tradirla nella sua complessità, come occasione per promuovere processi di apprendimento e di pensiero significativi per sé e per gli altri (disciplina di studio)?¹¹⁵

Moreover, it is interesting to see how the discourse emphasizes the individual, pointing out how to make a teaching methodology successful, by considering the variety of learners and educators:

In ogni insegnare, quindi, non è in gioco soltanto ciò che si insegna, il ‘che cosa’, ovvero il sapere; né soltanto il ‘come si fa’; conta altrettanto il ‘chi’. Non si impara, infatti, se l’ordine logico di una serie di costrutti scientifici non coincide anche con quello psicologico ed etico personale di chi se ne appropria.¹¹⁶

The document displays the language of pedagogical theories and becomes even more interesting when it addresses the issues of ‘programmazione’ and its lexical discrepancies. Bertagna is keen to point out how the idea of ‘Programmi’ has been essential for Italian schools ever since the nineteenth century and up until 1988. Unlike more recent ways to address curriculum development, the ‘programmi designano contenuti di insegnamento dettati centralisticamente, da parte del Ministero, e da svolgere in maniera uniforme in ogni classe del Paese. Tutti i docenti e le scuole, a discendere, devono adeguarsi alle loro indicazioni’.¹¹⁷ It has been already pointed out in the previous chapter how, after the

¹¹³ Giuseppe Bertagna, ‘Raccomandazioni per l’attuazione delle Indicazioni Nazionali per i Piani di studio personalizzati nella Scuola Primaria’, <http://archivio.pubblica.istruzione.it/news/2002/allegati/sperimentazione/raccomandazioni_primaria.pdf> [Acc. June 2019].

¹¹⁴ Ibid.

¹¹⁵ Ibid.

¹¹⁶ Ibid.

¹¹⁷ Ibid.

‘progetto Brocca’, there was an attempt to adapt Italian schools’ didactical and methodological planning to a more international perspective. That is why, as Bertagna says, the word curriculum suggests ‘le scelte educative e didattiche concretamente adottate dai docenti nelle diverse realtà scolastiche per corrispondere in maniera più pertinente alle differenze territoriali, sociali e culturali di provenienza degli allievi’.¹¹⁸ This new order of reform, though, aims at something that can be placed in the middle ground between ‘programma’ and curriculum. Bertagna identifies judiciously the fact that, whereas ‘programmi’ were leaving aside the regional and ethnic varieties of Italian schools, and having to follow directives from higher and centralized powers, curricula carry the risk of being too localized and therefore extremely vague. This document suggests the middle ground of the ‘programmazione curriculare’, by which it is meant: ‘vincoli nazionali che ogni unità scolastica è chiamata autonomamente ad interpretare e ad adattare alle esigenze della propria realtà formativa’.¹¹⁹ The words ‘autonomamente’ and ‘interpretare’ highlight the attempt at giving continuity with the old reform and, at the same time, the concern to use its new ideas on behalf of the more recent political ideologies. In this light, it is easy to understand the meaning of ‘piani di studio personalizzati’, the major curricular change of the reform. Within the context of ‘livelli essenziali di prestazione’ that were seen above, schools are explicitly called to deal with local communities and local cultures and to adapt cultural observations and learning procedures to their cultural backgrounds, always relying on a basic overall level of preparation and national achievements targets that are the same for every school of the country.

Finally, it must be mentioned that the new role of the teacher is now that of ‘teacher-tutor’. The learning process involves educational concepts and related terminology, that have been circulating for decades: ‘capacità’, ‘competenze’, ‘conoscenze’ and ‘abilità’. A pertinent summary is given by the document when it provides the following comments:

Le capacità personali diventano competenze personali grazie all’insieme degli interventi educativi promossi da tutte le istituzioni educative formali (scuola, università), non formali (mass media, parrocchie, partiti, musei ecc.) e informali (famiglia, il gruppo dei pari, la dinamica sociale nel suo complesso). A scuola, però, l’istituzione educativa formale per eccellenza, le capacità di ciascuno diventano competenze personali grazie all’impiego formativo delle conoscenze e delle abilità che lo Stato [...] reputa valore trasmettere alle nuove generazioni. Esse sono raccolte nelle Indicazioni Nazionali sotto la

¹¹⁸ Ibid.

¹¹⁹ Ibid.

voce ‘obiettivi specifici di apprendimento’, [...] ovvero correlati, come scopo del proprio essere formulati, alle competenze da promuovere negli studenti.¹²⁰

Accordingly, whereas ‘capacità’ and ‘conoscenze’ are related to the concept of ‘sapere’, ‘abilità’ and ‘competenze’ are related to the ‘saper fare’, which has a stronger educational value.

Bearing this theoretical framework in mind, three peculiar traits of the new reform lexicon can be observed: ‘obiettivi specifici di apprendimento’ (*OSA*), which ‘indicano le conoscenze (il *sapere*) e le abilità (il *saper fare*) che tutte le scuole della nazione sono invitate ad organizzare in attività educative e didattiche volte alla concreta e circostanziata promozione delle *competenze* degli allievi a partire dalle loro *capacità*’;¹²¹ ‘unità di apprendimento’ (*UA*), which are not ‘unità di insegnamento, cioè preoccupate di dichiarare ciò che fa o deve fare il docente per trasmettere determinati contenuti, ma, appunto, di apprendimento, ovvero attente a promuovere ciò che fa e deve fare l’allievo per effettivamente imparare, nel suo modo, tali contenuti’;¹²² and ‘obiettivi formativi’, which are the targets that are reputed to be realistically achievable by one or more students and, at the same time, he/she identify them as important in his/her skills development. These points are represented in the scheme (Image 1), provided by Bertagna and reproduced below.

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² Ibid.

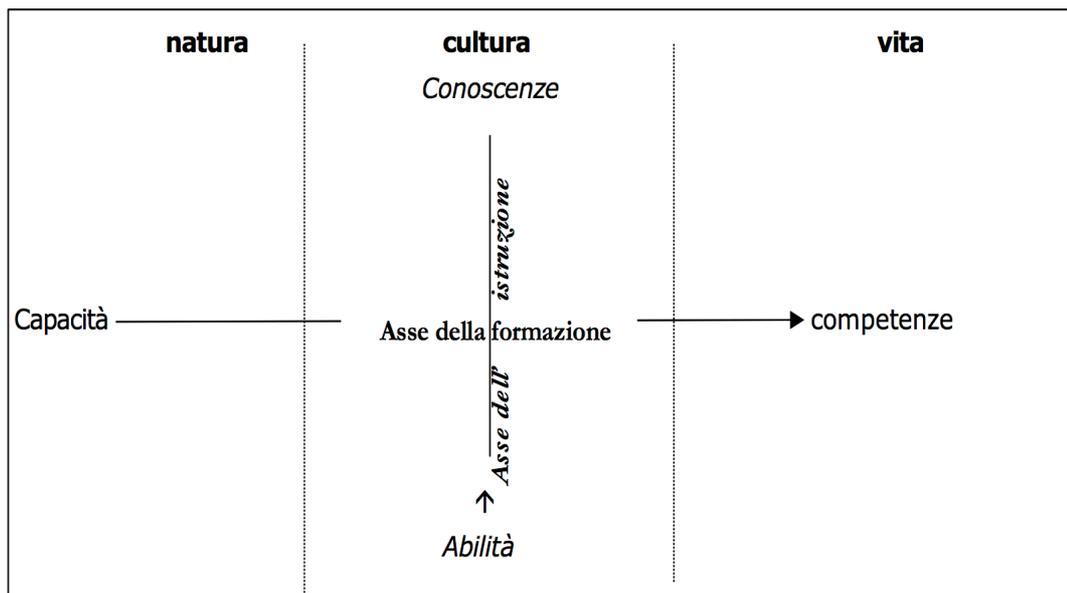


Image 1: The scheme of learning process included in Giuseppe Bertagna, *La progettazione della Riforma: lessico pedagogico di riferimento*, In-Riforma, Indire 2004

The new curricula are, therefore, built upon a precise background and the text itself appears extremely schematic. Every discipline has a section dedicated to it and this is, in its turn, sub-divided for every level of education. The focus is, understandably enough, on general learning targets, *OSA*, and the way *OSA* can/must become ‘competenze’ through the ‘piani di studio personalizzati’.

Now, as far as concerns the Italian language, the document, as mentioned, is presented in three annexes called ‘Allegati A’, ‘B’ and ‘C’, respectively for the nursery school, primary (5 years) and secondary (3 years) ones; no mention is made of the ‘licei’ and technical institutes which will only see new curricula in 2010. Especially interesting is, in these documents, the reference to a dependency upon grammar (‘Concetto di frase (semplice, complessa, nucleare), predicato e argomenti’),¹²³ to textual varieties (‘Riconoscere e riprodurre le caratteristiche testuali delle più consuete tipologie di comunicazione scritta’)¹²⁴ and to language variation (‘Essere consapevole della variabilità delle forme di comunicazione nel tempo e nello spazio geografico, sociale e comunicativo’).¹²⁵ Particularly emphatic is the attention that these documents dedicate to argumentative forms of texts:

¹²³ *Indicazioni nazionali per i Piani di Studio Personalizzati nella scuola primaria*, p. 21.

¹²⁴ *Indicazioni scuola secondaria*, p. 26.

¹²⁵ *Indicazioni scuola secondaria*, p. 2.7

La struttura del testo argomentativo: gli elementi di - cornice (tema, riferimenti allo scopo, ai destinatari, informazioni sul contesto, tempo, spazio, fonti), e gli - elementi che fanno parte del nucleo argomentativo (una tesi o un'opinione, le argomentazioni, un - ragionamento che utilizzi le argomentazioni per confermare o dedurre la tesi oppure per negarla.¹²⁶

These concerns can be connected to the reform of the final exam for secondary school that took place in these years by a law promulgated by the previous government. To prepare students to handle a variety of texts that would differ from the old form of 'tema' both primary and secondary schools included these topics in their curricula. On the other hand, it is true that, as a commentary document published in 2004 by GISCEL in response to these curricula points out, 'i traguardi educativi fissati dal Ministero sono in realtà dei banali, vecchi contenuti programmatici [...], della lingua si vedono soprattutto gli aspetti statici, con scarsa attenzione alle varietà della lingua che oggi entrano e devono entrare nel mondo della scuola'.¹²⁷

What GISCEL underlines in this brief but extremely useful document, is that, while the curricula are using standard contents already in fashion in the old programmes through a lexicon that might appear more up-to-date, they are actually lacking in substance. First of all, according to GISCEL, they are mixing the idea of 'istruzione' with the more appropriate term 'educazione' ('All'inizio del terzo millennio, nella società dei molti linguaggi e delle molte culture, parlare di 'insegnamento della lingua', in qualunque grado e ordine di scuola, è riduttivo: infatti all'insegnante non è tanto affidata l'*istruzione* quanto l'*educazione* linguistica').¹²⁸ Moreover, it is remarkable to see the lack of any reference to the idea of multidisciplinary teaching. This was a point made repeatedly clear by old curricula and is now apparently forgotten. Language education exists only in relation and constant communication with other disciplines. Furthermore, this curriculum omits to mention the importance of pluri- and multi-linguistic approaches to language education. Finally, the reflection on grammar should not mean learning grammar rules, abstruse, technical terminology and cryptic categorisations by heart. As GISCEL suggests 'la riflessione sulla lingua dovrebbe avere carattere essenzialmente descrittivo: si tratta di vedere e capire come la lingua è usata, prima che di insegnare come dovrebbe essere usata. L'enunciazione di norme dovrebbe essere accompagnata dalla riflessione sulla loro

¹²⁶ Ibid.

¹²⁷ GISCEL, *Oltre la riforma Moratti: Le proposte dell'educazione linguistica democratica*, <<http://giscel.it/wp-content/uploads/assemblee/2004/2004-09%20OltreLaRiforma.pdf>> [Acc. June 2019].

¹²⁸ Ibid.

variabilità nel tempo e nello spazio, secondo la stratificazione socio-culturale dei parlanti e secondo i mezzi e le forme della comunicazione'.¹²⁹ To conclude, there is at least one controversial and possibly contradictory point in these documents. For, if they are intended as 'indicazioni,' general guidelines which schools and teacher are free to move around, they appear as good examples of curricula. And yet the documents are far from exhaustive and complete. If, on the other hand, they represent a regulative action with which schools must comply, they present a major step back from didactic autonomy and democratic education, which had constituted the milestone of linguistic policies of the previous two decades.

2.2 Curriculum again... Giuseppe Fioroni and the reform of Primary School

In the following section, the main focus will be on the changes that a new centre-left government conceived between 2006 and 2008, mostly addressing the Primary School. This time, a change of government did not lead to a radical reform, but to a number of significant changes. Giuseppe Fioroni believed that, to renew significantly the school system, Italy did not need radical, strict and rigid reforms, but an effective interpretation of flexible and adaptable rules. Accordingly, his approach to the reform system was careful and gradual, and it may well have been effective if only the government had not been defeated in elections and as a result discouraged to carry on the work. Although the general outline of the 'Riforma Moratti' remained untouched, the new minister introduced some changes affecting Primary School, that involved teaching methodologies and curricula.¹³⁰ For this reason, the document on which the focus will be is the 'Indicazioni per il curricolo per la scuola dell'infanzia e per il primo ciclo di istruzione',¹³¹ released the 31 July 2007 and with which the new system nullified the previous documents presented in the DPR 275/99 and in the 'Legge-delega 53/03'. The first major difference is the return of the word 'curriculum' and therefore the refusal to adopt the term 'Piani di studio'. 'Programmi', 'Piani di studio' and curriculum are not interchangeable words because their own history reveals different utilizations for different purposes. 'Piani di studio' can be understood as the weakened but related version of 'programmi

¹²⁹ Ibid.

¹³⁰ D.Lgs 76/05 on "Il diritto-dovere all'istruzione e alla formazione", D.Lgs 286/04 on "L'istituzione del Servizio nazionale di valutazione", D.Lgs 77/05 on "La normativa relativa al secondo ciclo: alternanza scuola-lavoro" are some of the 'decreti', the new Ministry changed at the beginning of his new assignment.

¹³¹ As can be seen online at:

<<http://www.edscuola.it/archivio/norme/decreti/dm31707.htm>> [Acc. June 2019].

ministeriali’, which are teaching plans conceived on a global (often national) scale and tailored for every teacher or tutor of a specific grade of school. The main difference between ‘programmi ministeriali’ and ‘piani di studio’ is that the latter should be explanatory, suggestive, whereas the ‘programmi’ (a term that does not seem to be in these documents) were fully normative. The current definition, *curriculum*, represented a new form of didactics and pedagogy for the Italian school system. In fact, it opened to the possibility for allowing teachers and students to create their own path at their own rhythms. All this could be done according to a broader range of teaching/learning experience that puts the student and the class (and its cultural background) to the centre of the process.

In this light, it can be understood how the new document prefers to address a curriculum built around the class/school environment, and how, far from stressing normative and ‘centralised’ applications, it offers an approach that is concerned with local, programmatic and flexible adaptations. The final aim of the document is to try to reconnect ‘academia’, scientific research and society with the school system. Didactically, the document is concerned with three main points: 1. That the student has to be the centre of the whole teaching/learning process: ‘Le finalità della scuola devono essere definite a partire dalla persona che apprende, con l’originalità del suo percorso individuale e le aperture offerte dalla rete di relazioni che la legano alla famiglia e agli ambiti sociali [...]. Lo studente è posto al centro dell’azione educativa in tutti i suoi aspetti: cognitivi, affettivi, relazionali, corporei, estetici, etici, spirituali, religiosi’;¹³² 2. That the School needs to educate to citizenship, starting from local communities: ‘La scuola genera una diffusa convivialità relazionale, intessuta di linguaggi affettivi ed emotivi, ed è anche in grado di promuovere la condivisione di quei valori che fanno sentire i membri della società come parte di una comunità vera e propria’;¹³³ 3. That the aim of every discipline, including humanistic ones, is to build connections and relationships with other disciplines, generating a new methodology based on multidisciplinary teaching, with the hope that this would help to achieve ‘la capacità di cogliere gli aspetti essenziali dei problemi; la capacità di comprendere le implicazioni, per la condizione umana, degli inediti sviluppi delle scienze e delle tecnologie; la capacità di valutare i limiti e le

¹³² Ministero della pubblica istruzione, ‘Indicazioni per il curriculum per la scuola dell’infanzia e per il primo ciclo di istruzione’ (2006), p.17. (hereafter cited as ‘Indicazioni primo ciclo’ and page number).

¹³³ ‘Indicazioni primo ciclo’, p. 19.

possibilità delle conoscenze; la capacità di vivere e di agire in un mondo in continuo cambiamento'.¹³⁴

Looking at the general outline of the document, it seems clear that it focuses more on the 'vertical' dimension of education: there is a gradual and progressive movement towards an idea of knowledge organised in disciplines in which what changes, throughout the educational career is not the system of one particular discipline, but the methodology. This will vary accordingly to the nature of that discipline in each different period of a student's educational life. That is why the difference between 'campi di esperienza e discipline e aree disciplinari', 'Traguardi per lo sviluppo della competenza' and 'Obiettivi di apprendimento' works perfectly for the purpose of this document: the curriculum moves towards a categorisation of disciplinary areas: 'linguistico-artistico-espressiva', 'storico-geografica', 'matematico-scientifico-tecnologica'. As mentioned earlier, the final goal is to encourage multidisciplinary teaching/learning as the best way for the student to gain a unitary vision and acquire knowledge.¹³⁵

As has already been noticed, the document deals with Nursery and Primary School (students between 3 and 14 years of age) as part of a larger project of reform that never became effective. For reasons that concern more closely this study, the part regarding Italian teaching/learning (mostly for the 'Scuola secondaria del primo ciclo', 11-14) will be now analysed. This part begins with a strong and clear reference to language variety:

Nel nostro paese, l'apprendimento della lingua avviene oggi in uno spazio antropologico caratterizzato da un varietà di elementi: la persistenza, anche se quanto mai ineguale e diversificata, della dialettofonia; la ricchezza e la varietà delle lingue minoritarie; la compresenza di più lingue anche extracomunitarie. Tutto questo comporta che nell'esperienza di molti studenti l'italiano rappresenti una seconda lingua. È necessario, pertanto, che l'apprendimento della lingua italiana avvenga sempre a partire dalle competenze linguistiche e comunicative che gli alunni hanno già maturato nell'idioma nativo.¹³⁶

The idea of a transcultural way to teach the national language not only seems to be coherent with the European addresses on cultural diversity, but also opens itself up to possible interdisciplinary methodologies, where the final aim of teaching/learning is not the subject itself anymore, but a more general passion for knowledge. Language varieties do/should no longer represent an anomaly anymore, but are rather the natural way for

¹³⁴ 'Indicazioni primo ciclo', p. 21.

¹³⁵ Multidisciplinary teaching and cooperative learning are clearly encouraged at 'Indicazioni primo ciclo', p. 41.

¹³⁶ 'Indicazioni primo ciclo', p. 49.

students to process modern languages because they are crucial to building linguistic skills through the ‘varietà spaziale e temporale, sociale, storica caratterizzante il patrimonio linguistico dei componenti di una stessa società’.¹³⁷

Furthermore, as far as concerns primary schools, it is interesting to notice the high consideration given to oral forms of communication, to the notion of ‘use’ of a language, to textual varieties (‘L’alunno apprenderà la scrittura attraverso la lettura e la produzione, prima guidata poi autonoma, di una grande varietà di testi funzionali e creativi’),¹³⁸ to planning as the most important feature of the process of writing (‘Vista nel suo compiersi, la scrittura di un testo si presenta come un processo complesso nel quale si riconoscono fasi, dall’ideazione agli abbozzi di pianificazione, alla prima stesura, alla revisione, ecc...’).¹³⁹ Most notable and significant, in this sense, is the fast, approachable and easy way in which the document is presented: it is divided in two macro-areas of ‘Traguardi’, respectively for the ‘Scuola primaria’ and ‘Scuola secondaria di primo grado’ and three micro-areas of learning objectives to be achieved at the end of third and fifth class in the ‘Scuola Primaria’ and of the third in the ‘Scuola secondaria di primo grado’.

Despite this, several criticisms have been levelled at the document, especially for what concerns the section dedicated to grammar teaching/learning. I agree with Maria Luisa Altieri Biagi when she states that explicit grammar ‘non dovrebbe esserci. [...] Fino agli 8- 9 anni più si risparmia ai ragazzi la grammatica esplicita e meglio è. [...] I bambini devono riflettere sul significato delle parole e sul modo in cui le mettono insieme (le combiniamo, le collochiamo, le modifichiamo formalmente) nel discorso. Questa è la grammatica intelligente a cui bisogna aprire le porte: quella che parte dall’osservazione del testo e dalla sua interpretazione. [...] Altrimenti proponiamo al bambino delle categorie grammaticali prima di averlo fatto riflettere sui fenomeni reali’.¹⁴⁰ However, it remains the case that the new ‘Indicazioni’ seem to drive towards different objectives. It is stated multiple times that students, even from the very early stages of primary schools, need to recognize grammatical categories, in a way that problematically recalls notional grammar, leaving aside contextual, practical, functional forms of linguistics that contemporary methodologies had shown and argued to be more effective in

¹³⁷ GISCEL, *Dieci tesi per un’educazione linguistica democratica*, 1975, in Maria Piscitelli, *Italiano: Un punto di Vista*, in Giancarlo Cerini, Carlo Fiorentini, Ermanno Testa, *Indicazioni per il curriculum: analisi, proposte, percorsi possibili* (Rome: Cidi, 2007), p. 75.

¹³⁸ ‘Indicazioni primo ciclo’, p. 50.

¹³⁹ *Ibid.*

¹⁴⁰ Maria Luisa Altieri Biagi, ‘Imparare l’uso della lingua’, in *La Vita Scolastica* n. 11 (Florence: Giunti Scuola, 2005).

teaching/learning grammar at these early stages. As noticed by Maria Piscitelli: ‘Per raggiungere il traguardo indicato servirebbero obiettivi che invitano alla riflessione sui significati, sugli aspetti pragmatici della comunicazione e sulle differenti testualità’¹⁴¹ and not the old-fashioned ‘analisi grammaticale’ or ‘analisi logica’.

Finally, it seems that, despite the good intentions set out in the section dedicated to the variety of language teaching, the new ‘Indicazioni’ confuse the difference between ‘Riflessione sulla lingua’ and ‘Grammatica’. ‘Grammatica’ here stands for a given set of rules to be applied in specific communicative events, and ‘riflessione sulla lingua’ means an active participation of the learner to find out linguistic phenomena from the context. Therefore, it might seem difficult to accept forms of multilingualism and conceive discourses on textual varieties when such an important document lacks the discrimination found in more updated teaching/learning theories.

2.3 The curriculum during the Financial Crisis: ‘riforma Gelmini’

During his fourth government, Silvio Berlusconi and his team of experts decided to define a major reform of the School system whose aim was to guide public School through a period of financial crisis that should have only been transitory. For this reason, the group of laws, released between 2008 and 2009 by minister Maria Stella Gelmini with the cooperation of the Minister for Economy Giulio Tremonti and Minister for Public Administration Renato Brunetta, are known as ‘riforma Gelmini’ and represent the outcome of many decades of discussion on education policies. As mentioned, the reform was intended to operate on a vast scale and involved every sector of education. Its effects were indeed much more evident compared to other reforms, mostly because of their social and economic impact. Of course, in operating on such a large scale, the reform inevitably found both strong opponents or fierce advocates. The reform certainly had the merit of refocusing the public debate on education policies. Moreover, among some extremely significant changes at the level of system, organizations and the economy, the reform finally took care of all the didactic aspects with the publication of two ‘Indicazioni per il curriculum’ dedicated respectively to the ‘licei’ and to the ‘Scuola dell’Infanzia e del Primo Ciclo d’Istruzione’. This is not the place to discuss the reform in detail, especially its strong impact on social debates about public universities,¹⁴² but it will suffice to say that the major changes have been: a) the introduction of two new ‘licei’ (‘scienze umane’

¹⁴¹ Piscitelli, *Italiano*, p. 81.

¹⁴² Some of the most significant changes for the Universities are included in ‘Legge 240/2010’.

and ‘musicale e coreutico’), but the suspension of many other school curricula; b) the making compulsory of English as a foreign language for all the secondary schools; c) re-establishing the figure of the single teacher in charge for each discipline for Primary School; d) re-establishing decimal valuation in the Secondary School; d) new policies on the acquisition through the internet of textbooks; e) the introduction of a new discipline called ‘Cittadinanza e Costituzione’, which would have the goal to build a more responsible civic consciousness in every grade of the school system.

This paragraph will not be focusing on the analysis of the social and political consequences to which the points mentioned above contributed. However, what the paragraph is mostly concerned with are the overall changes that the reform brought to the Italian curriculum. As mentioned, the Ministry firstly wanted to fill the lack of a curriculum for the ‘licei’ (or ‘Scuole Secondarie’ in general) which last appeared in revised form for public schools in 1988. ‘Indicazioni nazionali per i licei’ (2010) is the result of the work of experts (Sergio Belardinelli, Giorgio Bolondi, Paolo Ferratini, Gisella Langé, Andrea Ragazzini, Luca Serianni, Elena Ugolini and Nicola Vittorio), but mostly it draws upon an open debate that, thanks to online technologies allowed teachers, headmasters, headmistresses, families, students and all sort of school insiders, to give their opinion through the website www.nuovilicei.it,¹⁴³ which they could freely access for one month. The full title of the document can help to understand the intent of this new curriculum and the concern in this dissertation with questions of textuality, multidisciplinary teaching and language varieties: ‘Schema di regolamento recante ‘Indicazioni nazionali riguardanti gli obiettivi specifici di apprendimento concernenti le attività e gli insegnamenti compresi nei piani degli studi previsti per i percorsi liceali di cui all’articolo 10, comma 3, del decreto del Presidente della Repubblica 15 marzo 2010, n. 89, in relazione all’articolo 2, commi 1 e 3, del medesimo regolamento.’’. The document is therefore a group of rules concerning specific objectives of learning and a guide on how to achieve them through the curriculum in the ‘Licei’. As Iannicelli noticed, ‘le Indicazioni nazionali degli obiettivi specifici di apprendimento per i licei rappresentano la declinazione disciplinare del *Profilo educativo, culturale e professionale* dello studente a conclusione dei percorsi liceali’.¹⁴⁴ This means that the Ministry brings back the PECUP (‘Profilo educativo, culturale e professionale’) of the student, that was first introduced by Moratti Ministry in 2005 and that the ‘Indicazioni’ will aim to fulfil

¹⁴³ As at June 2019, a Google research for ‘nuovi licei’ generates a list of websites that are not available.

¹⁴⁴ Iannicelli, ‘La trasformazione’, p.104.

this paradigm. To do so, it is interesting to notice that they are divided according to school curriculum and eventually for each single discipline. Within the single discipline the focus can be on ‘Linee generali e competenze’ or on the already mentioned ‘obiettivi specifici di apprendimento’; the material is divided by year of study (5 in total). Before looking at the parts regarding Italian Language for the ‘licei’, it is worth noting that, as well as referring to the ‘Programmi’ 1979 and 1985, this document keeps to the forefront the recommendations that emerged from the Lisbon European Council in 2006. It is said, in fact:

Tale impostazione, del resto, emerge già nel Profilo educativo culturale e professionale dello studente [...], che costituisce l’ideale e imprescindibile preambolo alle presenti Indicazioni ed in cui sono recepite pienamente le Raccomandazioni di Lisbona per l’apprendimento permanente e il Regolamento sull’obbligo di istruzione. Il Profilo chiama innanzitutto in causa ‘il concorso e la piena valorizzazione di tutti gli aspetti del lavoro scolastico [...]’.¹⁴⁵

As for the level of didactic autonomy, it can be said that the Lisbon recommendations served to encourage the creation of personalized curricula, according to the variety of each class. Once more as the indications state:

Le Indicazioni non dettano alcun modello didattico-pedagogico. Ciò significa favorire la sperimentazione e lo scambio di esperienze metodologiche, valorizzare il ruolo dei docenti e delle autonomie scolastiche nella loro libera progettazione e negare diritto di cittadinanza, in questo delicatissimo ambito, a qualunque tentativo di prescrittivism. La libertà del docente dunque si esplica [...] nella scelta delle strategie e delle metodologie più appropriate, la cui validità è testimoniata non dall’applicazione di qualsivoglia procedura, ma dal successo educativo.¹⁴⁶

Furthermore, the choice of using ‘obiettivi specifici di apprendimento’ was not easily or readily accepted by the school experts. In an online contribution, Adriano Colombo and Anna Guerriero questioned the total absence of any form of competences or abilities (and therefore of learning) in the official document: ‘intendiamo per competenza ciò che, in un contesto dato, si sa fare (abilità) sulla base di un sapere (conoscenze), per raggiungere l’obiettivo atteso e produrre conoscenza. [...] Nessuna traccia in tal senso nel documento ministeriale’ or ‘negli ‘obiettivi specifici di apprendimento’ è proprio la prospettiva

¹⁴⁵ Indicazioni nazionali per il curricolo riguardanti gli obiettivi specifici di apprendimento concernenti le attività e gli insegnamenti compresi nei piani degli studi previsti per i percorsi liceali’, 2010, p. 7. (hereafter cited as ‘Indicazioni 2010’ and page number).

¹⁴⁶ ‘Indicazioni 2010, p. 10.

dell'apprendimento a essere messa da parte a favore di un punto di vista del docente e di ciò che 'dovrà' insegnare' and finally 'domina l'idea di una didattica trasmissiva, consistente in un travaso meccanico di contenuti, piuttosto che la definizione di indicatori generali di profili di competenza che un allievo dovrà gradualmente controllare'.¹⁴⁷ They seem to view the document as being closer to the idea of 'programma' rather than the one of 'programmazione': in other words, they regard programme as sterile transmission of contents rather than conscious planning of educational paths. However, it must be recalled that this document represents the only attempt, in more than two decades, to change the secondary school's curricula.

Nevertheless, because it represented, until 2018, the more up-to-date curriculum for secondary schools, the document is of utmost relevance for this research to understand to what extent language variety with regards to textuality can be found in official documentation and the extent to which its concerns have become effective in everyday teaching/learning.¹⁴⁸ According to the document, language education has to be seen as a 'responsabilità condivisa e obiettivo trasversale comune a tutte le discipline, senza esclusione alcuna. La padronanza dei lessici specifici, la comprensione di testi a livello crescente di complessità, la capacità di esprimersi ed argomentare in forma corretta e in modo efficace sono infatti competenze che le Indicazioni propongono come obiettivo di tutti'.¹⁴⁹ Referring to multi-trans-disciplinary teaching and textual and language variety as some of the founding features of the document, teachers and tutors are encouraged to explore and develop new methodologies. At the same time, however, the document does not often discuss the dimension of textuality, understood as the ability of the student to deal with different text types, according to context and communicative situations. In the section 'linee generali e competenze', it is repeated that:

L'osservazione sistematica delle strutture linguistiche consente allo studente di affrontare testi anche complessi, presenti in situazioni di studio o di lavoro. A questo scopo si serve anche di strumenti forniti da una riflessione metalinguistica basata sul ragionamento circa le funzioni dei diversi livelli (ortografico, interpuntivo, morfosintattico, lessicale-semantico, testuale) nella costruzione ordinata del discorso.¹⁵⁰

¹⁴⁷ All the references are available online at:
<<http://www.adriancolombo.it/proprova/proprova08.pdf>> [Acc. June 2019].

¹⁴⁸ The curricula from 2018 are not included in this analysis.

¹⁴⁹ 'Indicazioni 2010', p. 9.

¹⁵⁰ 'Indicazioni 2010', p. 11.

Only in a footnote can be found a mention that the student must ‘dominare la scrittura in tutti i suoi aspetti, da quelli elementari (ortografia e morfologia) a quelli più avanzati (sintassi complessa, precisione e ricchezza del lessico, anche letterario e specialistico), modulando tali competenze a seconda dei diversi contesti e scopi comunicativi; saper leggere e comprendere testi complessi di diversa natura, [...] in rapporto con la tipologia e il relativo contesto storico e culturale; [...]’.¹⁵¹ Looking at the specific objects of learning, the tone seems somewhat different. It is noteworthy the presence of constant references (for the ‘Biennio’, which is understandably more interested in linguistic education) to textuality:

Tali attività consentiranno di sviluppare la competenza testuale sia nella comprensione (individuare dati e informazioni, fare inferenze, comprendere le relazioni logiche interne) sia nella produzione (curare la dimensione testuale, ideativa e linguistica). Oltre alla pratica tradizionale dello scritto esteso, nelle sue varie tipologie, lo studente sarà in grado di comporre brevi scritti su consegne vincolate, parafrasare, riassumere cogliendo i tratti informativi salienti di un testo, titolare, parafrasare, relazionare, comporre testi variando i registri e i punti di vista.¹⁵²

The variety of texts listed in this passage is impressive: from writing for functional purposes (‘consegne vincolate’) to the ability of being concise when using them (‘brevi scritti’); from planning and writing/understanding texts in sequences (‘parafrasare’) to the acceptance of the abstract as a real form of text (‘riassumere...’). As expected, these new sets of indications effectively mark a difference with other official documents conceived for secondary schools. As far as textual varieties are concerned, the document seems to be very clear and tries to indicate the path that the school system could take. This is even more remarkable when looking at the fact that teaching/learning of Italian language, in these pages, has not to be intended as something belonging to one subject only, but rather as something which abilities are achievable only through/with every other discipline. This point emerges most clearly in passages such as the following:

Questo percorso utilizzerà le opportunità offerte da tutte le discipline con i loro specifici linguaggi per facilitare l’arricchimento del lessico e sviluppare le capacità di interazione con diversi tipi di testo, compreso quello scientifico: la trasversalità dell’insegnamento della Lingua italiana impone che la collaborazione con le altre discipline sia effettiva e programmata.¹⁵³

¹⁵¹ ‘Indicazioni 2010’, p. 7.

¹⁵² ‘Indicazioni 2010’, 12-13.

¹⁵³ ‘Indicazioni 2010’, p. 13.

This could be the first time that, in an official document, sectorial-based languages ('le discipline con i loro specifici linguaggi') and multi-trans-disciplinary teaching/learning ('trasversalità dell'insegnamento') find such space, followed by such specific argumentations.

Two years later, the 'Indicazioni nazionali per il curricolo della scuola dell'infanzia e del primo ciclo d'istruzione' enhanced and finalized the long list of curricula already mentioned in previous chapters. More than any other curriculum for primary schools, this 2012 document follows the path already taken at the end of the 1970s by the GISCEL and proposed again by the Berlinguer indications. In fact, along with some established figures in pedagogy and education (Giancarlo Cerini, Paolo Mazzoli, Rosa Calò, Damiano Previtali), important parts of this document bear the imprint of the work and the words of Luigi Berlinguer, Tullio De Mauro and Francesco Sabatini. In the detailed introduction on methodologies and framework, it can be noticed that the new curriculum is in agreement with the Italian Constitution and the European context. Regarding the latter, it is noteworthy that these 'Indicazioni' refer to the *Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning*.¹⁵⁴ The key competences, as is well known, are: 1. Communication in the mother tongue; 2. Communication in foreign languages; 3. Mathematical competence and basic competences in science and technology; 4. Digital Competence; 5. Learning To Learn; 6. Social and civic competences; 7. Sense of initiative and entrepreneurship; 8. Cultural awareness and expression. It is interesting to notice how, in the section dedicated to 'communication in the mother tongue', it is stated that for communication it is meant 'an awareness of the main types of verbal interaction, a range of literary and non-literary texts, the main features of different styles and registers of language, and the variability of language and communication in different contexts'.¹⁵⁵ To underline how these competences are all strictly connected, in the document, it is said that:

Cultural knowledge includes an awareness of local, national and European cultural heritage and their place in the world. It covers a basic knowledge of major cultural works, including popular contemporary culture. It is essential to understand the cultural and linguistic diversity in Europe and other regions

¹⁵⁴ 'Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning', <<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006H0962>> [Acc. June 2019].

¹⁵⁵ 'Recommendation', p. 5.

of the world, the need to preserve it and the importance of aesthetic factors in daily life.¹⁵⁶

Thus, linguistic and cultural factors contribute on an everyday basis to the shaping of cultural identities and the school system needs to be the first step to acknowledge and address this situation, because ‘a solid understanding of one's own culture and a sense of identity can be the basis for an open attitude towards and respect for diversity of cultural expression’.¹⁵⁷

In the 2012 ‘Indicazioni’ for primary schools, there is a clear methodological division between ‘aree disciplinari’ and ‘discipline’. These are not to be seen as isolated and self-sufficient, but as part of the cultural and general education of competences for lifelong learning. Multidisciplinary teaching/learning is, therefore, not an optional methodology but the only way to conceive the curriculum. As the document says:

Le discipline, così come noi le conosciamo, sono state storicamente separate l’una dall’altra da confini convenzionali che non hanno alcun riscontro con l’unitarietà tipica dei processi di apprendimento. [...] Oggi, inoltre, le stesse fondamenta delle discipline sono caratterizzate da un’intrinseca complessità e da vaste aree di connessione che rendono improponibili rigide separazioni. Nelle Indicazioni le discipline non sono aggregate in aree precostituite per non favorire un’affinità più intensa tra alcune rispetto ad altre, volendo rafforzare così trasversalità e interconnessioni più ampie e assicurare l’unitarietà del loro insegnamento.¹⁵⁸

Of all the disciplines, Italian (and Modern Languages in general) has a crucial role: ‘Un ruolo strategico essenziale svolge l’acquisizione di efficaci competenze comunicative nella lingua italiana che non è responsabilità del solo insegnante di italiano ma è compito condiviso da tutti gli insegnanti, ciascuno per la propria area o disciplina, al fine di curare in ogni campo una precisa espressione scritta ed orale’.¹⁵⁹ The idea of Italian teaching/learning as a process that involves all the disciplines is very advanced in educational theories and need to be kept into consideration for the case studies of the dissertation. Furthermore, the multicultural, multilingual, multidisciplinary dimension is not only mentioned throughout the document for a vast range of disciplines (‘Ricerca storica e ragionamento critico rafforzano altresì la possibilità di confronto e dialogo intorno alla complessità del passato e del presente fra le diverse componenti di una società

¹⁵⁶ ‘Recommendation’, p. 9.

¹⁵⁷ Ibid.

¹⁵⁸ Indicazioni per il curricolo della scuola dell’infanzia e del primo ciclo d’istruzione, 2012 (hereafter cited as ‘Indicazioni 2012’ and page number), p. 17.

¹⁵⁹ ‘Indicazioni 2012’, p. 17.

multiculturale e multi-etnica', p. 52), but also, regarding Italian teaching/learning, it is said that, in Italy, language learning takes place in a diversified and multicultural anthropological space, in which many learners approach Italian as a second language.¹⁶⁰ Consequently, linguistic education needs to be a teaching/learning process that involves every discipline and, through which, teachers can plan their curriculum.

As far as textuality is concerned, the approach of the document seems to be in line with the most recent educational and linguistic ideologies. In the section dedicated to writing, it is suggested that 'la scrittura di un testo si presenta come un processo complesso nel quale si riconoscono fasi specifiche, dall'ideazione alla pianificazione, alla prima stesura, alla revisione e all'auto-correzione, su ognuna delle quali l'insegnante deve far lavorare gli allievi con progressione graduale e assicurando ogni volta la stabilizzazione e il consolidamento di quanto ciascun alunno ha acquisito'.¹⁶¹ More generally, it is recommended that writing is essential for functional and everyday purposes, especially for primary school students: it is only through functional-based languages that students can achieve the knowledge of cultural diversity and adapt their communicative skills to different context and communicative situations.

The analysis of the curricula for every school cycle of this chapter represents a corner-stone for the investigation that will be carried on in the next chapters. The focus of them will be on secondary schools and an analysis of sectorial-based languages and teaching methodologies will be conducted. The analysis will firstly take into account the changes to the language assessment of the final exam for secondary schools. The exam, it is argued, generated from the linguistic discussion and the reforms that have been analysed so far. In the following chapters, it is also proved, through case studies, that the final exam modified the approach of textbooks and teaching/learning methodologies for secondary schools of the first cycle. Finally, it will be examined whether the rich and methodologically sophisticated material of recommendations of the official documentation, that has been seen in the first two chapters, has become effective in current teaching practices for secondary schools.

¹⁶⁰ 'Indicazioni 2012', p. 36.

¹⁶¹ 'Indicazioni 2012', p. 37.

3. The Italian language assignment for the final exam for secondary school: new methodologies of teaching and learning.

This chapter will focus on how the process of reform of the final exam for secondary school in the Italian school system, formerly known as the ‘esame di maturità’, was affected by new methodologies and generated a new approach to teaching and learning Italian writing. Particular attention will be paid to the assessment known as the ‘prima prova’. As seen in the previous chapters, indications on how to vary types of written assignments across a wide range of texts have always been present in official curricula. At the same time, however, for reasons that will be discussed, there were notable difficulties in adapting the long-term methodologies of Italian teaching to textual variation as a subject of study. Moreover, Italian language teaching methodologies were for a long time conceived as self-sufficient, far from any interaction with other disciplines, even though studies have repeatedly pointed out the crucial importance of interdisciplinary teaching and language variation.¹⁶² Before analysing more closely the new teaching methodologies generated by the changes in the exam, it is essential to point out that the interest is here on the final exam because it is a form of achievement towards which every student and teacher must address their efforts throughout their school careers. This assessment represents the first important text that students write for practical purposes, and is the most revealing means of considering how written forms of Italian can be diversified by genres and/or join forces with other disciplines.

In 1997, even before reforming the School cycles, the Ministry of Education, for the first time in decades, made some significant changes to the form of examination at the end of secondary schools, starting with a new (and perhaps more up-to-date) name: the old ‘Esame di maturità’ became the ‘Esame di Stato’. Among other changes, the reform brought about: a new system of ranking (from 60/60 to 100/100); a new commission of examination, which was to be made up of an equal proportion of internal and external members; an improved quality for individual disciplines’ assessments. For Italian language, the major and most significant change related to the need to adapt the assessment to new linguistic and sociological ideologies, starting from the multi-linguistic and multi-cultural backgrounds of the European context, which needed to be addressed in the light of the new exam. Against this context, the official document of the

¹⁶² See chapters 1 and 2.

reform states:

La prima prova scritta è intesa ad accertare la padronanza della lingua italiana o della lingua nella quale si svolge l'insegnamento, nonché le capacità espressive, logico-linguistiche e critiche del candidato, consentendo la libera espressione della personale creatività; essa consiste nella produzione di uno scritto scelto dal candidato tra più proposte di varie tipologie [...].¹⁶³

A mention of diversifying text types on the Italian assessments may be not as explicit as one might have expected, but it becomes very clear when looking at a 'tema' assignment for the 'esame di maturità' in 1996, the year before the reform:

'Quando un popolo non ha più senso vitale del suo passato si spegne. La vitalità creatrice è fatta di una riserva di passato. Si diventa creatori anche noi, quando si ha un passato. La giovinezza dei popoli è una ricca vecchiaia' (C. Pavese).
Discutete e sviluppate con riflessioni personali il principio enunciato nel passo su riportato.¹⁶⁴

The essay produced from this assignment would certainly be of cultural and intellectual relevance and will probably mobilize the vast vocabulary of complicated and unused words of the candidates, but, if the aim of the Italian assessment is to 'accertare la padronanza della lingua italiana [...] nonché le capacità espressive, logico-linguistiche e critiche del candidato',¹⁶⁵ the outline here leaves too much to creativity (which is still very important in every form of written text) and does not make the students reflect on what might be the real purpose of their writing, who they are speaking to, what is their audience, to what communicative situation the outline has to be referred. In this sense, the reform of the exam made significant progresses in *specializing* Italian assessments by categorizing the 'prima prova' into four different typologies of texts between which the student can choose.¹⁶⁶ First there is A) the 'analisi del testo', an analysis of a poem or a

¹⁶³ 'Regolamento degli esami di Stato conclusivi dei corsi di studio di istruzione secondaria superiore', 23rd July 1998, <<https://archivio.pubblica.istruzione.it/news/1998/ne98002.shtml>> [Acc. June 2019], p. 3.

¹⁶⁴ There is a full list of Italian final exam assessments at: <http://www.storiairreer.it/sito_vecchio/Materiali/IndiceEsamiStato.htm> [Acc. June 2019].

¹⁶⁵ Regolamento 1998, p.3.

¹⁶⁶ The outline of the final exam is, to this day (April 2019), still valid, as it is explained by Maria Maggio and then re-posted on academia.edu by Cristina Lavinio in *Verso il nuovo esame di Stato. Sulla prova scritta di Italiano*, <<http://www.iissmatteimaglie.edu.it/wp-content/uploads/2019/02/MaggioITAscrittoEsamiStato20febbbr.pdf>> [Acc. June 2019].

prose guided by the outline itself that helps the student to plan before writing. Then there is B) the ‘saggio breve’ or the ‘articolo di giornale’. The first is a form of text very similar to the Anglo-Saxon *essay*, the second is the common newspaper article. They are both texts conceived for specific communicative situations and with explicit audiences and they represent, it could be argued, the most interesting change of the Reform. What is more, they both make use of the argumentative text which, through a number of specific documents, will have to lead the student to a coherent conclusion in the chosen area of interest (four different options). Thirdly there is C) the ‘tema’ regarding history, and finally D) the ‘tema’ of broad and generic interest. It is interesting to notice that the last two typologies still make use of the word ‘tema’, which, in an era in which linguistic studies on the variety of written language seem to have overtaken the old methodologies, seems very anachronistic. On the other hand, it can be observed how, even the two typologies (C and D), which are more related to the old forms of teaching/learning written Italian, have been slightly updated in the outline of the exam itself and perhaps in the preparation that teachers dedicate to the ‘prima prova’.¹⁶⁷ Accordingly, looking at data¹⁶⁸ regarding the ‘licei’, it can be seen how 74.7% of students, in 2015, have chosen the ‘saggio breve’ or ‘articolo di giornale’, whereas only 9.5% have chosen the generic ‘tema’. Even the A) typology is, in fact, a more popular choice for ‘licei’ students than the traditional ‘tema’. When looking at two years before (2012/2013), there are very similar data:¹⁶⁹ 72.2% of students chose the B) typology whereas 10.6% opted for the generic ‘tema’ and 15.8% the A) typology. Less than 2% every year chose the more traditional history essay.

This next section will investigate the reasons for the remarkable popularity among students of a text type that, less than twenty years earlier, was neither taught nor considered for any kind of exam. Before looking at the historical background of textual variety in teaching methodologies, it seems appropriate to notice the outline that every student, since 1998, has to engage in, with regards to the text of B) typology:

¹⁶⁷ I remand here to the case studies found in chapters 5 and 6.

¹⁶⁸ Statistics Service of MIUR, ‘Focus Esiti degli esami di stato nella scuola secondaria di secondo grado’ for the year 2014/2015, <http://www.istruzione.it/allegati/2016/focus_esiti_esami_stato_II_grado_b.pdf> [Acc. Feb. 2017], p. 20.

¹⁶⁹ Statistics Service of MIUR, ‘Focus Esiti degli esami di stato nella scuola secondaria di secondo grado’ for the year 2012/2013 <http://www.istruzione.it/allegati/2014/Notiziario_esami_scrutini_II_ciclo2012_2013_completo.pdf> [Acc. Feb. 2017], p. 17.

Sviluppa l'argomento scelto o in forma di 'saggio breve' o di 'articolo di giornale', utilizzando i documenti e i dati che lo corredano.

Se scegli la forma del 'saggio breve', interpreta e confronta i documenti e i dati forniti e su questa base svolgi, argomentandola, la tua trattazione, anche con opportuni riferimenti alle tue conoscenze ed esperienze di studio. Da' al saggio un titolo coerente con la tua trattazione e ipotizzane una destinazione editoriale (rivista specialistica, fascicolo scolastico di ricerca e documentazione, rassegna di argomento culturale, altro). Se lo ritieni, organizza la trattazione suddividendola in paragrafi cui potrai dare eventualmente uno specifico titolo. Se scegli la forma dell' 'articolo di giornale', individua nei documenti e nei dati forniti uno o più elementi che ti sembrano rilevanti e costruisci su di essi il tuo 'pezzo'. Da' all'articolo un titolo appropriato ed indica il tipo di giornale sul quale ne ipotizzi la pubblicazione (quotidiano, rivista divulgativa, giornale scolastico, altro). Per attualizzare l'argomento, puoi riferirti a circostanze immaginarie o reali (mostre, anniversari, convegni o eventi di rilievo). Per entrambe le forme di scrittura non superare le quattro o cinque colonne di metà di foglio protocollo.¹⁷⁰

Ideas such as 'ipotizza una destinazione editoriale', 'dà all'articolo un titolo appropriato', 'organizza la trattazione suddividendola in paragrafi', are of crucial importance for building a discussion upon technical/functional writing because they open the didactic debates towards textual variety and multi-disciplinary teaching. Technical-scientific writing is not by chance one of the four areas of interests (in fact, the most popular),¹⁷¹ students can choose to redact this typology of text: if the 'prima prova' is shared by all secondary school students regardless of curriculum, it is no longer merely an examination on Italian language, but rather one that helps to verify how the Italian written language can be used in specific communicative situations. Writing for everyday purposes and for actual intentions not only allows the students to reflect on the linguistic skills they have acquired throughout the entire curriculum, but also can make them understand how language education is a competence that regards and can be applied to every single discipline.

3.1 Teaching the new: textual linguistic ideologies that influenced the changes to the final exam.

After the Second World War, during the years for Italy known as the economic 'boom', the new stream of migrations, both internal and transnational, as well as the diffusion of new media such as television and radio, helped to increase the level of education of Italian

¹⁷⁰ Current assignment for b) text typology at the final exam.

¹⁷¹ According to Statistics Service of MIUR, 'Focus Esiti degli esami di stato nella scuola secondaria di secondo grado' for the year 2014/2015
<http://www.istruzione.it/allegati/2016/focus_esiti_esami_stato_II_grado_b.pdf> [Acc. Feb. 2017].

citizens. In 1951, illiterates accounted for 14% of the whole population, while in 1961 they numbered 8,4%.¹⁷² The main reason for this advance was, of course, the introduction of compulsory schooling for fourteen years olds, which was brought by the Gentile reform in 1923: the whole spectrum of middle and lower classes, traditionally illiterate or basically educated in a rudimentary way, for the first time, had access to secondary school.

At the same time, a brand new generation of philosophers, journalists, intellectuals, writers started to feel the inadequacy of traditional teaching methodologies, especially the ones related to Italian language and grammar. Innovative theories and harsh criticisms began to emerge, starting from the Sixties, from several and differentiated environments. One of the most peculiar stances against traditional schooling and, at the same time, a fundamental turning-point for linguistic and pedagogical theories which will have had a massive influence on Italian school curricula, was don Lorenzo Milani and his Barbiana school. Between 1954 and 1967, in a little town public school, he created a communitarian and popular environment where, for instance ‘writing art is taught as any other art’¹⁷³ and where arid concepts of grammar were learnt in harmony and productively. The ‘Scuola di Barbiana’ experimented new forms of teaching textuality and functional writing such as the crucial idea that ‘il processo di scrittura sia un compito complesso, scomponibile in vari sotto-processi’.¹⁷⁴ In order to highlight the importance of multidisciplinary and interdisciplinary aspects within the teaching/learning of Italian, don Milani wanted to bring the Italian lessons outside the comfortable zone of the ‘Italian hours’, which were canonically dedicated to old-fashioned and not contextualized forms of writing. His idea was that linguistic education had to overcome the boundaries of the isolated discipline and connect itself to every other domain of learning, clearing the way for a sustained reflection on language varieties and interdisciplinary aspects of teaching. The following record redacted by one of his students, casts some light on how the methodological approach of this innovative school was, at the time, different from any other:

A giugno del terzo anno di Barbiana mi presentai alla licenza media come privatista. Il tema fu: ‘Parlano le carrozze ferroviarie’. A Barbiana avevo imparato che le regole dello scrivere sono: Aver qualcosa di importante da dire e che sia utile a tutti o a molti. Sapere a chi si scrive. Raccogliere tutto quello che serve. Trovare una logica su cui ordinarlo. Eliminare ogni parola

¹⁷² De Mauro, *Storia linguistica*, pp. 88 - 89.

¹⁷³ Scuola di Barbiana, *Lettera ad una professoressa* (Turin: Einaudi, 1967).

¹⁷⁴ Lo Duca, *Lingua italiana*, p. 28.

che non serve. Eliminare ogni parola che non usiamo parlando. Non porsi limiti di tempo.¹⁷⁵

Besides the helpful summary about teaching and writing methodologies, planning methods, writing for real purposes and being concise, what is especially noteworthy here is the outline for the essay: ‘let the train carriages speak’. It can only be imagined how difficult it could have been for a student who was born and had grown up in a little village of Tuscany - where trains were perhaps not even a part of daily life - to write about topics completely unrelated with his personal cultural background nor any real (or even imaginary) purpose.

During the late Sixties and the early Seventies, Italian linguistics began to draw upon non-Italian and international theories, such as the sociolinguistics and educational ideas of Basil Bernstein and William Labov.¹⁷⁶ The *Dieci tesi* were conceived, in 1975, in this environment and, as Cristina Lavinio has pointed out, they had a major impact in teaching new writing methodologies related to the ‘funzionalità comunicativa, contrapposta all’astrattezza mono-funzionale e non motivata dei pensierini e dei temi’.¹⁷⁷ These kinds of ideologies and discussions about the importance of sociological aspects of linguistics helped to shape some innovative teaching/learning methodologies in the 1980s and 1990s, some of which were discussed in the previous chapters. Projects such as the ‘Progetto Brocca’ or programmes such as the 1985 ones for Primary School, give clear evidence that the discussion around new text types and multidisciplinary teaching was vibrant in those years.

Finally, the reform of the final exam in 1997/1998 facilitated the creation of several projects, designed to address and help teachers and students towards developing the new writing typologies for the Italian final assessment. In the early years of the reform, one of the most important projects was conducted by the Ministry of Education and the GISCEL, in 1998, and was called ‘Laboratorio di scrittura’.¹⁷⁸ The laboratory aimed to help students and teachers from every level of education to deal with the new form of writing proposed by the new exam and, to do so, tried to relate assignments to functional purposes for the students’ everyday life. As the project leader Guerriero pointed out, it

¹⁷⁵ Barbiana, *Lettera*, p. 20.

¹⁷⁶ Basil Bernstein, *Class, Code and Control: Theoretical Studies Toward A Sociology of Language* (London: Routledge & Kegan Paul Ltd., 1971); and William Labov, *Language of The Inner City* (Philadelphia: University of Pennsylvania Press, 1973).

¹⁷⁷ Cristina Lavinio, ‘L’impegno del GISCEL nel “Laboratorio di scrittura”’, in *Laboratorio di scrittura*. p. XIX.

¹⁷⁸ The results of that have been collected in ed. by Anna Rosa Guerriero, 2002.

became necessary to join both the didactic necessities and the socio-semiotic and cognitive perspectives of students in order to give renewed value to textual varieties and new types of writing. Experiences like this became quite popular and were in part related to new writing methodologies, as well as being related more broadly to an approach to Italian teaching in a multidisciplinary way. To take just a few relevant examples regarding technical-scientific language, it is worth to mention how in 2003, the Crusca Academy dedicated an international meeting to ‘Lingua italiana e scienza’,¹⁷⁹ or in 2014, a continuing education course for teachers on the topic of teaching and learning mathematics and science through Italian language,¹⁸⁰ or even more recently in 2014 GISCEL’s annual national conference, which was devoted to ‘Educazione linguistica e apprendimento/insegnamento delle discipline matematico-scientifiche’.¹⁸¹ Finally, in 2018, the SILFI¹⁸² dedicated their fifteenth annual conference to ‘Linguaggi settoriali e specialistici’.

However, to take a step back, given the importance that the 1970s had for linguistic ideologies, especially regarding textual variation and textual categorization, one could assume that the initial inspiration for the new text types of the final exam, could derive from that decade. In fact, in 1976 the linguist Egon Werlich brought about a major advance in textual linguistics, by categorizing text types through what he called cognitive aspects of language, among which he listed the variation of communicative situation and reference. He pointed out five types of text:¹⁸³ descriptive, narrative, argumentative, instructive or procedural and expository-didactic or explanatory. He believes that texts could derive their own distinction from innate cognitive properties and that the five types ‘correlate with forms and range of human cognition’ and ‘reflect the basis cognitive process of contextual categorization’.¹⁸⁴ He adds that these types are:

(1) differentiation and interrelation of perceptions in space in the text type of description;

¹⁷⁹ Annalisa Nesi, Domenico Di Martino, ‘Lingua italiana e scienze’, Atti del convegno internazionale, Villa Medicea di Castello, 6-8 febbraio 2003, Accademia della Crusca (Accademia della Crusca Edizioni: Florence, 2012).

¹⁸⁰ See Maria Luisa Villa’s presentation, <<http://www.cruscascuola.it/corsi/corso-lingua-mate-scienze>> [Acc. June 2019].

¹⁸¹ The conference results were included in *Educazione linguistica e apprendimento/insegnamento delle discipline matematico-scientifiche*, ed. by Francesco De Renzo and Maria Emanuela Piemontese (Aracne: Rome 2016).

¹⁸² ‘Società Internazionale di Linguistica e Filologia Italiana’.

¹⁸³ Egon Werlich, *A Text Grammar of English*, (Heidelberg: Quelle & Meyer, 1976).

¹⁸⁴ Werlich (1976) in *Pragmatics of Discourse*, ed. by Klaus P. Schneider, Anne Barron, (Berlin/Boston: The Gruyter, 2014), pp. 453-454.

- (2) differentiation and interrelation of perceptions in time in the text type of narration;
- (3) comprehension of a great general concepts through differentiation by analysis and/or comprehension of particular concept through differentiation by subsumptive synthesis in the text type of exposition;
- (4) judging, that is the establishment of relations between and among concepts through the extraction of similarities, contrasts and transformations from them in the text type of argumentation;
- (5) and planning of future behavior by subdivision of subsumption in the text type of instruction.¹⁸⁵

Furthermore, there is a certain level of subcategorization that involves text *forms* and *variants*: the first representing the ‘dominant manifestation’ of a type, the second an auxiliary type: for instance, the book is the text form, the review about the book is the variant.

During the following years, several linguists reviewed and updated Werlich’s categories. In 1983 Robert Longacre introduced the ideas of *contingent succession* and *agent orientation*, that give us a four-way discourse type (narrative, behavioural, procedural and expository).¹⁸⁶ He thought that ‘*contingent temporal succession* [...] refers to a framework of temporal succession in which some [...] of the events or doings are contingent on previous events or doings’,¹⁸⁷ whereas *agent orientation* ‘refers to orientation towards agents with at least a partial identity of agent reference running through the discourse’.¹⁸⁸ More recently, in 1992, the linguist Tuija Virtanen, distinguished text and discourse in Werlich’s typologies.¹⁸⁹ She believed that the *discourse type* can correspond to Werlich’s five categories, whereas the *text type* does not necessarily have to accord to the discourse. For example, an argumentative discourse can be realized by a narrative text type: the discourse is the final aim of the text, whereas the type is given by the function and/or the communicative situation. The writer, for instance, can use a descriptive text type to express narrative, descriptive or explanatory discourse.

This debate had an impact on new methodologies for teaching Italian written language which, at the same time, needed to deal with the new types of final examination.

¹⁸⁵ Egon Werlich, *A Text Grammar*, in Klaus P. Schneider, Anne Barron, *Pragmatics*, p. 453.

¹⁸⁶ Robert E. Longacre, *The Grammar of Discourse* (New York and London: Springer Science & Business Media, 1983).

¹⁸⁷ Robert Longacre, *The Grammar*, in Klaus P. Schneider, Anne Barron, *Pragmatics*, p. 455. (Italics in original).

¹⁸⁸ *Ibid.*

¹⁸⁹ Tuija Virtanen, *Discourse Functions of Adverbial Placement in English: Clause-Initial Adverbials of Time and Place in Narratives and Procedural Place Descriptions* (Åbo: Åbo Akademi University Press, 1992).

One of the most receptive and interesting examples are the schoolbooks (which will be analysed in the following chapter), as they represent an ideal medium between linguistic ideologies, curriculum objectives and methodologies. In 2011, Italian linguists Francesco Sabatini, Carmela Camodeca and Cristiana De Santis published *Sistema e Testo*, a textbook dedicated to the 'biennio' (13-15 years old) of Secondary School. The textbook provided an interesting definition of 'text': 'un messaggio – orale, scritto o trasmesso – prodotto in una determinata situazione da un emittente, per trattare un argomento con l'intenzione di ottenere un effetto sul destinatario'.¹⁹⁰ As this definition shows, it is clear that the authors were attempting to connect textual linguistic reflection with the new purposes of the school final exam. The aim is to relate the purely verbal features of a text to situational contexts, underlining the crucial importance of textual variation and communicative situations. According to this schoolbook, the final meaning of a text emerges within the relation that are generated between the writer and the reader: unlike Werlich's categories, which are here criticized for considering only the writer's purposes and leaving aside the crucial role played by the reader in *receiving* a text, this book takes into account both perspectives. Of remarkable interest for the purposes of this work is the kind of text types categorization carried out in *Sistema e Testo*: texts are divided into a spectrum that goes from a high level of *rigidness* to a high level of *elasticity*, with, in the middle, several grades of variation. The authors explain the meaning of *rigidness* as a text built with 'parole e costruzioni rigide, che non devono lasciare (se possibile) margini di incertezza nell'interpretazione',¹⁹¹ while, on the other hand, *elastic* texts are formed with words and constructs that 'si adattano a ricevere le interpretazioni e il senso che vuole attribuire loro il lettore'.¹⁹² The *rigidness* or *elasticity* of a text is given by 30 traits that concern lexicon, syntax and morphology of the text, of the sentences and of the words. Among them, the following categories can be found: logical cohesion, different aspects of cohesion, phrasal structures, lexicon, punctuation, prosody and so forth. Thus, for instance, using verbs of ambivalent or generic meaning will probably be a signal of high elasticity of a text; or, repeating a particular term several times in the same text, will be a factor of rigidness because the writer does not want the reader to misunderstand that specific term and miss the whole meaning of the text. The final result of the categorization consists in a range of texts that goes from *very binding* (like laws, list of rules, scientific

¹⁹⁰ Francesco Sabatini, Carmela Camodeca, Cristiana De Santis, *Sistema e Testo* (Turin: Loesher, 2011), p. 541.

¹⁹¹ *Sistema e Testo*, p. 652.

¹⁹² *Ibid.*

analysis of data, instructions for use, etc.) to *averagely binding* (like informative texts, newspaper articles, papers for conferences, textbooks, encyclopaedias, etc.) and to *not so binding* (like novels, short stories, adverts, scriptures, etc.).

3.2 Creative vs. Functional Writing

Bearing in mind these grades of variation for different forms of writing, in the past twenty years, Italian schools have been encouraged to include cases of writing for real purposes in their curricula. 'Real purposes' involve particularly two aspects of writing: the first is a simulated/artificial kind of writing, with types of texts such as the ones seen for the outlines of the final exam (newspaper articles, essays, argumentative texts); the second is an alternative that has been less exploited, but could be of considerable interest for new methodologies and it is writing for actual real purposes. Students are, in this case, stimulated to deliver periodically texts of practical aims (school papers, informative signs, hypertexts for student-parent communications, etc.). As Adriano Colombo has noted, the reform of the final exam pointed out how Italian students were, in fact, not prepared to face such a radical change in learning written language.¹⁹³ Traditionally, Italian schools paid more attention to *creative* forms of writing, because, as discussed in the previous paragraphs, the crucial aim was to reward students who were able to use complicated words, to express very deep and mature feelings using a language perhaps closer to poetry than anything else. The new 'prima prova', at least partially, asked students to reflect upon *functional* forms of writing, that is a writing aimed to fulfil real-life purposes, such as making a request or giving advice, inviting someone for a visit or to a function, applying for something. Creative writing, on the other hand, focuses on student's self-expression, and it usually regards all the spheres of creativity, including narrative situations, fictional characters and features that quite often are shared with poetry and poetic traditions. Before going further, it is worth underlining that it is believed that creative writing is extremely important and it has to be practised by students throughout each school cycle, especially in the early stages of education. Having said so, it is impossible not to notice how, for a very long time, Italian teaching methodologies seemed only concerned with creative forms of writing and one of the reasons, it is believed, is because the final exam did not give students and teachers enough encouragement to exploit alternative solutions.

¹⁹³ Adriano Colombo, *A me mi. Dubbi, errori, correzioni nell'italiano scritto* (Milan: Franco Angeli, 2011).

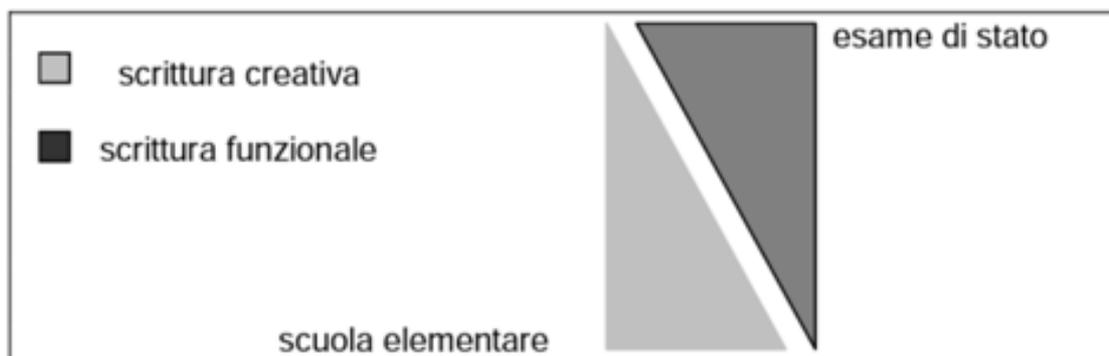


Image 2 - Adriano Colombo, *A me mi. Dubbi, errori, correzioni nell'italiano scritto* (Milan: Franco Angeli, 2011), p.125.

As can be seen in the diagram presented above,¹⁹⁴ an alternative/ideal path for the school cycles would be to mediate between the two forms of writing as much as possible, thinking of a first step in the 'Scuola elementare' where creative writing is almost a necessity throughout each level of study, towards a last step, the 'Esame di Stato', where the student will have to be able to deal with functional writing and writing for real life purposes, which will be the kind of writing their adult life will require. In fact, as Colombo, the proponent of this alternative, himself points out:

Da un punto di vista più immediatamente pratico, è di questo tipo la scrittura che può essere richiesta negli studi ulteriori e nella vita professionale e sociale: all'università si tratterà di esami scritti, tesine, e infine della tesi; nelle professioni si tratterà di relazioni, progetti, lettere e altre forme di comunicazione pratica; [...] Ben difficilmente le situazioni professionali e sociali richiederanno la scrittura di testi creativi o di confessioni autobiografiche.¹⁹⁵

Writing, like every linguistic code, has to be considered in relation to four linguistic dimensions:¹⁹⁶ *semantic*, that relates the meaning of the text to its signifier; *expressive*, that relates the signifier and a range of expression that can give it a meaning; *syntactic* which focuses on the relation between a signifier and different signifiers belonging to the same linguistic code; *pragmatic*, about the way users of a language get informed or questioned about a particular signifier. These four dimensions are in constant variation, given that they are subject to time, space, social stratification and communicative situations, and, therefore, it is crucial to keep them under consideration when dealing with

¹⁹⁴ Colombo, *A me mi*, p.125.

¹⁹⁵ Adriano Colombo, 'Tipi e forme testuali nel curriculum di scrittura', in Guerriero, *Laboratorio di scrittura*, p. 49.

¹⁹⁶ As noted by Tullio De Mauro, *Guida all'uso delle parole* (Rome: Editori Riuniti, 1980), p. 37.

teaching writing methodologies.¹⁹⁷ With the new ‘prima prova’, it becomes clear that students’ psycholinguistic and cognitive processes are to be taken into account when it comes to teaching/learning writing skills: the objective of a text, the importance of the reader and the communicative background are all to be considered vital for the new forms of writing at school and, more importantly, the act of writing itself finally becomes a subject of study. According to teacher and linguist Maria Emanuela Piemontese:

Ciò di cui ha bisogno l’insegnamento della scrittura è una teoria della scrittura che fornisca un insieme di criteri essenziali basati sulle più recenti acquisizioni della linguistica testuale, della psicologia cognitiva, della retorica e della ricerca sulla composizione. Fattori cognitivi, sociali e linguistico-testuali sono da considerare nella loro stretta integrazione perché solo dalla visione integrata di tali fattori è possibile arrivare a delineare un’idea equilibrata di ciò che si intende comunemente per essere capaci di scrivere.¹⁹⁸

Moreover, considering writing as a cognitive and psychological process allows us to see (and therefore teach/learn) the act of writing in an entirely new way. Indeed, in a dated but still valid study, linguist Linda Flower and psychologist John R. Hayes, in 1981, pointed out how the cooperation between language and cognitive processes might actually benefit the act of writing. In their seminal article on the topic, the two scholars made use of protocol analysis of experienced writers to develop a theory of their cognitive processes and eventually of their writing steps.¹⁹⁹ As is well known, they used four key points to conduct their research:

1. The process of writing is best understood as a set of distinctive thinking processes which writers orchestrate or organize during the act of composing.
2. These processes have a hierarchical, highly embedded organization in which any given process can be embedded within any other.
3. The act of composing itself is a goal-directed thinking process, guided by the writer's own growing network of goals.
4. Writers create their own goals in two key ways: by generating both high-level goals and supporting sub-goals which embody the writer’s developing sense of purpose, and then, at times, by changing major goals or even establishing entirely new ones based on what has been learned in the act of writing.²⁰⁰

¹⁹⁷ For an insightful essay on language variation, see Gaetano Berruto, ‘Variazione linguistica’, <[¹⁹⁸ Maria Emanuela Piemontese, ‘La scrittura: un caso di problem solving’, in Guerriero, *Laboratorio di scrittura*, p. 7.](http://www.treccani.it/enciclopedia/variazione-linguistica_(Enciclopedia-dell'Italiano)/> [Acc. June 2017].</p></div><div data-bbox=)

¹⁹⁹ Linda Flower, John R. Hayes, ‘A Cognitive Process Theory of Writing’, in *College Composition and Communication*, Vol. 32, No. 4 (Dec., 1981), pp. 365-387.

²⁰⁰ Flower, Hayes, 1981, p. 366.

These key points lead to three major elements of the act of writing: the *task environment*, the *writer's long-term memory* and the *writing process* itself. What Flower and Hayes call *task environment* is the communicative situation, the cultural background, the concern of the author in identifying the possible readers and everything else is outside the writer's acting sphere; as for the *long-term memory*, this represents the way the writer stores information about the environment and the topic itself; the *writing process* is the actual act of writing which is, as can be seen, only the last step of a more complex process and it is divided in *planning* (it has already been pointed out how important it has been for some Italian linguistic and pedagogic ideologies), *translating* ('the process of putting ideas into visible language')²⁰¹ and *reviewing*. The whole process is, of course, to be understood as extremely flexible, with every category having permeable boundaries and as many sub-processes as possible: the act of writing does not occur in ordered stages, but, more likely, anytime the writer allows it in his /her mind. A third, and perhaps more interesting point for the purposes of this work, that is raised by Flower and Hayes' research lies in the question of how can the act of writing always have a direction, a purpose. The answer, according to the two scholars, is that because writing is always a goal-directed process. Writing is, in the end, always a functional act and its overall goals are *process* goals ('instructions people give themselves about how to carry out the process of writing')²⁰² or *content* goals, which represent the way the writer wants to 'treat' their content. In either cases, what this scheme is pointing out about writing theory is a hierarchical spectrum that, as *Sistema e Testo* (as seen above) noted and Dario Corno has more recently pointed out, goes from writing with a *spontaneous* attitude (a letter or an email for friend, etc.) to a highly *planned* and careful forms of writing (disciplinary and sectorial-based languages).²⁰³ To find a common ground between Flower and Hayes' theory and the spontaneous/planned scheme, means to be able to embrace new methodologies to teach written languages. In the case studies of chapter 5 and 6 of this thesis, *planned, rigid* forms of writing and text types will be examined. However, adopting the theories outlined above and dividing the process of writing into pre-writing, writing and reviewing (or planning, translating and reviewing, as Flower and Hayes seem to prefer), give a helpful way of approaching the new forms of writing within the school environment. Questioning the final goal of a text, asking questions such as who is my

²⁰¹ Flower, Hayes, 'Theory of Writing', p. 373.

²⁰² Flower, Hayes, 'Theory of Writing', p. 377.

²⁰³ Dario Corno, *Scrivere per comunicare. Teoria e pratica della scrittura in lingua italiana* (Milan: Mondadori, 2012), p. 24.

audience, which are the questions of the pre-writing phase, means to address the discourse and adapt it according to the communicative situation, an idea on which students and teachers can finally reflect. Moreover, planning a text involves the collection and storage of materials that the writer considers important for it: on a school level (but not only) this can coincide with the act of writing a second auxiliary text known as *outline*, which not only is vital in order to teach students to think gradually and plan ahead, but also can be analysed and treated as an independent text type with all its educational relevance. Finally, regarding the reviewing process, it seems important to recall the crucial role of self-reviewing: quite often, the process of review implies also the re-creation of the text or the division and sub-division of it in paragraphs and chapters, which might have a very high level of interest for teaching methodologies. As Simone pointed out: ‘non c’è dubbio che la lentezza del processo che porta al controllo pieno dei meccanismi di correzione sia dovuta a fatti mentali e cognitivi. Il più importante di questi, probabilmente, è la capacità [...] di formulare piani di testo e confrontare il testo effettivamente prodotto col piano che ad esso si riferisce, e di modificarlo fino a che testo e piano non si ‘somiglino’ il più possibile’.²⁰⁴ Not by chance, then, school curricula and indications, starting from 1979, have encouraged teachers to vary as much as possible the assignments of written texts, to deal with different genres, including (perhaps especially) the auxiliary ones, like the outline, the summary and the division in chapters/paragraphs. The reform of the ‘prima prova’ in 1997/1998 has opened new perspectives upon textual variation and teaching methodologies that have not always generated concomitant interest within the world of the school system. Textual linguistic ideologies, as seen, offered a starting point that is worth to reflect upon and, if necessary, adapts to methods suitable for school levels. Before going further, in the next paragraph, the focus will be on how functional and technical writing can find space in the final exam for secondary schools.

3.3 Teaching the new: what is linguistic variety and what is its place in textuality and for the final exam for secondary school?

The Italian language is defined according to a certain number of sociolinguistic varieties that are relevant for teaching/learning processes because they address the object of teaching towards personalized purposes for each social, cultural and linguistic situation.²⁰⁵ Among other varieties, some of the most important are the *diachronic*, which considers

²⁰⁴ Raffaele Simone, QRZ. *La macchina da scrivere e lo sviluppo del linguaggio*. “Riforma della scuola”, XXX, 7-8:40-46, in Guerriero, *Laboratorio di scrittura*, p. 6.

²⁰⁵ See William Labov, *Sociolinguistic patterns*, 1972.

how language changes through time, *diatopic*, which considers how languages change according to geographical places (it defines dialects, as well), *diastratic*, which refers to the way language varies according to social classes or groups the writers/speakers belong, *diaphasic* referred to the degree of formality the language needs in particular communicative situation, *diamesic* which refers to the medium in which the language come across. When dealing with interdisciplinary teaching/learning and textuality, it is essential to bear in mind the importance of these five variables even though, in the case studies of chapter 5 and 6, the attention will be mainly on the *diaphasic* and *diamesic* varieties. The *diaphasic* variable is relevant because it contains several linguistic registers that vary according to different communicative situations: this is the sociolinguistic variable that helps to define sectorial-based languages like the language of science, medicine, law, and so forth. Its importance is not to be underestimated from an educational point of view because it leads students and teachers to a more conscious linguistic awareness that addresses different linguistic choices and different situations. At the same level, the *diamesic* variable, referring to the medium used in a particular communicative situation, highlights the importance of making choices according to whether we are using a written text or simply speaking. Combining the *diaphasic* and *diamesic* variables, it can be noticed the importance of teaching/learning linguistic variety at school with particular relevance for textuality. In a seminal work for Italian sociolinguistics, Gaetano Berruto defines the features of linguistic registers in a scale that goes from very high/formal to very low/informal.²⁰⁶ High-ranked linguistic registers, for instance, are typical of written forms of language, especially if used with functional purposes. These, according to Berruto, are characterized by extremely explicit features, and also therefore by the absence of any implicit expression, by an accurate planning of the act of writing (or speaking or presenting orally a written work), by a frequent use of sentence connectors and by different forms of dependent clauses. Informal registers, by contrast, supposedly sharing the communicative context between the writer/speaker and the receiver, make more use of implicit expressions and parataxis.

How might one apply this theoretical background to teaching methodologies? It was seen in the previous chapters how, from the 1979 ‘Programmi’ to the reform of the new exam for secondary schools, curricula for Italian language have been filled with indications on how to make students aware of variability and functional writing. In 2009,

²⁰⁶ Gaetano Berruto, ‘L’italiano popolare e la semplificazione linguistica’, *Vox Romanica* XLII (1983), pp. 38-79; now also available in Gaetano Berruto, *Studi di sociolinguistica e linguistica* (Alessandria: Edizioni dell’Orso, 2012), pp. 141-181.

the Italian Ministry of Education introduced for the first time the so-called INVALSI²⁰⁷ test, that became a crucial part of the final exam for the first education cycles (ages 5-13). The test is presented in the same form for every Italian region and, because of this, it has caused several difficulties and has been criticized for not considering the geographical differences and linguistic varieties within different regions.²⁰⁸ Nevertheless, one of the aims of the text was to present assessments that are as varied as possible, and, by doing this, to connect different disciplines. For Italian language this has meant a will to experiment with different text types, some of them very *unusual* for Italian school tradition. In the year 2011-2012, for instance, students were given a train ticket and were asked to extract information from it. This may seem very simplistic, but it is the first step to face in relation to the rise of functional illiteracy in Italy.

Particular cases of teaching methodologies that deal with functional writing and textual varieties will be later more closely analysed. It is sufficient now to bring evidence of how linguists have suggested to make students aware of all the different text types that they could face at the final exams. Luca Serianni, for example, suggests the importance of the interactivity between Italian language and science.²⁰⁹ An example to make these two worlds come into contact is given by the Information Leaflets of generic medications. Leaflets are scientific texts conceived for the general distribution, therefore they have to be specific, but not so specific that users fail to understand the features of the medicine they are taking. Moreover, at every linguistic level, leaflets represent a valid text to be addressed at school because, from the syntax (they make large use of parataxis) to the lexicon (the etymology of some scientific terms), they help students to understand how language (and grammar) lies in everyday life and can be addressed with functional purposes. Furthermore, leaflets are interesting because they open up a debate upon sectorial based languages, which should be present in every school cycle to allow students to become familiar with sociolinguistic varieties and make them aware of language/code/register changes. A final feature of medication leaflets is their power on the *diachronic* variables: comparing leaflets from different eras can help students to

²⁰⁷ 'Istituto Nazionale per la Valutazione del Sistema Educativo di Istruzione e Formazione'.

²⁰⁸ Recently this has been discussed by many magazines, including 'Internazionale', <<https://www.internazionale.it/bloc-notes/christian-raimo/2018/07/13/invalsi-scuola>> and 'Il Fatto Quotidiano' <<https://www.ilfattoquotidiano.it/2018/05/07/anche-invalsi-ammette-che-il-test-non-serve-a-nulla-ma-ormai-i-buoi-sono-scappati/4336881/>> [Acc. April 2019].

²⁰⁹ Luca Serianni, *Terminologia medica: qualche considerazione tra italiano, francese, spagnolo*, *Studi di lessicografia italiana* (Rome: Le Lettere 25, 2008), pp. 253-269.

understand how language changes and evolves throughout time and how simplifying structures for generic and educational purposes assists the communicative end of the text.

Another kind of text on which linguists have reflected repeatedly in recent years is the mathematics text types. On many different levels, it has been noticed that most of the problems students encounter in learning mathematics are due to language difficulties.²¹⁰ This is because the language of mathematics has grown within its own tradition, too often forgetting its vital link with the standard language it is spoken/written. Again, the language of mathematics, on lexicon, syntax, textuality, semantics presents its own features, but it is the responsibility of every teacher (not only a language or maths teachers) to make the disciplinary languages accessible to students. Studies have proven how collaborative teaching between maths and language can assist in both subjects and examples are given,²¹¹ for instance, by the use of the ‘Vocabolario di Base’.²¹² One activity/methodology that has been suggested for teachers is to attempt to simplify and de-construct mathematics texts, using a tool like the ‘Guida all’uso delle parole’²¹³ or [translated.net](#).²¹⁴ Both of these resources make use of legibility features considering a list of 7000 words that represent the most used and common in Italian language. If the majority of words used in a given text fall within these 7000, it means the text is accessible to everyone. Therefore, a technical-scientific text intended for educational purposes needs a high level of accessibility and readability, whereas communications between experts can have a very low level of accessibility because there is a shared cultural and scientific background.

²¹⁰ Giorgio Bolondi, Matteo Viale, ‘Abilità linguistiche e discipline scientifiche: un’esperienza di formazione del corpo insegnante nel Polo dell’Emilia-Romagna del progetto «I Lincei per una nuova didattica nella scuola»’ (XVIII Convegno nazionale GISCEL “Educazione linguistica e apprendimento/insegnamento delle discipline matematico-scientifiche”) (Rome, 27-29 marzo 2014), in *Educazione linguistica*, ed. by De Renzo, Piemontese.

²¹¹ Among many others: Tullio De Mauro, *Anche l’italiano serve a parlare di scienze, Lingua Matematica e scienze. Anche le discipline scientifiche parlano l’italiano*. (Florence: Accademia della Crusca Edizioni, 2014); Tullio De Mauro, ‘Linguaggi scientifici e lingue storiche’, in *L’educazione linguistica e i linguaggi delle scienze*, ed. by Anna Rosa Guerriero (Florence: La Nuova Italia, 1988).

²¹² ‘Nuovo Vocabolario di Base’, the latest version is available online at: <https://www.dropbox.com/s/mkcyo53m15ktbnp/nuovovocabolariodibase.pdf?dl=0> [Acc. June 2019]. This is the last work of Tullio De Mauro, who passed away in January 2017.

²¹³ The software is included in Tullio De Mauro, *Guida all’uso delle Parole* (Rome: Editori Riuniti, 1980/1997).

²¹⁴ Online resource available: <https://labs.translated.net/leggibilita-testo/> [Acc. March 2017].

Finally, another text type that has been object of discussion amongst linguists is the public bureaucratic communications. It has been pointed out by scholars that the understanding of official documentations and public announcements can be extremely difficult for everyday users because their language is often too abstract, allusive and ambiguous.²¹⁵ Striking examples are the school communications or administrative circulars. Administrative documents need to communicate something that is practical and has to become effective, therefore they need a very high level of legibility and accessibility. The website www.scrivereinitaliano.it, by the publisher Carocci, hosts very effective activities that could be incorporated into new teaching methodologies. One of these is an exercise of re-writing school communications such as:

Oggetto: Organizzazione momenti di coralità ludico-espressiva nella giornata del martedì grasso (28/02).

Come previsto con delibera del Consiglio di Circolo [], in data 28/02/2006 (martedì grasso) le attività didattiche avranno conclusione alle ore 11.30 presso tutte le scuole primarie e dell'infanzia del Circolo.

Poiché, come di consueto, in tale giornata le attività tendono ad assumere aspetti e si sviluppano secondo modalità tali da risultare in consonanza con le dimensioni ludico-espressive che caratterizzano la relativa dimensione tradizionalmente festiva e festosa e al fine di agevolare il tempestivo ripristino della vivibilità ed agibilità dei locali scolastici, si dispone quanto segue: [...].²¹⁶

It is clear how activities like this might be entertaining for students and, at the same time, extremely important to raise new awareness regarding functional writing that finally helps writers to deal with the effect of a text, rather than simply its form. Features of technical writing will be discussed further in this work, but here are highlighted some of the elements to be kept in mind, as Pearsall has shown:

²¹⁵ For studies see: Matteo Viale, *Studi e ricerche sul linguaggio amministrativo* (Padua: Cleup, 2008); Maurizio Dardano, 'Profilo dell'italiano contemporaneo', in *Storia della lingua italiana*, ed. by Luca Serianni e Pietro Trifone, vol. II, *Scritto e parlato* (Turin: Einaudi, 1994), p. 357.

²¹⁶ 'Parole per scrivere: nell'officina del dizionario', such activities can be found online at:
<http://www.scrivereinitaliano.it/cms/index.php?option=com_content&view=article&id=118:parole-per-scrivere-spezzariga-nell-officina-del-dizionario&catid=8:laboratori&Itemid=114> [Acc. June 2019].

1. Know your purpose and your writing situation
2. Know your audience and their situation
3. Choose and Organize your content around your purpose and audience
4. Write clearly and precisely
5. Use good page design
6. Think Visually
7. Write Ethically²¹⁷

The above is a very simple list of goals towards which every functional writer should aim and every student and teacher can find useful for activities in class. On this note, it seems relevant to recall what Tullio De Mauro said, regarding administrative and functional-based writing:

Le parole sono fatte, prima che per essere dette, per essere capite: proprio per questo, diceva un filosofo, gli dei ci hanno dato una lingua e due orecchie. Chi non si fa capire viola la libertà di parola dei suoi ascoltatori. È un maleducato, se parla in privato e da privato. È qualcosa di peggio se è un giornalista, un insegnante, un dipendente pubblico, un eletto dal popolo. Chi è al servizio di un pubblico ha il dovere costituzionale di farsi capire.²¹⁸

To conclude, this chapter has shown how the final Italian assignment for secondary schools introduced new teaching methodologies that focus more on the functional-based aspects of language. This is mainly due to the inclusion in the final assessment of the two text types called ‘saggio breve’ and ‘articolo di giornale’. These are planned forms of texts that have become part of the exam as a result of the long-lasting discussion (1970s – 1990s) on pragmatic of discourse and textuality, which was analysed in chapters 1 and 2. The main research question, which will be answered in the next chapters, is: to what extent these new methodologies are absorbed within the school system and, in particular, within secondary schools of the first cycle? The next chapter will seek an answer to this question by examining how grammar textbooks for secondary school of the first cycle changed and evolved in relation to the reform of the final exam and, particularly, how some features of textuality are treated.

²¹⁷ Thomas E. Pearsall, *The Elements of Technical Writing*, (London: Longman, 2009).

²¹⁸ Tullio De Mauro, *Guida all'uso delle parole* (Rome: Editori Riuniti, 1980-1997).

4. Textbooks and grammar schoolbooks for secondary school of the first cycle and language varieties: functional writing before and after the reform of the final exam.

With the changes enacted to the final exam, Italian schoolbooks and grammar ‘manuali’ had to adapt to the new text types and to start reflecting about language varieties and related pedagogies. As a result of this situation, following the discussion upon the curriculum and the advanced theories between the 1970s and present day, it can be observed (and this is a feature found also in the case studies of chapters 5 and 6) what seems to be a disjunction between the understanding of researchers, official reforms and indications, on the one hand, and the practice found in school classrooms, on the other.²¹⁹ One important indicator of assessing the relationship between institutional changes, scientific theories and the school system is the grammar schoolbook. For this reason, in this chapter, schoolbooks from ‘scuole secondarie’ - both before the institutional changes and after them - will be analysed in order to highlight similarities and differences, with respect to the approach to technical and functional writing and with an emphasis on the relationship between these schoolbooks and linguistic ideologies and legislation.

Before going further and listing the features and the methodologies that will be investigated in this section, it is important to remember that, even if schoolbooks are an essential indicator of how reflections on pedagogy theories are received, they provide limited insights into everyday teaching practice. It would not be surprising to discover that many of the features and indications elaborated in a schoolbook, are ignored or not treated properly by teachers. School is inevitably more than just a learning ground: teachers deal everyday with the personal growth of their students, as well with large and complicated administrative processes of Italian schools. All the same, in this chapter, it is worth underlining some major problems that teachers have to deal with when it comes to teaching the grammar of a language. The first, and perhaps best known of these problems is: what grammar shall teachers teach?

Adopting a particular description of one language does not avoid the possibility of having several theories and ideologies that lie behind the definition. This means that,

²¹⁹ For an informed discussion see Francesco Sabatini, ‘La scuola ha smesso di insegnare la lingua italiana’, <https://www.tecnicaldellascuola.it/la-denuncia-di-sabatini-la-scuola-ha-smesso-di-insegnare-la-lingua-italiana?fbclid=IwAR0F1oathPGSOvAXjgCp2Er4ayLioDe3DliAtQqENLc8_IT88ANo vAztG7A> [Accessed May 2019].

for instance, one can adopt the Port Royal grammar approach, according to which grammar is a universal mental process²²⁰ or the functional grammar approach which is concerned with the social function of a language,²²¹ or even, one could think of using Chomsky's generative grammar²²² or Tesnière's valency theory²²³ and so forth. Given all these possible options, it will not be surprising to learn that between 1965 and 1980 some of the most renowned linguists considered grammar teaching as practically *useless*.²²⁴ This, of course, has to be seen as result of many harsh criticisms levelled against the traditional teaching methodologies and textbooks, moved by linguists and associations in the late 1970s. It is therefore reasonable to assume that such methodological ideas affected everyday teaching at Italian school.²²⁵ A dominant belief that tended to prevail in the early 1970s²²⁶ was that grammar does not show itself as something that comes from the outside and needs to be taught/learnt, but as something that everyone owns. Consequentially, grammar emerges as *implicit* and, as such, it needs to be taught through *implicit* methodologies.²²⁷ As Raffaele Simone pointed out, grammar at school has to be *implicit* in contrast with the *analytic/generative* approach which is preferable in general speech.²²⁸ From a psychological point of view, 'non pare dubbio che i procedimenti linguistici messi in opera dal parlante sono nella massima parte di tipo generativo... nel parlare noi applichiamo regole... e possediamo tanto meglio la nostra lingua quanto più numerose sono le entità semplici e le regole di cui disponiamo per produrre entità terminali, ossia frasi corrette'.²²⁹ Of course, as might be assumed, to teach grammar without actually teaching 'rules' would be impossible and the *implicit* grammar

²²⁰ Antoine Arnauld, Claude Lancelot, *Grammaire générale et raisonnée, ou La Grammaire de Port-Royal* (Stuttgart-Bad Cannstatt: Frommann, 1966).

²²¹ André Martinet, *A Functional View of Language* (Oxford: Clarendon, 1962).

²²² Noah Chomsky, *Aspects and Theory of Syntax* (Cambridge, Mass.: MIT press, 1965).

²²³ Lucien Tesnière, *Éléments de syntaxe structurale* (Paris: Klincksieck, 1959).

²²⁴ Raffaele Simone and Giorgio Cardona, 'Strutture teoriche di alcune grammatiche scolastiche italiane', in *L'insegnamento dell'italiano in Italia e all'estero*, ed. by Mario Medici and Raffaele Simone, (Rome: Bulzoni, 1971), pp. 365-393.

²²⁵ According to Cristina Lavinio, 'Per un rilancio dell'educazione linguistica democratica', pp. 30-31.

²²⁶ I mainly refer here to Raffaele Simone, *Libro di Italiano* (Florence: La Nuova Italia, 1973).

²²⁷ *Ibid.*

²²⁸ *Ibid.*

²²⁹ Raffaele Simone, 'Modelli per la grammatica scolastica', in *Proposte didattiche. Insegnamenti linguistici storico-geografici filosofici*, ed. by Vertecchi and Maragliano (Turin: Loescher, 1974). The reference is available online at: <http://www.adrianocolombo.it/riflelin/riflelin01.pdf> [Acc. June 2019].

methodologies appeared problematic and subject to debate, too. Adriano Colombo, in 1982, tried to mediate between innovative and obsolete methodologies.²³⁰ Quoting Simone, Colombo pointed out that teaching an *implicit* grammar would be the same as teaching grammar in general, because reflections on languages will always be carried out through grammatical structures and terminology ('verbo imperativo', 'genere', 'numero', 'persona', etc.). Moreover, even though, from a didactic point of view, the so-called *implicit* grammar can be useful to provide teachers and students with the idea of 'presentare soltanto dei materiali linguistici (e stimolarne la produzione) in vista di uno sviluppo del potenziale del linguaggio',²³¹ these approaches are not exclusive to a particular methodology (the idea of an *implicit* methodology), but belong to the linguistic education in general.

The aforementioned ministerial programmes for the 'scuola media' of 1979, together with the discussion within the school system according to which teachers started 'un mutamento generale di orientamenti del (diciamo) 'discorso pedagogico di sinistra', che da qualche anno insiste sui temi della formazione intellettuale',²³² represented one of the felicitous and, most of all, reliable examples of the 'ritorno alla grammatica'. By the time the programmes were made operational, the pedagogical and educational debate was at a very advanced state and, within the curriculum, adequate spaces were dedicated to language education. It nonetheless remained the case that, as linguists argued when questioning the legitimacy of talking about an actual 'ritorno alla grammatica', 'grammatica' never ceased to be at the centre of the linguistic and pedagogical discussion.²³³ All the same, as mentioned, there is reasonable evidence to assume that a significant number of teachers used the new *implicit* approach (adopting particular schoolbooks) which was not rejected entirely. In fact, three main points are worth stressing, namely that (i) not everything in the earlier linguistic tradition was wrong or unreliable (if a definition of an item is unreliable, it does not mean that all the category is unreliable); (ii) that there did (and probably does) not exist an advanced, structured and modern linguistic theory on which to build an unambiguous way to teach grammar; and (iii) even if this did exist, it probably would not solve all problems of language teaching. Finally, to answer the question about what grammar shall teachers teach, it seems

²³⁰ Adriano Colombo, 'Riflessioni di un conservatore', in *LEND, Quale Grammatica* (Milan: Edizioni scolastiche Bruno Mondadori, 1982), pp. 12-70

²³¹ Colombo, 'Riflessioni', p. 18.

²³² *Ibid.*

²³³ Tullio De Mauro, 'La grammatica e le grammatiche, dossier', in *Riforma della scuola* (9/10) (Rome: Riforma della scuola press, 1981), pp. 17-48.

appropriate to quote Maria Luisa Altieri-Biagi who states that grammar should be seen as way to reach a subject and not as list of rules:

[grammar should be intended] come uno strumento da adeguare e da commisurare alle funzioni logiche- comunicative della lingua, sempre articolate, varie e in continua evoluzione. Uno strumento da costruire coi ragazzi, e non da consegnare loro come fosse un sistema chiuso, autosufficiente, definitivo.²³⁴

4.1 Methodological framework

This paragraph focuses on the question: how is it possible to keep students, teachers or textbook writers up-to-date with the latest grammar ideologies, and, at the same time, expect them to rely on a particular description of a language? Analysing different theories about grammar description means going through periods in which theories are constantly overtaken by other theories and, mostly, teachers and scholars have to deal with the conception of grammar they have from their school years. The research question is here quite similar to the one discussed earlier in this chapter: what grammar shall teachers teach?

A chronological analysis of four grammar textbooks for secondary school of the first cycle ('scuola media') will be adopted: two of them were released before the reform of the final exam discussed in the previous chapter (respectively 1992 and 1995), and two of them are more recent (2010 and 2011). In particular, a quantitative approach will be adopted, given that the four grammars in exam are, according to surveys, among the most utilized respectively between 1990-1995 and 2010-2012. Having to deal with schoolbooks for the 'scuola media' (now 'scuola secondaria di primo livello') means that, as far as concerns the less recent books, the question of availability is not to be underestimated. In fact, out of the four schoolbooks highlighted as the most used between 1990-1995, only two were available at the 'Biblioteca Nazionale' which holds and preserves every publication within Italian territory.²³⁵ A tempting initial hypothesis, for a research such as the current one, might be to believe that grammar textbooks radically changed after the reform. In this scenario, together with everyday teaching methodologies

²³⁴ Maria Luisa Altieri-Biagi, *La programmazione verticale. Continuità dell'educazione linguistica dalla scuola primaria alla scuola superiore* (Milan: La Nuova Italia, 2000).

²³⁵ As well as this limiting factor, it is notable that the only two grammar books that are not irreversibly lost are listed as 'minor' publications and, as so, are kept away from the main building of the library.

and language assignments, schoolbooks had to adapt to the new changes about writing theories. It goes without saying that schoolbooks and linguistic theories evolve at the same time, but it is interesting to emphasize if and how specific features find (or do not find) space in traditional grammars and if and how they become essential in contemporary grammar schoolbooks for secondary schools. Another point that is essential to make clear before going further is that what follows is not an attempt at pointing out how new grammar textbooks are better conceived than older textbooks. For, it is recognized that the evolution of linguistic theories does not imply that the old ones were wrong or inefficient. Traditional paradigms are essential not only to compare how new theories are being developed, but also because they help to understand to what extent some features can be improved and/or are crucial for the development of linguistic skills of the student. The analysis carried on this chapter acknowledges that a unified and generally accepted linguistic theory for schoolbooks does not seem to exist at the moment. In particular, the chapter uses previous textbooks, such as those by Schwarze²³⁶ (1988), Trifone, Palermo²³⁷ (2000) or Prandi²³⁸ (2006) as a reference that takes into account the most advanced theories on the subject of this research. These works, although respecting and comparing themselves with traditional grammar theories, acknowledge that, as far as concerns school teaching/learning process, old grammar textbooks are no longer acceptable because they are too regulative and based on superficial factual knowledge. In recent years, linguists found themselves cooperating more closely with school publications and grammar textbooks.²³⁹ These publications are indeed a crucial point of interest for this current study. However, in order to understand the impact of the linguistic discussions and the governmental indications on the subject, this chapter will make use of the most popular and used grammar textbooks instead. The small sample will not take in consideration the territorial diffusion, but will accept the survey conducted with editors Giunti and La Scuola.²⁴⁰ As a result, the chapter deals with a sample of the most used schoolbooks for

²³⁶ Cristoph Schwarze, *Grammatik der italienischen Sprache* (Tübingen: Niemeyer, 1988).

²³⁷ Pietro Trifone, Massimo Palermo, *Grammatica italiana di base* (Bologna: Zanichelli, 2000).

²³⁸ Michele Prandi, *Le regole e le scelte: introduzione alla grammatica italiana* (Turin: UTET, 2006).

²³⁹ The most famous is probably the aforementioned *Sistema e Testo*. But see also Maria Giuseppe Lo Duca, Rosaria Solarino, *La lingua italiana, una grammatica ragionevole* (Padua: Unipress, 2004); Giuseppe Patota, *Grammatica di riferimento dell'italiano contemporaneo* (Novara: De Agostini Scuola-Garzanti, 2006).

²⁴⁰ It must be pointed out that the two editors, contacted via telephone, did not share the territorial diffusion or any percentage of the diffusion. However, they agreed and

91

the ‘scuola secondaria di primo grado’ (pupils aged 11-14) both before and after the reform.²⁴¹ Although the ‘scuola secondaria di primo grado’ is not the last step of education and it does not end with the reformed final exam, it has been adopted as paradigm for this work because it is believed that it represents the most delicate and interesting moment of a student’s linguistic development.

In this section, both aspects of linguistics and aspects of sociolinguistics will be analysed, in order to address and contextualise problems related to language education. Firstly, the focus will be given to the definition/explanation of language/communicative situations and communicative goals. Secondly the differences between spoken and written language will be analysed, as learners often make no difference between oral registers and written ones. The extent to which schoolbooks address this problem, or even if they do so at all, can be important for the development of students’ linguistic skills. Thirdly the presence of a definition of sectorial-based languages in the textbooks will be taken into account: bearing in mind the importance of considering all the varieties of a language, to notice the existence of sectorial-based languages (the language of law, medicine, bureaucracy and so forth...) could help students to see how grammar is deeply related to everyday life. Fourthly, the presence of a definition of text/context will be researched. Focusing more on written language, the next paragraphs will research how the definition of text has been delivered through different textbooks and different eras and, mostly, if the definition considers the importance of the context by which the text must always be regulated. Fifthly, the analysis will emphasise the description of how to build a text: having noticed how little or inadequate context was given to students dealing with texts in written assignments,²⁴² it is interesting to research if and how schoolbooks have addressed the different phases of how to build written forms of language, how to write an abstract or how to break up a text in different paragraphs or chapters. Finally, it will be analysed the distinction between different text types: naturally students will have to be able to make distinction between argumentative, narrative, regulative texts (and, at the same time, be able to write them), but, most importantly, the next section will look at

confirmed that the two schoolbooks concerned were amongst the most utilized in the Italian peninsula.

²⁴¹ The information of the most utilized textbooks after the reform is taken from Dalila Bachis, ‘Norma e uso nella grammaticografia scolastica attuale’, in *Studi di grammatica italiana* Vol. 29 (2010/2011), pp. 329- 348.

²⁴² See the case studies of chapter 6 and the examples of chapter 3.

if and how grammars have pointed out the *rigidity* or *elasticity* of given texts, in order to help students and teaching methodologies to distinguish them.

4.2 Textbooks before 1997/2000

This section examines the above-mentioned features in two grammar textbooks for the ‘scuola media’ released before the reform of the final exam in 1998. It is important to highlight first the contextual background in which these books were published. As seen in previous chapters, the end of the 1980s was a vivid period for linguistic and educational theories. All the theories that emerged during the 1970s started to find an application in everyday didactics and, between 1988 and 1989, an experimental curriculum called ‘Progetto Brocca’ became reality, with the possibility of putting into practice all the theories of the earlier period. As far as concerns textuality and the sociolinguistic aspects of language, these grammars are actually very careful in pointing out all the possible features, starting from semiotic traits, to semantics and textuality, as this analysis will detail. Here it is only important to recall how, despite this accurate examination of the most important aspects of textuality, one of the features that could be problematic about these books is the way they put into practice the reflection on different kind of texts. For this reason, an essential part of this work will be to analyse not only the theory, but also the exercises where students could prove their understanding of the subject. Finally, it should be noted that schoolbooks are normally conceived as a guide that teachers can follow fully or partially. Having no physical evidence of precisely how much teachers used to refer to these books (and to what extent they did), it is important to exercise great caution and reiterate that the texts are being understood as revealing the state of scholastic publications and not the actual classroom practice. The current teaching/learning situation regarding functional based languages and textuality within Italian secondary schools of the first cycle is the concern of the case studies addressed in the following two chapters. Nonetheless, it is assumed that, considering the traditional importance given by teachers to micro-linguistic aspects of languages (such as the ones seen above), linguistic varieties, sectorial-based languages and textuality were (and perhaps still are) not a priority. In this light, it is even more interesting to examine how the curricula and indications which have been examined in the previous chapters, have been presented within grammar schoolbooks and textbooks. Before the pivotal change brought about to the Italian assessment for the final exam, schoolbooks were already pointing out the importance of language and textual varieties. Accordingly, the key questions are here: how are these topics assessed in school books? Are they addressed in the normal frontal lessons or

93

through different methodologies? As stated above, this research will only answer the first of these questions, pointing out the most important features of textual varieties.

The two books examined here are *L'ora di italiano* by Antonella Bottero, Paola Drago, Tiziana Gallo, Rosaria Rossini and published in Florence by Giunti Marzocco in 1992 and *Italiano insieme* by Maurizio Della Casa, published in 1995 by La Scuola in Brescia. Conversations with the publishers did not allow the analysis to take in consideration the full circulation or territorial diffusion of these works. However, the information provided by them confirmed that these two books were amongst the most utilized in the relevant period of time. They will be examined individually and, where necessary, differences and similarities will be pointed out.

4.2.1 *L'ora di italiano* - 1992

Interestingly, this book, unlike *Italiano insieme* (that will be shortly analysed), addresses sociolinguistic aspects very early on in the discussion. It might at first seem a purely structural problem, but 'confining' sociolinguistic aspects of language to the last pages of a book (as *Italiano insieme* does) is revealing of how they could be underestimated. It may be assumed that old textbooks believed that it would be more important to go through the rules before starting to understand the evolution of the language, the occasions in which to use different registers or the meaning of the registers itself. In this respect, *L'ora di italiano* is different not only for presenting these features at the outset, but also because it provides a supplementary exercise book, along with the already copious number of exercises in the book, called *Quaderno di lavoro* where students could elaborate what they have learnt in the book. For the purpose of this work, it is essential to look closely at the exercise book as well.

The first chapter is about the evolution of the Italian language. This, in an environment where students aged 11-13 have never dealt with Latin and the Indo-European languages, represents a good possibility to approach the origin of languages for the first time. Not by chance the excursus from the fall of the Roman Empire to the development of the first Kingdom of Italy reveals its utility. It can be read, in fact:

Nel corso dei secoli seguenti, gli scrittori, i poeti, gli scienziati e tutti coloro che volevano rivolgersi a un pubblico più ampio, continuano a usare il fiorentino che ormai è diventato lingua comune delle persone colte, per quanto spesso solo lingua scritta. Infatti, poiché l'Italia era politicamente divisa in molti stati, spesso dominati da una potenza straniera, non era stato possibile

procedere a una unificazione linguistica: il letterato scriveva in fiorentino, ma continuava a parlare il suo dialetto locale o una lingua straniera.²⁴³

This represents a useful starting point to trigger a discussion upon language varieties, which, in fact, takes place in the following page. Following up on studies such as William Labov (1972, 1994-2001) which pointed out the close interaction between the chronological evolution of a language and *synchronical* aspects of variation, the schoolbook points out what it generically calls ‘Varietà linguistiche’. Although it seems rather imprecise to designate the topic as such and afford it only a few pages of the book, when considering how extensive (still ongoing) the discussion on linguistic varieties was, it must be nonetheless recognized its importance in addressing one of the most debated topics in contemporary sociolinguistics.²⁴⁴ *L’ora di italiano* prefers to adopt a generic approach, calling ‘varietà’ what is better called ‘repertorio’, or communicative competence.²⁴⁵ Nevertheless, this textbook classifies the linguistic repertoire in the following way: ‘italiano comune: cioè la lingua basata sul fiorentino, parlata e, soprattutto, scritta in tutta Italia’,²⁴⁶ that is what is generally called standard, although the book points out that ‘comune’ is a language based on the ‘fiorentino’. The book rightfully says so, although, specifying its relation with the ‘fiorentino’, might well be confusing for the young learner, considering that, as stated by Berruto:

L’italiano standard in effetti non ha mai, fin dalla codificazione cinquecentesca, coinciso esattamente con il fiorentino, e sin dal Seicento ha accolto, data anche la mancanza fra il tardo Cinquecento e l’avanzato Ottocento di un centro preminente che imponesse una norma, innovazioni di varia provenienza. La distanza dal fiorentino si è ancora accresciuta dopo l’Unità d’Italia, nonostante i tentativi puristici di imporre il fiorentino moderno come modello, in particolare per la pronuncia.²⁴⁷

²⁴³ Antonella Bottero, Paola Drago, Tiziana Gallo, Rosaria Rossini, *L’ora di italiano* (Florence: Giunti Marzocco, 1992), pp. 19-20.

²⁴⁴ Gaetano Berruto, ‘Variazione Linguistica’, in *Enciclopedia dell’Italiano Treccani*, <[http://www.treccani.it/enciclopedia/variazione-linguistica_\(Enciclopedia-dell'Italiano\)/>](http://www.treccani.it/enciclopedia/variazione-linguistica_(Enciclopedia-dell'Italiano)/>) [Acc. June 2019].

²⁴⁵ See, for example Dell Hymes, ‘On Communicative Competence’, in *Sociolinguistics*, ed. by John B. Pride, Janet Holmes, (Harmondsworth: Penguin Books, 1972), pp. 269-293. Or, see also the more recent Constant Leung, ‘Convivial communication: recontextualizing communicative competence’, in *International Journal of Applied Linguistics*, 15 (2) (Leuven: Peeters, 2005), pp. 119-144.

²⁴⁶ *L’ora di italiano*, p. 21.

²⁴⁷ Gaetano Berruto, *Italiano standard* (2010), in *Enciclopedia dell’Italiano Treccani* <http://www.treccani.it/enciclopedia/italiano-standard_%28Enciclopedia-dell%27Italiano%29/> [Acc. July 2017].

Furthermore, ‘italiano regionale’ is given a definition that looks exhaustive and efficient, although no mention is made that it is very likely that this linguistic register corresponds to the language pupils and teachers use every day to speak between to one another. Finally, the category ‘dialetto: cioè la ‘lingua’ parlata solo in una determinata zona d’Italia’²⁴⁸ is the last variety. Though it may seem inappropriate to use the word ‘lingua’ (in quotes) for describing the ‘dialetto’, it is interesting to note that this book does not classify the dialects into a distortion of the standard language. Finally, it should be noted that this textbook also enlists, among other varieties, different languages spoken within Italian borders (Sardo, French, German or Slovenian, etc.) and words loan, demonstrating an interesting and premature multicultural and multilingual awareness.

Regarding the definition/explanation of language/communicative situations and communicative goals, *L’ora di italiano*, as well as *Italiano insieme* dedicate a unit to semantic aspects of language with careful consideration of the difference between *sign* and *code* and between verbal and non-verbal communication. In order to highlight the relevance of communicative situations within discourse analysis, the book points out the importance of the *context* and the *register*. Regarding the context, it is interesting to emphasise how *L’ora di italiano* starts the discussion with an example (a dialogue between King Midas and the queen) without providing any sort of definition. The expedient is appropriate because the students can reflect upon the importance of knowing the context behind the communicative situation. Therefore the definition (‘Conoscere il contesto in cui avviene la comunicazione è necessario per comprendere perché uno stesso messaggio possa venire formulato secondo modalità differenti’),²⁴⁹ which closes the paragraph, is clearly more accessible to the reader. Accordingly, the following exercise appears very interesting:

[...] descrivi il contesto in cui può essere pronunciata l’espressione “che pizza!”²⁵⁰

The possible answers are the *pizzeria*, the projection room of a cinema and someone being bored about something. This example creates an interesting connection with the topic of *registers*, which is exploited shortly after. With regards to the *context*, once again, the paragraph opens with an example: the same argument/referent in three different communicative situations/registers. The schoolbook explains the *variation* of register, pointing out three major categories: ‘formale’, ‘medio’ and ‘informale’. It is worth

²⁴⁸ Ibid.

²⁴⁹ *L’ora di italiano*, p. 62.

²⁵⁰ *L’ora di italiano*, p. 63.

pointing out that, despite it could fit within this section regarding register variation, there is no mention of sectorial-based languages. In fact, the discussion focuses only on varieties, whether they may be related to the formality of different registers or to sectorial-based concerns. As Giovanni Rovere points out, this difference ‘si rivela nondimeno operativa in quanto permette di tenere separate su un piano anche terminologico entità diverse nella loro configurazione linguistica’.²⁵¹

As is the case with *Italiano insieme*, so too *L’ora di italiano* does not specify the difference between spoken and written language. This essential trait of should find space in the section dedicated to language abilities, but it is a topic that only begins to find its place in language curricula after the release of the document on key competences for lifelong learning²⁵² by the European Union. As is well known, *text* is not only to be intended as written text, but also as a manifestation of language that has meaning. *L’ora di italiano* does not exhaustively address the possibility of having a verbal text that differs from other types of codes. There is mention of it at page 79, where, next to a speech bubble in a comic strip, it is pointed out that ‘il testo B è verbale in quanto il messaggio che si vuole comunicare è espresso con delle parole’.²⁵³ Nonetheless it does not seem sufficient for a student of 11-14 years old to have the skills necessary to understand that a text can have verbal or written manifestation and, therefore, registers.

Despite the lack of continuity between the pages dedicated to the topic of *context* and the ones dedicated to the topic of *text*, there is an interesting approach to the definition of *text*. In fact, the definition (‘Un testo è un messaggio di senso compiuto in cui è espresso in modo chiaro e organico tutto ciò che l’emittente vuol comunicare’)²⁵⁴ does not mention, in this first stage, the crucial role of coherence and cohesion for building a text, but it is interesting to see that it gets there (‘gli elementi costitutivi di un testo sono la coesione e la coerenza’)²⁵⁵ through two examples and two exercises. What is very accurate, on the other hand, is the description of different text types. Narrative and non-narrative text types, definitions and descriptions are given accordingly to the style of the book, which prefers to anticipate descriptions and definitions with examples. What is also very interesting for the purpose of this work is the part dedicated to non-literary texts, such as

²⁵¹ Giovanni Rovere, *Registro* (2011), in Enciclopedia dell’Italiano Treccani: <http://www.treccani.it/enciclopedia/registro_%28Enciclopedia-dell%27Italiano%29/> [Acc. July 2017].

²⁵² See the already mentioned European document regarding life-long learning: <<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Ac11090>>.

²⁵³ *L’ora di italiano*, p. 79

²⁵⁴ Ibid.

²⁵⁵ *L’ora di italiano*, p. 81.

descriptions, expositions, informative texts and argumentative texts. Before going further, it is essential to remind that being able to recognise different text types does not mean being able to produce different text types. This is why the long exposition of text types contained in Unit 4 of the book is supplemented by another section, towards the end of the book, called ‘La lingua serve...’. Here, the authors give some advice on how to build different types of ‘tema’ (this is the definition used, that will be partially ruled out after 1997/2000). Although accurately focusing on the exercise related to the argumentative type (which is the type that will be more in fashion after the reform of the exam), it is clear that the book does not give an exhaustive description of the problem. Assignment B, for example, says: ‘Persuadi i tuoi genitori o i tuoi amici a smettere di fumare’.²⁵⁶ If, as noted previously, an argumentative text must be documented in support of a thesis, an assignment such as the one above looks very intricate for a student to undertake. Without any kind of source nor documents, or any experience of the matter, how could they be able to support their thesis? Moreover, looking at assignment C, the scenario is even more complicated: ‘Esprimi le tue opinioni attorno a un problema di attualità’.²⁵⁷ Without a connection with the documentation or even starting points to support the discussion, the text may be very difficult to face. It can be argued that the teacher is there to provide help with sources and inspirations where needed, but, these are features of documented writing that should be part of every grammar schoolbook. Finally, what is notably absent from this short guide of how to write a ‘tema’ is a careful reflection upon the theory of writing itself. One of the most important features, for example, is the process: planning, writing and reviewing. On this matter, *Italiano insieme* pays more attention: in the 1995 book, in fact, there is one entire Unit dedicated to the different phases of writing a text. The exercise book of *L’ora di italiano*, on the other hand, looks much more concerned about both the problem of planning and the problem of documentation. Let me focus on exercise 18b, for example:

È necessario che gli alunni imparino a non fare errori di ortografia.

individuazione del problema: molti alunni fanno errori di ortografia;

presentazione della tesi: è necessario che essi non facciano errori di ortografia;

dimostrazione della tesi: fare errori di ortografia è segno di ignoranza; il mondo del lavoro richiede una certa cultura; un datore di lavoro non assumerebbe mai chi in una domanda di assunzione si lascia scappare errori di ortografia;

²⁵⁶ *L’ora di italiano*, p. 726.

²⁵⁷ *Ibid.*

confutazione delle obiezioni: è vero che la corretta ortografia può essere considerata una semplice convenzione priva di valore, ma è anche vero che la società in cui viviamo la richiede;

conclusioni: si deve imparare a fare i conti con il mondo che ci circonda, quindi se questo richiede che si scriva correttamente bisogna imparare a farlo²⁵⁸.

It is clear that, despite the vagueness of the assignment, the problem is presented with supporting documentation and, mostly, an idea of planning the product before delivering it. Even more interestingly, the section of the exercise dedicated to the ‘riassunto’ is very articulated, with five exercises aimed to value the importance of a text type that had almost always been underestimated by traditional grammars.²⁵⁹

Finally, the last point of this analysis regards functional writing, that is addressed in a section of this book dedicated to non-narrative text types. Interestingly, *L’ora di italiano* dedicates an entire paragraph to sectorial-based languages. As for any other topic, even sectorial-based languages are introduced by examples: there are sections of texts from legislative texts, running commentaries of football matches, texts taken from a medical encyclopaedia and a user manual for Macintosh computers. Readers can easily see the differences between all the sub-codes and the following definition just completes this impression: ‘I linguaggi settoriali o sottocodici sono varietà della lingua. Essi utilizzano una terminologia particolare o attribuiscono a parole di uso comune particolari significati’.²⁶⁰ It is a very fitting definition, although it does not mention one of the most important features of sectorial-based languages: their ability to be valid throughout a variety of registers, from a very formal/rigid one (for communications between experts) to a more educational/elastic one (to share with speakers or readers who are not familiar with the context). It can be noticed how the Treccani encyclopaedia addresses the problem: ‘Ciascun l. s. [linguaggio settoriale] presenta al proprio interno una scala di livelli e di registri che sono modulati a seconda delle circostanze, del destinatario e del canale linguistico di emissione’.²⁶¹

The section dedicated to the exercises is particularly interesting because it shows that the discussion around sectorial-based languages was alive even within the pre-

²⁵⁸ *L’ora di italiano*, p. 153.

²⁵⁹ As pointed out by Fabio Rossi and Fabio Ruggiano, *L’italiano scritto: usi regole e dubbi* (Rome: Carocci, 2018).

²⁶⁰ *L’ora di italiano*, p. 71.

²⁶¹ Claudio Giovanardi, *Linguaggi settoriali* (1993), in Enciclopedia dell’Italiano Treccani, <http://www.treccani.it/enciclopedia/linguaggi-settoriali_%28Enciclopedia-Italiana%29/> [Acc. September 2017].

Reform textbooks. Particularly, in exercise 10, which is found on page 73, can be read: ‘Leggi il seguente foglietto illustrativo di un medicinale e scrivi con parole tue perché si usa, come si usa, quando non si deve usare’.²⁶² Analysing or producing a package leaflet of a medicine is the kind of exercise many linguists and ideologists have supported (and still are) for a linguistic education that goes beyond the setting of an essay on a given topic. It is a non-canonical kind of text, because it not only makes use of a particular code (the language of medicine, in this case) and goes beyond the usual definition of text (being an example complementary to an item in everyday use such as a medicine), but also it offers an excellent example of a functional-based text. A text like the package leaflet of the aspirin must be as clear as possible because it is intended to have a practical purpose and, therefore, any ‘difficult’ word or structure may prevent the understanding. In dealing with the later cases studies, there will be a chance to focus on exercises such as this, when considering how teaching methodologies were intended to improve everyday curricula in the continuing education courses for teachers of every school cycle. It will be sufficient for now to point out how that the exercise of *L’ora di italiano* is stimulating because it supports pupils in the intention of re-writing this typology of text in a more accessible language. Not by chance, in fact, the celebrated Italian linguist Luca Serianni points out that:

Rispetto allo stile espositivo proprio dei foglietti francesi e spagnoli, quelli italiani presentano un quadro meno nitido. In Serianni 2008 si illustra l’infelice revisione (risalente al 2005) del foglietto di un noto farmaco a base di paracetamolo [...] in cui si glossano tecnicismi trasparenti [...], ma non si interviene su tecnicismi impervi [...] e si inseriscono informazioni destinate non al paziente, ma al medico:

(24) La somministrazione di paracetamolo può interferire con la determinazione della uricemia (mediante il metodo dell’acido fosfotungstico) e con quella della glicemia (mediante il metodo della glucosio-ossidasi-perossidasi)

Negli ultimi tempi lo stile espositivo dei foglietti è complessivamente migliorato, non solo per i ‘prodotti da banco’ (quelli che il cliente può acquistare senza ricetta medica), ma anche per farmaci destinati a patologie molto più impegnative.²⁶³

²⁶² *L’ora di italiano*, p. 73.

²⁶³ Luca Serianni, *Lingua scritta* (2010), in Enciclopedia dell’Italiano Treccani, <http://www.treccani.it/enciclopedia/lingua-scritta_%28Enciclopedia-dell%27Italiano%29/> [Acc. September 2017].

4.2.2 *Italiano insieme* - 1995

The approach of this 1995 grammar book is slightly different from *L'ora di italiano*. In fact, starting from the style in which it is written, it seems that the author adopts a more traditional view, made up of rules and general definitions. Beside this interesting difference, the two books show similarities both with regard to the list of arguments treated and the presence of a supplementary exercise book. A major difference, however, is the order of these topics. It might be relevant to note that *Italiano insieme* is about 700 pages long and more than half of the book is dedicated to morphology, orthography, phonology, syntax and punctuation. Nevertheless, it opens with an overview of multiple uses of the language. Although the brief aforementioned excursus of *L'ora di italiano* regarding the Latin and Indo-European origin of Italian seemed an efficient link to talk about language varieties, *Italiano insieme* prefers to give the general rule first ('Una lingua come l'italiano, pertanto, è quell'insieme di parole e di regole grammaticali che sono condivise da tutti coloro che appartengono alla comunità italiana o che, pur non appartenendovi (come gli stranieri), parlano o scrivono in questa lingua')²⁶⁴ and then to introduce the topic of language variety. Interestingly, this grammar focuses on an exemplified version of the ideas of Eugenio Coseriu on language varieties:²⁶⁵ it is well known, in fact, that language varieties can be classified into four major groups according to how language changes through time, space, social groups or communicative situations; every linguistic occasion, when produced, inevitably falls into each one of these classes. *Italiano insieme* includes this theory within its discussion, delivering an interesting explanation of the diachronic, geographic and communicative situation variety. The choice of *Il Novellino* by Masuccio Salernitano might not seem like the most appropriate example for very young students to understand how Italian has evolved from the 1476 version of this text, since this author is rarely treated even in literature classes at school. The same can be said for geographic variation, which is dealt with more closely in Unit 29, but runs into the difficult problem of the definition of dialects and linguistic differences within the same geographical area: 'ometto', 'gruccia' and 'stampella' for respectively the northern, central and southern varieties for *coat hanger* are good generic examples, even though they might not be the most utilised words among this age group of speakers. More interestingly, the section dedicated to the 'variazione diafasica' (which is not named as such), through two examples (a conversation between two friends and a

²⁶⁴ Maurizio Della Casa, *Italiano Insieme* (Brescia: La Scuola, 1995), p. 8.

²⁶⁵ See Eugenio Coseriu, *Lezioni di linguistica generale* (Turin: Boringhieri, 1973).

driving instructor during a lesson) states that ‘a seconda [...] delle persone alle quali ci rivolgiamo, delle circostanze in cui parliamo e degli scopi che ci proponiamo (tutti questi elementi costituiscono il CONTESTO del discorso), la lingua che usiamo assume caratteristiche diverse’.²⁶⁶ It is noteworthy that, even though it is then stated that ‘la lingua viene usata in modo diverso anche a seconda che *si parli o si scriva*’,²⁶⁷ there is no consideration regarding possible variations within the written and spoken languages themselves. In fact, it is taken for granted that the communicative situation changes only according to people, aims and surroundings, whereas the written language variation (such as the difference of register between an SMS to a friend or a medical prescription) is just as important as the spoken one.

The topic of *varieties* finds an articulated explanation that emphasises the features mentioned above in Unit 29. The geographic variety is the introduction to the topic of standard Italian.²⁶⁸ Very interestingly, the discourse on regional Italian and dialects is revealing because it points out the major interactions of the standard language itself: elastic uses of relative ‘che’, extended use of the ‘presente’, ‘imperfetto’ and ‘passato prossimo’ which take over the ‘passato remoto’, ‘trapassato remoto’ and ‘futuro’ (standard Italian will prefer ‘arrivo domani’ to the traditionally correct ‘arriverò domani’), the use of pronouns such as ‘lui’, ‘lei’, ‘loro’ as subject (not only as object) instead of ‘egli’, ‘ella’ and ‘essi’, and some other minor differences. Particularly notable is the attention that *Italiano insieme* places on underlining the importance of this variety within written uses of the language. Even though this kind of variety is mostly treated as an oral variety of the language in all other grammar books analysed, this grammar (even though just by mentioning it) is keen to remind that ‘l’italiano scritto, non risente delle differenze geografiche. Non fa differenza, perciò, che ad usarlo sia un settentrionale, oppure un meridionale’.²⁶⁹ It goes without saying that the situation is slightly more problematic, because, especially in less formal languages such as journalism, interactions between a ‘standardised’ use of Italian and a more familiar/informal one are very common. For example:

Cerchiamo di vedere sempre il mezzo pieno del bicchiere, perché il male fa da sé, mentre il bene ha sempre bisogno di una mano. E allora mettiamola così: tutta questa triste vicenda delle escort (oggi si dice così), delle ragazze immagine, delle letteronze candidate politiche, delle velinazze in carriera, delle ville in Sardegna strapiene di vergini come il paradiso dei musulmani, vicenda che ha saturato il 90 per cento della recente cronaca politica italiana,

²⁶⁶ *Italiano insieme*, p. 14 (upper case in the original text).

²⁶⁷ *Ibid.*, (italics in the text).

²⁶⁸ As exemplified by Berruto, ‘Italiano Standard’.

²⁶⁹ *Italiano insieme*, p. 408.

ci dà il senso di morte di un mondo in declino, è il fondo di un barile che abbiamo dolorosamente raggiunto.²⁷⁰

It is evident that this is a kind of hybrid variation that can be placed somewhere between standard Italian for newspaper publication, sectorial-based journalistic language and a slightly northern-oriented inflection ('letteronze', 'velinazze'). Nonetheless, it is interesting to note how the differences between written and spoken use are here highlighted. Even more accurately they are mentioned in a paragraph dedicated to the 'italiano popolare', seen in contrast to the 'italiano standard': 'l'italiano popolare è soprattutto parlato ma anche, in qualche occasione, scritto. È evidente che le incertezze e le approssimazioni che sono presenti nel parlato diventano ancora più marcate nella scrittura, dal momento che gli utenti di questa varietà sono privi generalmente di una pratica della 'penna' e tendono perciò a scrivere come si parla'.²⁷¹ According to linguists today the 'italiano popolare' is no longer a variety of Italian language,²⁷² but it is interesting to point out how the situation might have been different in 1995 where, to give an example, emails and electronic communications did not have the popularity that they have today. One of the reasons for the disappearance of this variety is, in fact, the diffusion of new ways of communication in electronic and digital forms such as emails, mobile phones and so forth. Furthermore, from a didactic point of view, it is evident that the 'italiano popolare' is far from the experience of the young learners and their everyday use of the language. What, on the other hand, is much closer to them is the following analysis on registers such as formal and informal communications. Unlike *L'ora di italiano, Italiano Insieme* underlines the necessity of understanding how, according to the context (communicative situation) and to whether it is a written or spoken occasion of communication, the language uses different registers. The informal registers, for example, are introduced with two examples which are carefully taken from two different communicative situations: one is a fragment of a discourse between two friends and the other is a personal journal page. It must be noted the attention that this textbook dedicates to point out the close relationship between spoken and written use of the language, underlining how the informal register is 'impiegato non solo nel parlato, ma pure in quei

²⁷⁰ Marina Terragni, in 'Io donna', 4th July 2009, cited by Luca Serianni, *Lingua scritta* (2010), <[http://www.treccani.it/enciclopedia/lingua-scritta_\(Enciclopedia-dell'Italiano\)/>](http://www.treccani.it/enciclopedia/lingua-scritta_(Enciclopedia-dell'Italiano)/>) [Acc. Sep. 2017].

²⁷¹ *Italiano insieme*, p. 409.

²⁷² See: Michele Cortelazzo, 'L'italiano e le sue varietà: una situazione in movimento', in *Lingua e stile* 36(2001), pp. 417-430; Giulio Lepschy, *Mother Tongues and Other Reflections on the Italian Language* (Toronto: University of Toronto Press, 2002).

testi scritti che hanno carattere pratico o personale, e non richiedono perciò particolare cura: gli appunti, i diari, i biglietti, le lettere che inviamo ad amici e parenti’.²⁷³ The same attention is dedicated to the formal register (normally a feature belonging to written types of language) that is ‘utilizzato però anche nei discorsi orali, quando: • ci si rivolge a persone con cui non si ha confidenza [...]; • la situazione [...] non è di natura libera e familiare [...]; • il tema affrontato esce dalla sfera degli argomenti di natura pratica e quotidiana’.²⁷⁴ *Italiano Insieme* does not even fail to remind us that, despite this classification, the Italian language, as any other modern language, has several grades of varieties in between the formal and informal registers.

As far as sectorial-based languages are concerned, Unit 30 titles the topic ‘gli italiani settoriali’. The main features highlighted are, in fact, that the young learners should think of them as part of the language they normally utilise but with the addition of words and structures that belong only to a specific subject. The problem of lexicon, which is naturally the most evident when dealing with sub-codes such as the language of medicine, exemplifies very well the idea of a particular code and its relation with everyday use: ‘a parole generiche della lingua comune corrispondono parole più esatte e spesso più numerose della lingua speciale’.²⁷⁵ The example of words like ‘mal di gola’ (that in more technical medical language can refer to ‘faringite’, ‘tonsillite’, ‘laringite’, ‘angina’), together with many others, are offered as effective instances. To this already very complete picture, can be added one more detail that many textbooks tend to underestimate: the relation between the sectorial-based language and the standard language. *Italiano insieme* focuses briefly on the well-known phenomenon of transferring ‘standard’ words to sectorial codes and vice versa. Even though in the early phase of language learning, it is believed that it is important that students familiarise with slightly more complicated issues such as this. The book, therefore, reminds its users that ‘vi è una continua trasmigrazione di parole dai linguaggi speciali alla lingua comune che si arricchisce e si amplia incessantemente’.²⁷⁶ There may be a lack of examples on this matter, but, at the same time, this is supplied by a very strong summary definition:

Se la lingua ci mette a disposizione più varietà, noi dobbiamo scegliere di volta in volta la varietà più adatta. A seconda dell’argomento, e a seconda della situazione, useremo perciò la lingua comune (nella variante colloquiale

²⁷³ *Italiano insieme*, p. 411.

²⁷⁴ *Italiano insieme*, p. 412.

²⁷⁵ *Italiano insieme*, p. 417.

²⁷⁶ *Italiano insieme*, p. 419.

o in quella formale), una lingua settoriale, una mescolanza di lingue settoriale e di lingua comune.²⁷⁷

It is perhaps important to notice that the argumentation never mentions the oral uses of sectorial-based languages (poster, oral presentations, sport commentaries, conference presentations, etc.) and does not relate the content to any everyday text, in the way that the package leaflet of the aspirin had in *L'ora di italiano*. Before going further, it is necessary to mention an example of the exercises proposed for this Unit. A brief text of astronomy is provided and the assignment is set as follows: 'Illustra le caratteristiche linguistiche di questo brano'.²⁷⁸ These kinds of exercises are very difficult to place in effective linguistic education methodologies. The learners are supposed to 'illustrare' (an already very vague requirement) linguistic features of a complicated scientific text relying only on the few indications they are given in the generic overview of the sectorial-based languages. Contrarily to what it was expected, *Italiano Insieme* is detailed and defines well the main features of scientific languages. It is pointed out how the language of science requires the re-use of some words (like *forza*, *potenza*, *resistenza*, etc.), the presence of neologisms, the impersonal use of verbs, the presence of nominal clauses and some other features.²⁷⁹ However, there might not be sufficient material to allow a young learner to 'illustrate' the main features of a scientific text. One might argue that it would have been much more stimulating, on the other hand, to have an exercise for re-writing texts with words and syntax more familiar to the use of young speakers, or an exercise of underlining words and structures that do not find matching correspondence in standard language.

As far as the definition of text and the classification of text typologies are concerned, *Italiano Insieme* adopts a very traditional approach, with a long list of definitions and rules, before presenting the examples. Interestingly, after giving a very generic definition ('un testo è una unità di comunicazione compiuta'),²⁸⁰ this grammar book focuses on what it was probably lacking in *L'ora di italiano*: the awareness of the deep connection between text and context. Following semantic and textual linguistic

²⁷⁷ *Italiano insieme*, p. 420.

²⁷⁸ *Italiano insieme*, p. 428.

²⁷⁹ See chapter 5 for an accurate description of the features of the language of science.

²⁸⁰ *Italiano insieme*, p. 461.

studies on the problem,²⁸¹ the book is keen to point out the existence of two types of context, verbal and situational:

- a) il contesto verbale, ossia l'insieme delle parole, delle frasi, dei significati del testo stesso, che sono la cornice in cui si inserisce ogni singolo pezzo (gli studiosi lo chiamano cotesto);
- b) il contesto situazionale, ossia il luogo, il tempo, le circostanze in cui un discorso viene pronunciato o scritto.²⁸²

With such strong classification, one would expect to have a list of examples which make the topic as clear as possible, but the book seems to ignore this and move on to another topic. It appears that the problem might be a generic approach, in which the information is provided at the expense of a clarification regarding methodology and practice. However, given the tone of the textbook and the careful consideration of topics such as coherence and cohesion (the argumentation takes over 5 pages), the progression of the discourse seems to be in harmony with the overall style. On the other hand, the extreme care utilised for these topics is very useful in the description of another important topic of textual linguistics: how to build a text. Unlike the textbook from 1992, *Italiano insieme* dedicates an entire Unit to analysing the different phases of the writing process. The crucial role of planning writing techniques in teaching methodologies is noted explicitly. Following up on generally accepted textual linguistic theories²⁸³ about having different phases involved in the act of writing, *Italiano insieme* indicates five phases: 'definire il compito', 'cercare i dati e le idee', 'predisporre il piano del testo', 'stendere il testo', 'rivedere quanto si è scritto'. It is evident how following this writing theory may simplify the act of writing, especially when dealing with functional-based types of text. For example, the pre-writing act of addressing the situation is crucial and very well explained, despite the lack of examples: 'definire il compito significa precisare alcune coordinate generali, che funzioneranno come una bussola nel seguito del nostro lavoro. Le coordinate più importanti sono l'argomento, il destinatario, lo scopo, il tipo di testo'.²⁸⁴ It has been noted before how important context is, when planning a functional-based text. Whether the context is real or simulated, the activity of finding a communicative context is certainly crucial when building a text. *Italiano insieme* seems to be clear about this feature, because it suggests a writing activity that does not necessarily imply real life

²⁸¹ See: Tullio De Mauro, *Semantica* (1982), in Enciclopedia dell'Italiano Treccani: http://www.treccani.it/enciclopedia/semantica_%28Enciclopedia-del-Novecento%29/ [Acc. Sep. 2017].

²⁸² *Italiano insieme*, p. 462.

²⁸³ See Flower, Hayes (1981) and Corno (2012).

²⁸⁴ *Italiano insieme*, p. 537.

purposes, but simulates one: ‘può capitare anche di doverci rivolgere a un destinatario immaginario: per esempio, i lettori di un quotidiano, un gruppo di scienziati, un’associazione pacifista. [...] Ma ciò ha poca importanza, ai fini delle nostre esercitazioni: scriveremo perciò ‘come se’ quelle persone dovessero leggere ciò che scriviamo.’²⁸⁵ The idea behind this kind of activity will be well received in the theorisations of Adriano Colombo, who, after the 1998 reform, together with GISCEL, reported some experiments in different writing laboratories which were established to test the new text typologies of the final exam. In a 2002 article (which refers to experience of 1998), he points out how important simulated acts of writing might be for didactic purposes:

A mezza strada stanno le attività a cui si assegna uno scopo comunicativo simulato: destinatari e scopi non ci sono (o meglio, il destinatario è l’insegnante, lo scopo è esercitativo), ma vengono definiti nella consegna, e si scrive “come se” ci fossero; penso alla scrittura di lettere simulate, o di testi argomentativi volti a persuadere destinatari immaginari di una tesi costruita ad hoc.²⁸⁶

Surprisingly, *Italiano insieme* does not make use of any other exercise regarding simulated forms of writing, but it does highlight the differences between an unstructured, creative form of text and a more functional and structured one. It is, indeed, the exemplification of the contrast between creative and functional,²⁸⁷ where creative is understood as a writing that does not have a practical destination nor referent, and where functional has the opposite sense. This, of course, represents the perfect link for analysing different types of text, with a specific interest in functional types. The scientific report, for example, is carefully addressed: the section highlights how, when dealing with the language of science, not only does the lexicon need to adapt to the communicative situation, but also the syntax and the tone of the entire text. Although this section lacks an explicit reference to sectorial-based language, the experienced teacher would be able to connect this theoretical part with the exercise about the variation. For example, a good exercise might be to make students write a laboratory report and then make them notice the most representative features of the language utilised. Not by chance, in the exercise book, one of many exercises on the topic is ‘esamina una pagina di un testo scientifico che usi a scuola: sottolinea in verde tutte le forme impersonali, in rosso tutte le nominalizzazioni’.²⁸⁸ To conclude, it is believed that the educator should, in fact, re-

²⁸⁵ Ibid.

²⁸⁶ Adriano Colombo, ‘Tipi e forme testuali nel curriculum di scrittura’, in Anna Rosa Guerriero, *Laboratorio di scrittura*, p. 45.

²⁸⁷ Colombo, p. 46.

²⁸⁸ Maurizio Dalla Casa, *Italiano insieme. Esercizi* (La Scuola: Brescia, 1995), p. 235.

connect the dimension of variety (sectorial-based languages and other varieties) with the linguistic textuality, in order to make students aware of the possibility of creating texts according to different communicative situations.

4.3 Textbooks in use in 2011/2012

The two following grammar schoolbooks, which will be analysed and compared to the ones published before the 1997/2000 Berlinguer Reform and final exam for secondary school changes, are among the most utilised textbooks for secondary schools in 2011/2012.²⁸⁹ The source of this information is, as Bachis points out, the publisher Loescher who provided a list of the most popular grammar textbooks publications across the Italian territory during the aforementioned academic year. Some of them count several re-prints and, for the purpose of this study, only well-known national publisher and re-printed grammar books have been considered. The two textbooks are published by two of the most popular school publishers in Italy: Fabbri and 'Edizioni Scolastiche Mondadori'. Even though definite data on the matter was not provided, given the number of reprints and the popularity of the publisher, it can be assumed that the territorial diffusion of these textbooks is wide. Furthermore, it is worth pointing out that both of these grammar books have not been written by professional linguists. On this note, in fact, in 2009 an article by Patota-Persiani²⁹⁰ pointed out how, starting from 1987, the Italian language began to be included amongst those languages that were provided with solid grammatical description, something that had not been seen the case previously. In fact, as noted, the situation, at the beginning of the last decade of the last century, was not as alarming as some linguists believed. For example, recently (in 2010), Luca Serianni has expressed his disagreement with Patota-Persiani, pointing out that 'con gli anni Ottanta il livello è migliorato, ma il libro di grammatica mantiene ancora oggi alcuni difetti strutturali, legati non solo alla forza dell'inerzia, ma anche all'intento-esplicitamente raccomandato da committenti editoriali - di non discostarsi dalla tradizione per non turbare l'orizzonte di attesa di molti insegnanti, rischiando di compromettere le adozioni'.²⁹¹ In short, then, a limited number of textbooks will be analysed, because of

²⁸⁹ According to Dalila Bachis, 'Norma e uso nella grammaticografia scolastica attuale', in *Studi di grammatica italiana* Vol. XXIX (Le Lettere: Florence, 2010/2011), pp. 329-348.

²⁹⁰ Giuseppe Patota, Bianca Persiani, 'Grammaticografia', in Lavinio *La linguistica*, pp. 119-138.

²⁹¹ Serianni, *L'ora di italiano*, p.61.

availability; however, the ones used do appear to have been widely diffused given the number of reprints.

Another aspect that must be considered, before analysing the textbooks, is the question of availability. As seen before, old textbooks are very unlikely to be found in libraries or public archives because they are classified as ‘minor’ publications, therefore they are often not given the care and preservation that other publications receive. For contemporary grammar books, the situation is different. All of the books listed by Loescher Editori²⁹² are available in their original and re-printed versions. It might be considered here how new technologies affect the diffusion of schoolbooks. Research by Gaia Passi,²⁹³ conducted in 2009, for example, has examined how receptive the school system is to these new technologies. On the one hand, the contemporary society is populated by digital natives who find themselves familiar with the use of tablets or computers for studying purposes, whilst on the other hand the school system aims to meet these new requirements, integrating teachers’ methodologies with interactive whiteboards, hypertexts and various methodological expedients. Despite all this, schoolbooks do not seem to be receptive for these supports²⁹⁴ at the time of this research, even if, as Passi points out,²⁹⁵ the resources to do so could be convenient, effective and have been achievable for some years. At the moment, Scuolabook (www.scuolabook.com), is the major e-book seller for textbooks and it is run by Hople association. For the purpose of this research, digital versions of textbooks have been consulted.²⁹⁶

The two books are: *Datti una regola* by Rosetta Zordan (Milan: Fabbri, 2011), which is at its third re-print (2012, 2013, 2014) and *L’italiano passo passo* by Francesco Testa, Mauro Mattioli, Italo Rosato and Massimiliano Singuaroli (Milan: Mondadori, 2009) which is in its fourth re-print (2010, 2011, 2012). They will be examined individually and, where necessary, differences and similarities will be pointed out.

²⁹² See the first paragraph of this chapter.

²⁹³ Gaia Passi, 2009, *L’evoluzione dei libri di testo nella scuola digitale*, Università degli Studi di Milano, <https://www.fondazionemondadori.it/wp-content/uploads/2018/12/06_Passi-29-35.pdf> [Acc. May 2019].

²⁹⁴ An exception to this could be the use of CD for whiteboards, even if it refers mainly to primary schools.

²⁹⁵ Passi, p. 31.

²⁹⁶ They are, in full, faithful to the printed version, but 35/40% cheaper, comparing their ISBN prices.

4.3.1 *Datti una regola*, 2011

The first major and more evident difference between these new textbooks and the old ones analysed in the previous paragraph, is that these post-Reform books come often in different volumes to make the product easier to carry in students' backpacks.²⁹⁷ Though this may seem a marginal consideration, it actually provides an interesting starting point to consider how topics are divided into different volumes. *Datti una regola* is divided into five volumes, with the longest reaching 816 pages and the shortest 48. It can be said that two of the five volumes address the normative and theoretical backgrounds on grammar topics, whereas three of them represent the more innovative parts. Beside the renewed exercise book, there is a volume dedicated to exam and test preparation and a volume containing a list of words that are frequently used within the book, which are a recent addition to an already exhaustive system. The two main volumes are dedicated to Phonology, Orthography, Morphology and Syntax, Lexicon, Communication and Textuality. Unlike previous examples, *Datti una regola* points out from the beginning its methodological approach. In particular, it is stated that this book will adopt an inquiry based method, through which examples are always given before definitions.²⁹⁸ Given the methodological planning set out in the first 10 pages, this approach is believed to be very interesting. In particular, this grammar book, as well as *L'italiano passo passo*, addresses the problems exposed in the Common European Framework of Reference for Language. As is well known, CEFR²⁹⁹ is the final outcome of a process of reforms in language education that started in Europe at the end of the Eighties, with the project 'Language Learning for European Citizenship' (1986). The aim was to provide to all European countries general assessments and scales that could be accepted everywhere. In 2001 the Council of Europe validated the general lines of the project and, in 2003 a draft version was released. It is now the most used reference framework scale in Europe and its structure is still evolving to this day. Grammar schoolbooks seemed to have adapted to these new backgrounds and they resulted in the rigid classification of general competences, knowledge and skills that can be found in the schoolbooks analysed. According to the CEFR every language has four activities that are essential to the full

²⁹⁷ The funny comparison between the weight of grammar and the weight of grammar textbooks is made by the title of a paper by Alberto Sobrero, 'Il peso della grammatica', in *Il test fa scuola*, ed. by Rosa Calò, Silvana Ferreri, (La Nuova Italia: Florence, 1997), pp. 489-502.

²⁹⁸ *Datti una regola - Fonologia*, p. 3.

²⁹⁹ CEFR, <<https://rm.coe.int/1680459f97>>[Acc. Oct. 2017].

comprehension of a language: reception (listening and reading), production (speaking and writing), interaction (speaking and writing again) and mediation (translation and interpretation).

The division into different volumes helps to better understand the methodological approach of this schoolbook. Having an entire volume dedicated to sociolinguistic aspects of language helps the educator not to neglect these fundamental aspects of language learning. Furthermore, the list of contents and visual representation of them make the book more understandable for the age of students it has been designed for. As stated already, all the arguments are preceded by an example that often includes comic strips or graphic illustration. For topics such as communicative situation, variation, lexicon and sectorial-based languages, this strategy seems quite appropriate.

Through the entire first part, it can be noticed a careful focus upon the main features of communication. Without being too normative, emphasis falls on the importance of communicative situations ('La situazione concreta, cioè l'insieme delle circostanze in cui la comunicazione avviene, si chiama contesto'),³⁰⁰ together with the difference between signs and signals, verbal and non-verbal communication and so forth. Specifically interesting for the purposes of this research is the difference between spoken and written languages: 'La situazione concreta, cioè l'insieme delle circostanze in cui la comunicazione avviene, si chiama contesto'.³⁰¹ The definition is followed by a very detailed chart which points out the main features of both languages: how one is evanescent and the other enduring, how one is mixed and integrated with other non-verbal languages and the other functions perfectly on its own, how one is lexically and syntactically free and the other one is very precise. A very interesting aspect of the chart is that, although it is stated that the written use of language is characterized by the absence of the referent, that does not mean that there is not a referent, but it is only not present in direct communication. For this reason, it appears that *Datti una regola* is well synchronised with the idea of having a written language always in contact with everyday occasions.

Very important for the purposes of this current research, too, is the short section dedicated to linguistic registers. Using the same methodological resources as earlier (the use of visual and written examples to make the point clear), this section introduces three different communicative situations with the same speaker and the same message. According to the referent, there will be a formal, standard or informal register: 'E

³⁰⁰ *Datti una regola*, p. 7

³⁰¹ *Datti una regola*, p. 32.

dagliela! Certo che ti ho detto la verità. Accidenti, ma quante volte te lo devo ripetere?’³⁰² Both ‘dagliela’ and ‘accidenti’ do not exactly sound like exclamations in use in 2011 for 11/14 years old speakers. However, it is noteworthy that the schoolbooks analysed for these case studies use examples of informal communication only from a ‘speaking language’ point of view. However, it is believed that informal registers are often found as well within written means of communication (such as chats, SMS, etc.). Nonetheless, *Datti una regola* is keen to point out how the variation of register may happen within written or oral forms of communication:

Perché, dunque, una comunicazione orale o scritta si realizzi correttamente e perfetta-mente, occorre anche saper scegliere un adeguato registro linguistico. Saper fare questo significa possedere un’adeguata **competenza comunicativa**, cioè la capacità di adattare la scelta della parole, dell’intonazione e dello stile in rapporto alle varie situazioni.³⁰³

Without going into the specifics of the idea of communicative competence, it is relevant to point out that the concept here is used in the sense of socio-cultural and socio-linguistic competence.³⁰⁴ This affects not only the oral communications, but also, as it is clearly stated at the beginning of the sentence, written communications. Admittedly, there is a lack of examples or exercises about written registers which do not belong to formal registers (out of five exercises of the relative section, only two refer to formal registers and they are both examples of written communications),³⁰⁵ but overall the chapter seems well connected to the functions of language. The dated but still valid model suggested in 1960 by the Russian-American linguist Roman Jakobson seems to be still a valuable tool for grammar education in textbooks both before and after reform of the final exam.³⁰⁶ The model points out six different factors that must happen in an effective act of communication: context, addresser (sender), addressee (receiver), contact, common code and message. Each of them refers to a function of the language (referential, emotive, conative, phatic, metalingual and poetic). It is important to underline that, after a careful description of all the functions, *Datti una regola* points out how, sometimes, the same act of communication might have more than one function, but it is always possible to distinguish the prevalent one: ‘anche se in genere in uno stesso messaggio sono presenti più funzioni, è quasi sempre possibile individuare la funzione prevalente, quella cioè che

³⁰² *Datti una regola*, p. 36.

³⁰³ *Datti una regola*, p. 36, **bold** in the original.

³⁰⁴ For which I refer to Hymes (1966), Bachman (1990), but also Zuanelli Sonino (1981).

³⁰⁵ *Datti una regola*, p. 38.

³⁰⁶ Roman Jakobson, ‘Closing statements: Linguistic and Poetics’, in *Style in language*, ed. by Thomas A. Seabook (Cambridge: M.I.T. Press, 1960), pp. 350-377.

prevale sulle altre ed esprime lo scopo principale per cui il messaggio è stato prodotto dall'emittente'.³⁰⁷

A common trait between the most recent textbooks and the ones before the reform, is the presence of a section (called 'dossier') about the history of Italian language, which in most of the books represents the beginning of the chapter dedicated to the 'diatopia', the variety of language that changes according to the geographic position of speakers/writers. However, *Datti una regola* seems to be the only grammar to introduce (even though indirectly) the difference between 'italiano popolare' and 'italiano regionale'. As is well known, the first studies on the problem by Manlio Cortelazzo believed that 'regionale' was a variety of spoken Italian, while 'popolare' a version of written Italian.³⁰⁸ Subsequent studies revealed that the difference was actually more specific than was previously believed: 'italiano regionale' was a geographic variation of the language, whereas 'italiano popolare' a social differentiation.³⁰⁹ In this light, 'Italiano popolare' is believed to be a variation of the standard language according to its geographic collocation, whereas 'italiano regionale' refers to the social and economic background of its speakers/writers. Therefore, the respective definitions in *Datti una regola* is very detailed:

L'italiano popolare, invece, è l'italiano parlato o scritto da quei cittadini che hanno ricevuto un'istruzione scolastica scarsa, che sono soliti usare il dialetto e hanno, quindi, una padronanza approssimativa dell'italiano nazionale standard.³¹⁰

The 'italiani regionali' are defined as 'i diversi modi di parlare italiano dovuti all'influenza degli usi dialettali delle diverse regioni'.³¹¹ The absence of any mention of written Italian is understandable because, as the Treccani encyclopaedia points out: 'quando si parla di italiano regionale ci si riferisce innanzitutto all'oralità, benché la *regionalità* non vada affatto esclusa dalla scrittura'.³¹² Nonetheless, it is noteworthy to report that *Datti una regola* is the only schoolbook which addresses the problem of the difference between these two varieties. The textbook supports the idea that 'italiano

³⁰⁷ *Datti una regola*, p. 43.

³⁰⁸ Manlio Cortelazzo, 'Avviamento critico allo studio della dialettologia italiana', in *Lineamenti di italiano popolare*, Vol. 3 (Pisa: Pacini, 1972).

³⁰⁹ Such as Gaetano Berruto, 'Una nota su italiano regionale e italiano popolare', in *Scritti linguistici in onore di Giovan Battista Pellegrini*, Vol. 2 (Pisa: Pacini, 1983).

³¹⁰ *Datti una regola*, p. 78.

³¹¹ *Ibid.*

³¹² Teresa Poggi Salani, 'Italiano regionale', in *Enciclopedia dell'italiano* (2010), [http://www.treccani.it/enciclopedia/italiano-regionale \(Enciclopedia-dell'Italiano\)/](http://www.treccani.it/enciclopedia/italiano-regionale_(Enciclopedia-dell'Italiano)/) [Acc. Nov. 2017].

regionale' is a language *spoken* by Italians from all areas which may or may not find traits in written instances. Before going on to analyse how sectorial-based languages are reported in this grammar book, it is interesting to notice two features that are different from the pre-Reform textbooks. One is the short section dedicated to linguistic minorities, which includes both the usual list of languages spoken by the 'traditional' minorities (Provençal, Slovenian, Catalan, Albanian, Greek), and also one dedicated to the 'new' minorities, 'costituite da persone che sono giunte recentemente in Italia dall'Est europeo, dall'Asia, dall'Africa, dall'America Latina e che hanno portato con sé la propria lingua d'origine'.³¹³ The other point is the presence of a dossier regarding how Italian dialects make the language richer with structures and words.³¹⁴ This, considering the long-lasting tradition of harsh criticisms towards Italian dialects in use at schools,³¹⁵ is an interesting approach. Even though dialects were not ostracised in the schoolbooks analysed previously in this chapter, it is noteworthy that, in 2011, middle-school students could learn that 'esiste un continuo scambio di elementi tra un dialetto e l'altro, tra la lingua e i vari dialetti, e viceversa'.³¹⁶

The following chapter³¹⁷ of *Datti una regola*, which addresses sectorial-based languages, in contrast to what might be expected, does not present any major differences with chapters dedicated to the same topic in the pre-Reform schoolbooks. After an interesting example, the definition is followed by a list of the most important features (lexicon, use of foreign words, use of acronyms, preference for nominal rather than verbal structures, etc.). The most interesting and debatable section is perhaps the short paragraph that points out how sectorial-based languages have reason to exist only as far as concern communications within experts of the same field: 'Non ha, infatti, alcun senso utilizzare un linguaggio settoriale quando ci si rivolge ai 'non addetti ai lavori', a persone che non hanno la stessa preparazione e cultura specifica perché, in tal caso, il linguaggio settoriale, anziché favorire una comunicazione chiara e precisa, la ostacola rendendola oscura o addirittura del tutto incomprensibile.'³¹⁸ This might be read as a controversial point because, even if assumed that sectorial-based communications tend to take place amongst experts, it is also true that the impact of this kind of language goes beyond specific fields of expertise. In fact, it is frequent, within these languages, to have word loans or

³¹³ *Datti una regola*, p. 87.

³¹⁴ *Datti una regola*, p. 86.

³¹⁵ See chapter 1 of this work.

³¹⁶ *Datti una regola*, p. 86.

³¹⁷ *Datti una regola*, p. 90.

³¹⁸ *Ibid.*

constructs that are shared by standard language and sectorial-languages. Furthermore, it is believed that it is important to make students not only aware of the existence of such languages, but also to facilitate them in using the languages within the appropriate context. It will be seen, in the following pages, how simulated occasions of writing may be methodologically interesting for making students familiar with sectorial-based languages.

With regards to the section regarding the definition and description of text,³¹⁹ *Datti una regola* does not add further innovation to the approaches were seen so far on this topic. Even pre-Reform textbooks seem to agree in defining a text as a ‘messaggio di senso compiuto, organizzato in modo completo, ordinato, corretto, coerente intorno a un contenuto secondo le regole di un codice’.³²⁰ The definition and the consequent characterisation of the features of a text correspond to the seminal analysis of text linguistics, advanced, among others, by Robert-Alain de Beaugrande and Wolfgang U. Dressler in their *Introduction to Text Linguistics*.³²¹ The theorisation of text linguistics seems to have found a careful receiver in schoolbooks and grammar books, which illustrate this (especially the text structure: cohesion, coherence, intentionality, acceptability, *informativity*, *situationality*) and, theoretically, prepare students to understand the implications of text linguistics. It must be noted how *Datti una regola* stands out for the care and attention it devotes to making every idea as exemplified as possible, with pictures and comic strips, including the exercises.³²² *Datti una regola* distinguishes two macro-groups of ‘testi letterari’ and ‘testi d’uso’ (which seems to be a didactically interesting way to name what, in this work, has been called functional-based texts). ‘Testi d’uso’ are defined as: ‘Testi usati quotidianamente nell’ambito della comunicazione pratica, sociale’.³²³ This short (perhaps too short) analysis seems to lack a methodological characterisation for every text type. It is, in fact, not overly concerned with defining the most evident structural differences of each text type. If we analyse the section about the writing methodologies³²⁴ in the book, it can be noticed how interesting the ‘Guida per scrivere “bene” un testo’³²⁵ is. The so-called *guide* seems to be a useful list

³¹⁹ *Datti una regola*, p. 162

³²⁰ *Ibid.*

³²¹ Robert-Alain de Beaugrande, Wolfgang U. Dressler, *Einführung in die Textlinguistik* (Berlin: De Gruyter, 1981/2011).

³²² *Datti una regola*, p. 170.

³²³ *Datti una regola*, p. 176.

³²⁴ *Datti una regola*, p. 236.

³²⁵ *Datti una regola*, p. 237.

of general recommendations on how to write a 'tema', but it does not say much on how to diversify the content of a text according to referent, context and communicative situations. Concepts such as 'se ci sono 'frasi fatte', affermazioni banali, luoghi comuni, vanno eliminati'³²⁶ may be valid as a general rule, but do not apply to specific text types for which, perhaps, there should have been a dedicated 'guida'. Nevertheless, the real critical points are the two chapters dedicated respectively to 'forme di scrittura nella pratica scolastica' and 'forme di scrittura nel mondo del lavoro'. Interestingly, for the first part, *Datti una regola* maintains the traditional name 'tema' when describing the most popular form of writing in school practice. The definition does not regard any linguistic features at all: 'Il tema è una forma di scrittura tradizionalmente utilizzata nella scuola come esercitazione o prova d'esame. Richiede da parte dell'alunno di svolgere, elaborare una proposta, una traccia assegnata dall'insegnante'.³²⁷ The list of text types (here called 'tema') which follows is a slightly updated version of the famous text types categorisation by Egon Werlich,³²⁸ with six types listed (narrative, descriptive, expositive, argumentative, expressive and interpretative). Interestingly, *Datti una regola*, instead of describing the differences between these text types (which are mentioned at pp. 245, 251, 257, 266, 271 and 276), focuses on the writing process (here, like in all the books analysed for this work, in the form of planning, writing, correction and reviewing). What seems to be remarkable here is that, even though the suggestions are accurate, sentences such as: 'A volte i titoli non danno alcuna indicazione circa il tipo di testo da produrre. Di conseguenza, devi stabilire tu, sulla base del contenuto che devi sviluppare, quale tipo di testo intendi utilizzare. Ad esempio, nel caso di un tema intitolato "L'età dell'adolescenza", puoi stabilire di utilizzare un testo espositivo per fornire informazioni, spiegazioni relative all'adolescenza'³²⁹ might seem difficult to understand for 11-14 year old learners. The problem is not which text a student can produce from an assignment such as 'l'età dell'adolescenza', but rather that assignments such as this do not keep in consideration the context, the linguistic reference and the communicative situation. Similarly, the guide on 'how to write a text' never indicates the referent or the communicative situation of their assignments and therefore it is believed that students would struggle when having to deal, in their professional or academic lives, with functional text types. Finally, looking at the exercises, it can be noticed that the lack of context is also present in abilities tests

³²⁶ *Ibid.*

³²⁷ *Datti una regola*, p. 281.

³²⁸ Egon Werlich, *A text grammar of English*, (Heidelberg: Quelle & Meyer, 1976/1982).

³²⁹ *Datti una regola*, p. 282

such as ‘Svolgi il tema ‘I ragazzi e il telefono cellulare’ utilizzando la seguente scaletta’. An assignment such as this, without an imaginary or real editorial destination, without the supporting documents to help the writer in the process and without an actual connection with the surrounding communicative environment, could certainly produce a well-written essay, but it would be lacking the educational implications that linguistics and reformers had begun to regard as essential to the future professional career of the student.

To conclude, it has been noted how, for certain aspect of text linguistics, *Datti una regola* seems to be still close to traditional methodologies that looked already as if they had been overtaken by the books before the reform of the final exam that have been analysed in this research. Nonetheless it cannot be underestimated the importance, in this textbook, of having sections dedicated to how to address text types in different communicative situations and therefore reflect upon linguistic varieties and sectorial-based languages. For instance, the paragraph about the text types called ‘nel mondo del lavoro’³³⁰ is interesting because it takes into account ‘minor’ text typologies, such as the ‘verbale’ (a written report), the curriculum vitae, etc. After the changes to the final exam for secondary school, it could have been normal to assume that schoolbooks and teaching methodologies would focus more on text types such as the ‘verbale’ or the curriculum vitae. However, *Datti una regola* shows that, despite the advanced theoretical background, this was not necessarily the case.

4.3.2 *L’italiano passo passo*, 2009/2010

Unlike *Datti una regola*, *L’italiano passo passo* is divided into only three volumes, two of which are more normative books and one focuses on the exercise and practical dimension of learning. Interestingly, the two normative volumes are respectively about general and basic grammar rules (morphology, phonology, orthography, syntax) and language abilities (which addresses sociolinguistic topics of the language). As previously pointed out, this partition is adopted to respect the Common European Framework of Reference for Language for which the four activities of reception (listening and reading), production (speaking and writing), interaction (speaking and writing again) and mediation (translation and interpretation) are crucial to understand a language. *L’italiano passo passo* and *Datti una regola*, from a structural point of view, represent the new course and the evolution of language education, for which aspects like lifelong learning,

³³⁰ *Datti una regola*, p. 299.

fundamental abilities of language learning, are the most crucial goal of textbooks and methodologies. On the other hand, it must be recalled that aspects such as communication theory, history of language, text linguistics, have always been present in grammar textbooks in the past 35 years. However, it is only within the new framework and with the introduction (on a European scale) of new reforms (including the final exam reform for Italy in 1997/2000), that educators and learners can have the awareness of the process and the necessity of accomplishing objectives and targets indicated by an institution such as the European Commission. For this reason, the division in volumes and the partition of the topics of *L'italiano passo passo* is not to be underestimated, as it gives us a clear picture of how textbooks adapted to these changes. For the purpose of this research, only the volume on sociolinguistic and text linguistics will be analysed, although it is relevant to point out that the new chapters of the book (including the ones in the volume 'La Grammatica') are introduced by two short sections respectively pointing out the knowledge and the skills that the chapter is highlighting. As can be noticed, this is in conformity with the theoretical background of the CEFRL, that divides competences into descriptive knowledge, skills, existential competences, linguistic, sociolinguistic and pragmatic competences.



Image 3 –The frontispiece of the chapter dedicated to ‘I linguaggi settoriali’, in Francesco Testa, Mauro Mattioli, Italo Rosato and Massimiliano Singuaroli, *L’italiano passo passo* (Milan: Mondadori, 2009/10), p. 63

The first example from *L’italiano passo passo* is the chapter dedicated to sectorial-based languages,³³¹ which, as far as concerns the *conoscenze*, aims to ‘conoscere le caratteristiche dei principali linguaggi settoriali’³³² whereas, as far as concerns ‘abilità’, aims to ‘imparare a riconoscere e utilizzare in modo appropriato le parole in base al contesto’.³³³

³³¹ Previous chapters on semiotics and communications are not here reported because they present extreme similarities with the textbooks previously analysed both before and after the reform of the final exam.

³³² *L’italiano passo passo*, p. 63.

³³³ *Ibid.*

This introductory short section is the most innovative part of this textbook and it states explicitly its aims of combining knowledges and skills in order to make students and teacher reach the final competences required on the subject. It can be noticed how important is the target of ‘abilità’, for, the purpose of learning sectorial-based languages at school is not only to make students aware of their existence, but also to address the fact that every linguistic circumstance needs to be addressed according to a communicative context. The definition of ‘linguaggi settoriali’ is also very stimulating because it looks radically different from the one contained in *Datti una regola* (‘I linguaggi specifici, usati dagli specialisti nei diversi settori professionali e lavorativi per rendere più veloci, chiare, precise ed efficaci la comunicazione e la collaborazione fra chi lavora nello stesso settore, si chiamano linguaggi settoriali o linguaggi speciali.’)³³⁴ as it focuses mostly on the recipient and on the context: ‘I linguaggi settoriali sono detti anche sottocodici perché non sono un ‘altro codice’ (diverso dalla lingua italiana) bensì zone particolari, modi in cui la lingua cambia per adattarsi a comunicare determinati argomenti’.³³⁵ It can be noticed that, unlike all the definitions seen so far, this book does not mention that sectorial-based languages have anything to do with professions or working environment: this is very likely due to the fact that, for example, sectorial-based languages instances also occur among speakers/writers who are experts of a particular role game, or among stamp collectors or any other situation in which speakers/writers adopt a language that could not be understood if a speaker/writer is external to the discipline. In fact, *L’italiano passo passo*, more efficiently but in the same way as *Datti una regola*, points out that ‘se usati da specialisti per comunicare con non specialisti, invece, i linguaggi settoriali provocano difficoltà di comprensione e la comunicazione non riesce’.³³⁶ The problematic point in *Datti una regola* (because it did not make evident the fact that it is frequent to have words or constructs in standard language borrowed from sectorial-based disciplines) is addressed shortly after. In fact, it can be noticed that the specific sections dedicated to different sectorial-based languages address the grammatical aspects the language: morphology and syntax. For scientific languages, for instance, *L’italiano passo passo* duly observes that:

A livello morfologico e sintattico, alcuni elementi caratteristici dei linguaggi scientifici e tecnici sono: • semplicità della costruzione della frase; talvolta le frasi sono prive di verbi (stile nominale): *Presenza di una sintomatologia acuta: cefalea e febbre alta.* • prevalenza di forme impersonali, o composte con la particella si, oppure con una generica prima persona plurale (noi): *Si*

³³⁴ *Datti una regola*, p. 90.

³³⁵ *L’italiano passo passo*, p. 63.

³³⁶ *L’italiano passo passo*, p. 64.

*riscontra la presenza... • prevalenza del presente indicativo, detto "presente atemporale", tipico di regole e teoremi: Il triangolo ha tre lati. L'acqua bolle alla temperatura di 100° C.*³³⁷

These, of course, are only a few of the many more specific traits of scientific language,³³⁸ but it is believed that it is crucial that this textbook point these features out.

With regards to textual linguistics and the definition of text, *L'italiano passo passo* adopts from Robert-Alain de Beaugrande and Wolfgang U. Dressler³³⁹ the description of the fundamental requirements to make a text: cohesion, coherence, intentionality, acceptability, *informativity*, *situationality*. Interestingly, the more exploited of them is *acceptability*, to which this grammar dedicates a full paragraph. *L'italiano passo passo* specifies that 'adeguare un testo al destinatario vuol dire, per esempio, non usare parole troppo difficili con una persona non specialista di un certo argomento o, viceversa, imprecise per un pubblico di specialisti; oppure non tenere conto dei rapporti di ruolo tra noi e il destinatario, usando termini troppo familiari o volgari con persone alle quali sarebbe bene rivolgersi in altro modo'.³⁴⁰ The definition and the explanation of this concept are perfectly in line with the methodological and ideological framework of the current research. To point out so explicitly the importance of variability in communicative and contextual situations is, as mentioned before, a crucial way to develop textual and sociological linguistic awareness in students. However, it is interesting to notice that the word 'adeguatezza' instead of 'accettabilità' (acceptability) might appear controversial for the contrast that the two definitions have in translation theory. Although this might not be a major problem for the young learner, it is interesting to recall that, in translation, 'adeguatezza' is the more philological and faithful version of a text, whereas 'accettabilità' is the more accessible version of it.³⁴¹

In order to emphasise how *L'italiano passo passo* focuses intensively on the methodological background of language learning, it can be noticed that it contains a chapter called 'Il metodo di studio'³⁴² which features a list of skills that aim to make students achieve their final goals (research difficult words, divide the text in paragraphs, underline the most important concepts and make conceptual maps, etc.). One of these

³³⁷ *L'italiano passo passo*, p. 66.

³³⁸ For which it is recommended Riccardo Gualdo, Stefano Telve, *Linguaggi specialistici dell'italiano* (Florence: Carocci, 2012).

³³⁹ See chapter 3.

³⁴⁰ *L'italiano passo passo*, p. 99.

³⁴¹ For a full analysis, see Gideon Toury, *Descriptive Translation Studies and Beyond* (Amsterdam/Philadelphia: John Benjamins Publishing Company, 1995).

³⁴² *L'italiano passo passo*, p. 119.

skills concerns the creation of a text intended for school purposes that is, at the same time, a functional-based type of text: the ‘riassunto’. The methodological importance of this text type has always been known and reference to it can be found throughout the debate about linguistic education.³⁴³ However, together with the ‘tema’, the ‘riassunto’, in traditional school methodologies, has been used as a de-contextualised form of writing. More recently, the text has made something as a return, in part thanks to a recent interview³⁴⁴ by the linguist Luca Serianni, who has been instructed by the Ministry of Education to lead a task force to restore this practice. The interview produced an animated debate, because many schools and teachers associations (especially CIDI)³⁴⁵ pointed out the difficulties and the risks of bringing back the ‘riassunto’.³⁴⁶ In particular, Mario Ambel commented that the discussion around ‘tema’ and ‘riassunto’, in the 1970s, was more about the methods they were taught to students, rather than the linguistic objects themselves. He points out that:

La polemica era e resta contro quella che definimmo la ‘didattica implicita’ e monovalente della scrittura a vantaggio di una didattica esplicita e polivalente del testo argomentativo pianificato e di altre scritture (anziché del tema), delle pluralità di sintesi e di strategie per realizzarle (anziché del riassunto), della riflessione sulla lingua (anziché della grammatica normativa), di una pluralità polifunzionale di riscritture (anziché della sola parafrasi), dei diversi linguaggi impiegati e dell'importanza delle loro implicazioni situazionali e funzionali (anziché della sola legittimazione ‘scolastica’, anzi liceale...)³⁴⁷

The discussion is very stimulating for language education’s purposes. Regarding *L’italiano passo passo*, it is interesting to notice that the way the ‘riassunto’ is presented (‘dopo aver individuato gli argomenti principali di un testo, dopo aver eliminato le informazioni secondarie e usato le tecniche di riduzione, dobbiamo scrivere il riassunto

³⁴³ On the subject, see: Ugo Cardinale, *L’arte di riassumere. Introduzione alla scrittura breve* (Bologna: Il Mulino, 2015); Adriano Colombo, Giorgio Graffi, *Capire la grammatica. Il contributo della linguistica* (Rome: Carocci, 2017); Fabio Rossi, Fabio Ruggiano, *L’italiano scritto: usi, regole e dubbi* (Roma: Carocci, 2018); Luca Serianni, Giuseppe Benedetti, *Scritti sui banchi. L’italiano a scuola fra alunni e insegnanti* (Roma: Carocci, 2015).

³⁴⁴ Luca Serianni, ‘La svolta di mister italiano’, *La Repubblica*, 18th September 2017, <http://www.repubblica.it/scuola/2017/09/18/news/la_svolta_di_mister_italiano_dalle_medie_alla_maturita_meno_temi_e_piu_riassunti_-175793181/> [Acc. November 2017].

³⁴⁵ ‘Centro Iniziativa Democratica Degli Insegnanti’.

³⁴⁶ See the interesting post about it by Mario Ambel, ‘Perché non è bene parlare così di riassunto!’ on the online version of *Insegnare, rivista del centro di iniziativa democratica degli insegnanti*, <<http://www.insegnareonline.com/orizzonti/educazione-linguistica-democratica/mario-ambel-parlare-riassunto>> [Acc. November 2017].

³⁴⁷ *Ibid.*

vero e proprio’).³⁴⁸ This kind of approach makes the subject more in line with the position of Mario Ambel. In fact, even the idea of writing a ‘riassunto’ (which would be more accurate to call ‘sintesi’) for studying purposes and therefore using it as a functional-based type of text, highlights the new nature that the ‘old-fashioned’ assignment might have in the future.

Perhaps one of the most interesting sections of *L’italiano passo passo* is the one dedicated to the practice of writing. The chapter ‘Organizzare un testo’³⁴⁹ not only provides a useful list of suggestions to deal with generic writing assignments (‘Che cosa devo scrivere? Ovvero, quale deve essere l’argomento? Per quale scopo devo scrivere? Per chi devo scrivere? Ovvero, qual è il destinatario del mio testo? Quale genere di scrittura (relazione, articolo, lettera...) devo realizzare? Quali vincoli (di lunghezza, di ordine, di registro linguistico) mi pone la traccia?’),³⁵⁰ but it also specifically addresses the most debated form of writing in Italian school system: the ‘tema’. As repeatedly noted in the previous chapters, the Italian school system relied on the ‘tema’ as its only form of writing assignment for generations. The reaction to this, during the years of fervid academic debate upon linguistic education, was a general denial or at least a careful consideration when having to submit this kind of assignment to students. More recently, on the other hand, the ‘tema’ seems to have been re-integrated as a methodology (even because of its presence in the final exam for secondary schools), but it seems to come with a new set of implications. Firstly, it is not anymore the one and only typology of writing assignments, because it is studied and practised alongside the ‘new’ forms of writing that are now also included into the final exam for secondary school; secondly, the ‘tema’ that students have to deal with nowadays seems to be different to its old version: as it will be shortly seen, what used to be an unrelated, abstract and far from everyday life type of text seems to have now (at least from a methodological and theoretical point of view) precise rules and a new framework to reflect upon. *L’italiano passo passo*, for example, treats the ‘tema’ as an expository-informative type of text: ‘Il tema è un testo, cioè, in cui chi scrive deve spiegare un argomento, un’esperienza, un’attività oppure esporre le informazioni che possiede su un problema o su un fenomeno di attualità’.³⁵¹ What is interesting here is that, after giving this generic definition, the textbook provides, as an example, an assignment that would ‘force’ students to adopt a very specific ‘functional’

³⁴⁸ *L’italiano passo passo*, p. 140.

³⁴⁹ *L’italiano passo passo*, p. 180.

³⁵⁰ *Ibid.*

³⁵¹ *L’italiano passo passo*, p. 187.

approach: ‘Parla di una delle attività di laboratorio che avete svolto durante quest'anno scolastico: spiegate gli obiettivi, le modalità di svolgimento, gli strumenti utilizzati e i risultati conseguiti’.³⁵² This assignment, within the paragraph about ‘tema’, seems to be the ultimate interaction between the old methodology and the new textual assignments. Finally, one of the strongest criticisms that was raised against the ‘tema’ was that this typology would lack a communicative reference, one of the most important features for textual linguistics. *L’italiano passo passo* addresses the problem by affirming that ‘il lettore del tema - a meno che non sia esplicitamente indicato nella traccia in modo diverso - è in genere il professore: non c’è bisogno di dire chi sei e che cosa stai facendo, ma non dare per scontate le conoscenze richieste, proprio perché devi dimostrare di possederle’.³⁵³ Ultimately, it is fair to admit that when writing for a functional purpose (a scholastic newspaper, a school board, etc.), an assignment aimed to verify writing competences (especially in middle schools) may adopt the teacher as a referent. Finally, it is interesting to note the presence, in the appendix of *L’italiano passo passo*, of a chapter dedicated to the preparation of the final exam,³⁵⁴ in which not only different exercises on ‘comprensione della lettura’ and ‘riflessione sulla lingua’ are given, but also students are made aware of the new procedures of the exam. This represents another point of difference with the pre-Reform schoolbooks, for which such a close interaction between the theory and the school practice seemed difficult. *L’italiano passo passo* thus stands out in making the students aware of what would normally be the communicative context, outside the more formal and rigid aspect of linguistic rules.

To conclude, it can be noticed that the analysis of this chapter shows that newer textbooks do not always present features of the most recent teaching methodologies, as far as textuality and functional-based languages are concerned. The analysis helps to provide support to the idea that the methodologies illustrated in chapter 1 and 2 have been present in textbooks and linguistic discussion since before the reform. Further studies on larger samples are needed to confirm this initial data. However, these results generate the research question which will be pivotal of the next two chapters: How did the topics analysed within the investigation of the curricula, reforms and textbooks, inform current school practices of secondary schools?

³⁵² *Ibid.*

³⁵³ *L’italiano passo passo*, p. 188.

³⁵⁴ *L’italiano passo passo*, p. 310.

5. Functional-based writing in contemporary Italian schools of every level of education. Definitions and features of scientific language and case studies.

The emphasis of the previous chapters was on the dynamics between, on the one hand, the academic and institutional progress in linguistics and educational fields and, on the other, the school system with its constraints related to the calendar, bureaucratic necessities and its own ways of responding to governmental directives. The discussion has shown that reflection upon new methodologies and the practices related to them diverge considerably, despite the attempts (started in the 1970s and carried on until present day) to make language education (and the study of textuality, in particular) more suitable to students' everyday lives and, therefore, to provide a more efficient basis for learning. This chapter describes the definitions and the main features of scientific language for educational purposes and investigates various attempts to bridge this misalignment between school theories and practices, analysing experiences (especially for secondary schools of the first cycle) during the academic year 2017-18. This will be done in the light of current linguistic reflections that have attempted to connect current teaching/learning methodologies with the changing world of research. The case study of this chapter is based on my direct observation and personal experience of the course for teachers organised by the Marino Golinelli Foundation in 2017-18 in Bologna. The teachers that attended the course belong to different levels of education and come from every school cycle of Italian state schools. However, the follow up in schools that I have carried on after the experience and that is reported at the end of this chapter focuses exclusively on secondary schools of the first cycle. This project has originated as a result of the ongoing debate between successive governments, linguists and teachers, when in 2013 the Ministry of Education and Lincei Academy introduced several continuing education courses for teachers across the subject range and in nearly all regions of Italy. In some regions, a new interdisciplinary and empirical approach was tried out for language education and functional writing in particular. In this chapter, it is analysed the role and the features of a particular sectorial-based language, the language of science. This case study has been chosen because it facilitates a multidisciplinary approach that involves teachers of different subjects. The features and definitions of both sectorial-based languages and scientific language in particular will be explained below.

Before going further and analysing the case studies regarding a particular type of continuing education course for teachers, it is essential to address the framework in which

this study places itself within the research on sectorial-based languages and, particularly on technical-scientific language.

5.1 Definitions and features of sectorial-based languages

From a terminological point of view, the definition of sectorial-based language is still ambiguous. In traditional Italian linguistics, the older and perhaps most representative definition dates back to Bruno Migliorini and Giacomo Devoto, who, in the first issue of the journal *Lingua Nostra* (1939) addressed the language of sport as a ‘lingua speciale’.³⁵⁵ A more accurate and detailed definition is given by Gian Luigi Beccaria (1973), who referring to this variety of language as ‘linguaggi settoriali’, included, within the definition, the language used by the mass media.³⁵⁶ During the 1980s, though, the influence of more advanced non-Italian studies on the subject, linguists developed different terminology such as ‘lingue’ or ‘linguaggi’ ‘a scopi speciali’, ‘di specialità’, ‘specializzati’; and finally, through the German *technolekt*, Italian linguists started using definitions such as ‘tecnoleto’, ‘sottocodice’, ‘microlingua’.³⁵⁷ Unlike Tullio De Mauro (1999) who believed that ‘lingue/linguaggi speciali’ and ‘linguaggi settoriali’ could be assumed as synonymous,³⁵⁸ Sobrero (1993) thinks that ‘lingue speciali’ represent the totality of an entire phenomenon whereas ‘linguaggi specialistici’ are the different variety of that particular ‘lingua speciale’.³⁵⁹ Therefore, to give an example, *medicine* would be the ‘lingua speciale’ and *cardiology* would be the ‘linguaggio specialistico’. In this case study, I will adopt the definition of sectorial-based languages when referring to general functional-based languages inherent to different disciplines, and of technical scientific language when referring to the case studies, which deal with the relations between Italian language and science. It is adopted the definition of *language* in opposition to the definition of ‘lingua’/*tongue*, because *language* ‘può esprimere concetti anche mediante mezzi non verbali [...] simbolici come le formule e le loro combinazioni’.³⁶⁰ The adjective *sectorial-based*/‘specialistico’ highlights a dichotomy between the strictly specialist

³⁵⁵ See: ‘1939-1959’, in *Indici di ‘Lingua Nostra’*, ed. by Luigi Crocetti (Florence: Sansoni, 1961), pp. 1-164.

³⁵⁶ Gian Luigi Beccaria, ‘Linguaggi settoriali e lingua comune’, *I linguaggi settoriali in Italia*, ed. by Gian Luigi Beccaria, (Milan: Bompiani, 1973), pp. 7-53.

³⁵⁷ See 3.1 of this work.

³⁵⁸ *Grande dizionario dell’uso (GRADIT)*, ed. by Tullio De Mauro (Turin: Paravia, 1999).

³⁵⁹ Alberto Sobrero, ‘Lingue speciali’, in *Introduzione all’italiano contemporaneo. La variazione e gli usi*, ed. by Alberto Sobrero (Rome-Bari: La Terza, 1993), pp. 237-277.

³⁶⁰ Riccardo Gualdo, Stefano Telve, *Linguaggi specialistici dell’italiano*, (Rome: Carocci, 2011), p. 17.

communication among experts of the same discipline and a more pragmatic, classroom-based educational way to use the same linguistic material. However, as noticed by Cortelazzo, every definition aims to point out two different kinds of language variety:

a) veri e propri sottocodici con un lessico particolare (spesso organizzato in rigidi sistemi di nomenclatura) ed eventualmente tratti morfosintattici e testuali caratteristici; b) lingue speciali in senso lato, senza un esteso lessico specialistico, ma comunque legate ad aree particolari di impiego, e caratterizzate da determinate scelte lessicali e da formule sintattiche e testuali ricorrenti.³⁶¹

While educational and didactic variety of sectorial-based languages will be treated in the following sections, it seems necessary to outline a general definition which summarises and highlights the most important features of functional language varieties and, therefore, seems to be crucial for the purposes of this chapter, especially when dealing with particular case studies. As Cortelazzo writes:

[a sectorial-based language is] una varietà funzionale di una lingua naturale, dipendente da un settore di conoscenze o da una sfera di attività specialistiche, utilizzata, nella sua interezza, da un gruppo di parlanti più ristretto della totalità dei parlanti la lingua di cui quella speciale è una varietà, per soddisfare bisogni comunicativi (in primo luogo quelli referenziali) di quel settore specialistico; [...] è costituita a livello lessicale da una serie di corrispondenze aggiuntive rispetto a quelle generali e comuni della lingua e a livello morfosintattico da un insieme di selezioni, ricorrenti con regolarità all'interno dell'inventario di forme disponibili della lingua.³⁶²

The above definition is in line with the idea of Dardano (1994), according to whom, in order to have sectorial-based language, there must be at least one specialist user, a *specialistic* communicative situation and a *specialistic* use of language.³⁶³ Accordingly, as mentioned above, it is possible to distinguish a referential type of communication and an educational kind. The first one, rigidly referred to as sectorial-based language is a typical variety of a communication which occurs between experts who are familiar with the applications, the uses and the contexts of the subject. The second type is found when the communication lacks one of the above points and goes beyond these borders, altering the very nature of the sectorial-based language and producing a 'de-tecnicizzazione' of it.

³⁶¹ Michele Cortelazzo, *Lingue speciali. La dimensione verticale* (Padua: Unipress, 1994) p. 7.

³⁶² Cortelazzo, p. 8.

³⁶³ Maurizio Dardano, 'Profilo dell'italiano contemporaneo', in *Storia della lingua italiana, II, Scritto e parlato*, ed. by Luca Serianni, Pietro Trifone (Turin: Einaudi, 1994). 127

Studies and theories around technical languages have flourished in Italy between the 1990s and present day, to the point that the linguist Michele Cortelazzo outlined a system that facilitates further research into the main features of sectorial-based languages. According to the linguist, it is possible to outline two different phenomenologies of the problem: the *horizontal* and the *vertical* dimension. The *horizontal* dimension is that which ‘identifica varietà delle lingue speciali legate ai diversi ambiti disciplinari (‘lingua dell’economia’, ‘lingua del diritto’, ‘lingua della medicina’, ecc.)’,³⁶⁴ whereas, on the other hand, the *vertical* dimension ‘distingue i diversi livelli ai quali viene usata una lingua speciale (‘testi primari’ such as ‘rapporti’, ‘relazioni’, etc; ‘testi di divulgazione’; ‘testi di volgarizzazione’; ‘testi didattici’; ‘testi con obiettivi operativi’, etc.)’.³⁶⁵ Although I agree with this theorisation, it seems necessary to integrate these two dimensions with other ones, which take into account different linguistic typologies of sectorial-based languages. For example, following the phenomenology firstly outlined by William Labov,³⁶⁶ it is helpful to take into consideration the dimension which sees sectorial-based languages evolving and changing in time (diachronic), the variation of them according to the particular geography of the place (*diatopic*) and finally how they vary according to the preferred channel of communication (*diamesic*).

As far as the *horizontal* dimension is concerned, it can be noticed that ‘l’esasperata specializzazione (e frantumazione) del sapere che si è avuta nel corso del XX secolo ha prodotto una tumultuosa moltiplicazione di terminologie e di linguaggi specialistici’.³⁶⁷ This means that, within the same *specialistic* language, it is very likely to find different levels of communication and, therefore, issues of (mis-)understanding among speakers/writers. The horizontal dimension, in this sense, is strictly connected, on one hand, to the diachronic dimension, and on the other hand, to the objects of communication themselves. The diachronic variety is evident with regard to revolutionary events in the history of communication such as the Copernican revolution, the introduction of Arabic numeration, the binary arithmetic system established by Leibniz, or even just the introduction into the lexicon of new words essential to refer to the new discoveries and progress made by science and technology in the past centuries. The objects of

³⁶⁴ Michele Cortelazzo, ‘Lingue speciali: la dimensione verticale e orizzontale’, in *Italiano d’oggi* (Padua: Esedra, 2000), p.31.

³⁶⁵ Cortelazzo, *Lingue speciali*, p. 32.

³⁶⁶ See 3.2.

³⁶⁷ Claudio Giovanardi, ‘Storia dei linguaggi tecnici e scientifici nella Romania: italiano’, in *Romanische Sprachgeschichte. Ein internationales Handbuch zur Geschichte der romanischen Sprachen*, 3/08 ed. by Gerhard Ernst and others (Berlin and New York: De Gruyter, 2008) pp. 2197-2211.

communication may vary according to whether we refer to *hard* or *soft* disciplines, and whether within the same disciplines we adopt a *hard* or *soft* approach to the language (typically depending on the channel of communication). Following the definition by Dardano,³⁶⁸ disciplines (like mathematics, physics and chemistry) are linguistically *hard* when they use rigid and extremely characterised structures from both a lexical and semantic point of view; on the other hand subjects such as sociology, law or philosophy are linguistically *soft* because they have more to share with standard languages and they often must use standard languages' structures to communicate.

As regards the *vertical* dimension of sectorial-based languages, it can be noticed that it often concerns the so-called 'dimensione diafatica', which refers to how language may vary according to different communicative situations, to different contexts and to the function of the language itself. This dimension is therefore essential for the creation of a specific, sectorial-based code within one or more subjects. Accordingly, Tullio De Mauro has highlighted seven major points through which it is possible to outline a *specialistic* language:

1. La determinazione dei significati di vocaboli destinati ad apparire nei discorsi di quella disciplina;
2. La selezione del piano di esperienza su cui possono collocarsi i sensi (i referenti) delle frasi, dei discorsi e dei testi di quella disciplina;
3. L'esplicitazione dei criteri di definizione dei termini e di scelta del piano di riferimento;
4. La delimitazione ben precisa della coerenza interna del vocabolario e delle forme di comunicazione utilizzati (le scienze dotate di maggior coerenza interna, semantica e sintattica, si distinguono da quelle meno coerenti);
5. La definizione di una lista – tendenzialmente chiusa – di termini, che nelle scienze più astratte assume di asserti elementari esplicitamente o implicitamente definenti il termine stesso: gli assiomi;
6. Il passaggio degli assiomi a teoremi, dai quali si estraggono previsioni falsificabili, secondo il criterio noto soprattutto nella formulazione di K. Popper (1934);
7. La riduzione di teoremi e assiomi a un numero ristretto di teoremi e assiomi più generali.³⁶⁹

³⁶⁸ Maurizio Dardano, 'I linguaggi scientifici', in *Storia della lingua italiana, Volume II, Scritto e parlato*, ed. by Luca Serianni, Pietro Tifone (Turin: Einaudi, 1994).

³⁶⁹ Tullio De Mauro, 'I linguaggi scientifici', in *Studi sul trattamento linguistico dell'informazione scientifica* (Rome: Bulzoni, 1994), p. 35.

As can be seen, these points extend from an elastic (point 1) to a very rigid level of formality (point 7): science tends to explicate its criteria and its processes, whereas technical disciplines find their foundation following science's codifications. Technical disciplines and *hard* sciences, in particular, are founded on axioms and postulates which need a very high level of formality and a very specific level of vocabulary, whereas *soft* sciences, as noted, must keep referring to the standard language and borrow words and structures from it. In this regard, Dardano noticed:

Ai nostri fini ci interessa sottolineare una conclusione cui giunge lo studioso: dal momento che è fondata su assiomi, una scienza 'dura' (come la matematica o la fisica) ha un bisogno piuttosto ridotto di termini specialistici e sconosciuti alla lingua comune. Invece a tale specificità devono ricorrere le scienze 'mollì', che hanno un continuo bisogno di differenziarsi dalla lingua comune, mediante particolari scelte lessicali: si pensi, ad esempio, alla stessa linguistica con le sue varie specializzazioni.³⁷⁰

The features of sectorial-based languages analysed so far help to address the debate regarding language varieties. As already mentioned, sectorial-based languages, because of their characteristics (their diachronic, *horizontal* and *vertical* dimensions) seem to vary according to different factors. It is crucial to bear this in mind because, when it comes to understanding and exploiting the importance of multidisciplinary teaching and linguistic education, it will be essential to underline their variable dimension. In this present study, it will be noticed that, in many instances, lexicon will have a central role. Not by chance, in fact, lexicon is probably the most exploited and studied aspect of functional languages. As Cortelazzo notes:

Il lessico risulta, dunque, il settore centrale per distinguere tra i tipi di varietà diafasica di cui stiamo parlando. Le lingue speciali in senso stretto hanno, come elemento costitutivo, non solo un lessico peculiare particolarmente esteso, ma anche regole di formazione di quel lessico convenzionalmente stabilite e accettate; le lingue speciali in senso lato, invece, non dispongono di un lessico specifico vero e proprio, o ne dispongono in misura piuttosto ridotta e, soprattutto, non dispongono di regole di formazione del lessico rigorosamente definibili.³⁷¹

Furthermore, lexicon represents the very foundation of the 'Vocabolario di Base' (VdB from now on), a list of 7000 words that De Mauro³⁷² has divided according to their iteration in a sample of written and oral texts.

³⁷⁰ Dardano, *I linguaggi scientifici*, p. 502.

³⁷¹ Cortelazzo, *Lingue speciali*, 2000, p. 30.

³⁷² The first edition was published in 1980 in Tullio De Mauro, 'Guida all'uso delle parole', in *Libri di Base* n. 3, 1st edition (Rome: Editori Riuniti, 1980), pp. 149-183; the 130

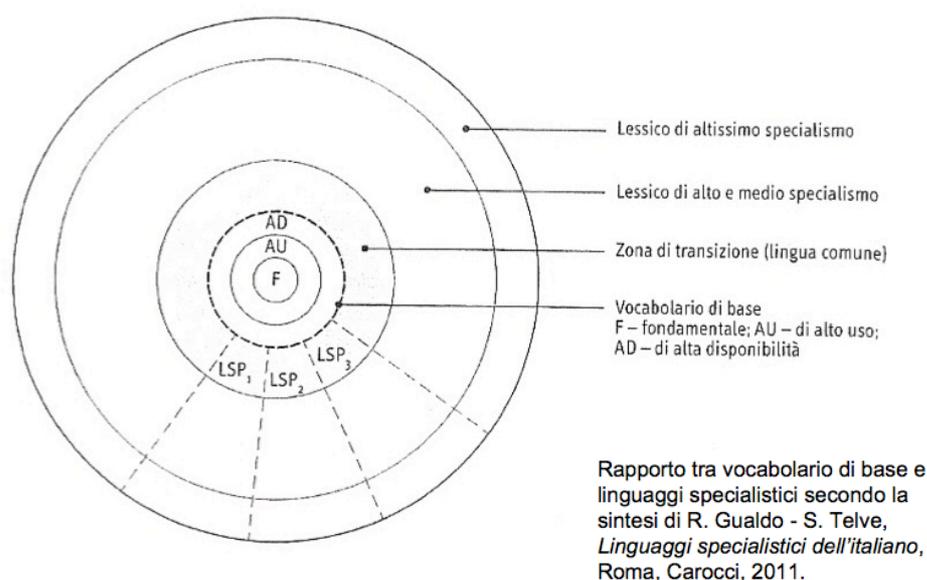


Illustration 4 – Riccardo Gualdo, Stefano Telve, *Linguaggi specialistici dell'italiano* (Rome: Carocci, 2011), p.23.

As the image above shows, the centre of the pie chart is the core of the lexicon of any language (F), which includes the majority of the words in the *VdB*. The sections AU and AD, which include around 2500 words, are respectively called ‘lessico di alto uso’ and ‘di alta disponibilità’ and refer to words which are normally found in very specific occasions (*mensa, lacca, tuta*). Moving further out in the diagram, it can be noticed dividing lines between the standard use of words (which, according to Gualdo and Telve,³⁷³ accounts for 45000-50000 words) and the functional and sectorial-based languages, which interest this study the most. The area in the pie chart that has dashed lines is used to signal complex interrelations between the two codes, and it is also divided into two sub-areas: ‘lessico di medio e alto specialismo’ and ‘lessico di altissimo specialismo’. However, these borders are relatively fluid: words such as *fegato* or *diabete*, for example, can be found in both the area of functional-technical language (medicine, in this case) and the area of the ‘lessico di alto uso’; in this case, it can be noticed that the area that borders

most recent edition is called ‘Nuovo Vocabolario di Base’ and it is available online: <<https://www.dropbox.com/s/mkcyo53m15ktbnp/nuovovocabolariodibase.pdf?dl=0>> [acc. Jan. 2018] and published via the *Internazionale* website, for which De Mauro has been editor in chief.

³⁷³ Riccardo Gualdo, Stefano Telve, *I linguaggi specialistici dell'Italiano* (Rome: Carocci, 2012).

the *VdB* has a dashed line, suggesting frequent interactions. In 2007, in their study on Italian vocabulary, De Mauro and Ferrieri counted approximately 130000 phrasal expressions belonging to sectorial-based languages and in 2007, the GRADIT³⁷⁴ added around 200000 sectorial and specific words to that.³⁷⁵

With regards to the variety of approaches within the sectorial-based language itself, it can be noticed how every discipline may have different levels of communication as well as different micro-disciplines with their own sub-codes. This is exemplified in the following diagram:

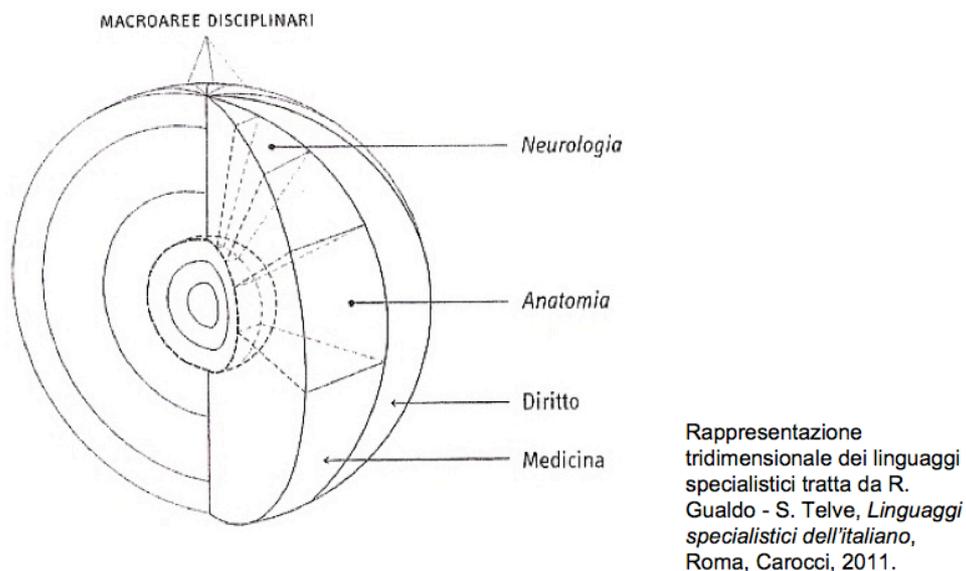


Illustration 5 - Riccardo Gualdo, Stefano Telve, Linguaggi specialistici dell'italiano (Rome: Carocci, 2011), p.25.

The different cross sections of this diagram show that the two macro-areas of the language of medicine and the language of law are divided in different variations and sub-areas. Within the 'slice' of 'medicina', for instance, it is possible to notice the micro-'slices' of 'neurologia' and 'anatomia' and this can be applied to every sectorial-based language. Furthermore, looking closer at the varieties of sub-languages, and graphically 'taking off' the 'slice' from the sphere, it is possible to analyse how the linguistic occasion may vary. The graphic below represents a pyramid with a quadrangular base whose corners are R (register/'diafasica' variation), T (time/diachronic variation), S (space/geographic variation), C (channel/communication variation). It can be noticed how the levels of communication change according to R: communication between experts, educational,

³⁷⁴ Tullio De Mauro, *GRADIT: Grande dizionario dell'uso* (Turin: UTET, 1999-2000 1st edition).

³⁷⁵ Tullio De Mauro, Silvana Ferrieri, 'Quantità dei lemmi nei dizionari', in Guado, Telve, p. 55.

didactic, profane; according to C: written or oral texts; according to S: linguistic loanwords from English, Greek and Latin derivative words or use of dialects.

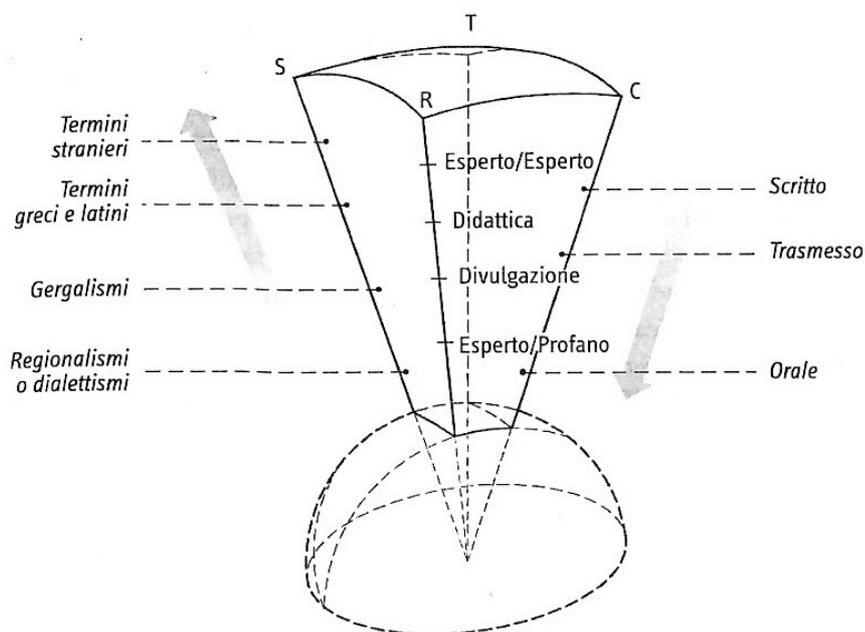


Illustration 6 - Riccardo Gualdo, Stefano Telve, *Linguaggi specialistici dell'italiano* (Rome: Carocci, 2011), p.27.

Finally, as already noted, words and lexicon in general, have a central role when analysing functional and sectorial languages. This is why it is crucial to shed some light on the difference between terms and words, between denotative and connotative use of the language. In fact, it can be said that signifiers express their signified meanings either in a very specific, unambiguous, univocal way (*terms*) or in a vaguer and indefinite one (*words*). Therefore, it is agreed that terms are ‘segni in cui il rapporto tra il significante (cioè l’espressione usata per significare) e il significato (il concetto legato all’espressione) è o tende ad essere biunivoco’,³⁷⁶ and, unlike words, they ‘permettono di concentrare in un unico *item* un significato molto preciso, molto ben determinato/delimitato, che rifugge dalla genericità o dalla massima *estensione* che invece hanno o possono avere le parole della lingua comune’.³⁷⁷ Whilst *terms* provide a univocal and unambiguous meaning to the signifier, *words* may also be interpreted in different ways and adapt their meanings to a large range of linguistic occasions. Furthermore, terms and words differ because, while terms have very limited *flexibility*, words can have a very large *flexibility*: the word *cosa*, for example, has a major extension in its flexibility because it can refer to a vast set of linguistic objects; words like *coltello* or *penna*, on the other hand, have a smaller

³⁷⁶ Cristina Lavinio, *Comunicazione e linguaggi disciplinari. Per un’educazione linguistica trasversale*. (Rome: Carocci, 2004), p. 29.

³⁷⁷ *Ibid.*

flexibility because they can only refer to one linguistic object. However, sectorial-based languages and scientific languages, in particular, have a very large number of terms (univocal/unambiguous signifiers) which tend not to be very flexible. In fact, it is evident that, in scientific and technical nomenclatures, terms and words aim to have the smallest level possible of ambiguity in order to deliver information in the most univocal way.³⁷⁸

5.2 Italian, language of science

Considering that the concern of this study is with written contemporary scientific language and most specifically the impact it has on the school system, it is important to point out that four degrees of analysis will be taken into consideration in the cases studies: lexicon, morphology, syntax and textuality. According to Cortelazzo, there must be three key conditions through which a scientific text is produced:

1. Al centro del rapporto fra testo e realtà extra-testuale deve sussistere il principio della verificabilità o falsificabilità delle asserzioni prodotte;
2. Oggetto del testo deve essere la realtà extrasoggettiva e ogni intrusione soggettiva dell'autore deve essere bandita;
3. Il testo deve essere 'chiuso', ovvero decodificato su codici standardizzati e interpretabili in un'unica direzione.³⁷⁹

It is therefore evident that any scientific text can be regulated by the aforementioned three categories, which will be working together to give the final product: a scientific text will style itself around the principles of precision (a category linked to the idea of the *lexicon*), 'deagentivizzazione' (which is close to the idea of *morphology* and *syntax*), concatenation (between the category of *syntax* and *textuality*) and synthesis (*textuality*-related). All of these features work together to create the text and can be individually analysed. The focus of the following case studies will be mostly on sociolinguistic aspects of the results, focusing on the particular communicative situations the texts were produced. However, it is often necessary to examine mono-linguistic features that define scientific languages and functional approaches to written languages.

³⁷⁸ This may vary, for example, if we look at the language of physics and words such as *forza*, *massa*, *campo*, *onda*, etc. that fall into the ambiguity of having different meanings according to different communicative situations.

³⁷⁹ Michele Cortelazzo, *I sentieri della lingua. Saggi sugli usi dell'italiano tra passato e presente* (Padua: Esedra, 2012), p.185.

5.2.1 Lexicon

As mentioned above, lexicon is probably the most evident and exploited level of analysis, as far as scientific languages are concerned. It is well known that sectorial-based languages not only use, but also need, a very large range of specific terms that are valid to univocally define a linguistic item. As for every other feature of sectorial-based languages, scientific lexicon must be addressed with care, discriminating between a more specific and rigid type, dedicated to communication between experts, and a more educational and didactic type, which is normally used by experts when dealing with non-experts, in generalist publications or in schools. Furthermore, it must be mentioned that scientific language is a vast and complex field especially when it comes to lexicon. Different disciplines have different terminology and it is only for the purposes of this research that they are dealt with, as if they were one group. As noticed previously, rigid disciplines such as physics or mathematics, very often use new meanings for common words (*asse, campo, moto, onda*), whereas other disciplines such as chemistry or biology tend to create words through suffixation, *prefixation*, eponyms, phrasal words, and so forth. Nevertheless, every scientific language aims to be as univocal and referential as possible and, therefore, their terminology is founded on objective and *neutral* terms. It can be said that their terminology consists in six major categories:

1. Standard and common use words with new meanings
2. Neologisms
3. Loanwords
4. Eponyms
5. Specific collateral terminology
6. Phrasal and nominal constructions

As already mentioned, rigid sciences such as physics or mathematics, tend to use the first category above and, as noticed by Porro,³⁸⁰ their languages ‘sul piano dei significanti [...], predeterminano e costruiscono convenzionalmente dei sistemi omogenei di significati, attraverso la ridefinizione continua dei medesimi’.³⁸¹ The translation/transference of words used in common languages into science has been a major point of debate between

³⁸⁰Marzio Porro, ‘I linguaggi della scienza e della tecnica’, in *I linguaggi settoriali in Italia*, ed. by Gian Luigi Beccaria (Milan: Bompiani, 1973), p. 187.

linguists and scientists. It has been often thought that the use of common words with different meanings in physics and mathematics might be dangerous for communicative purposes. Nonetheless, words such as *azione*, *reazione*, *potenza*, *soluzione*, *insieme*, *successione*, *funzione* are all words that still keep their double meaning. However, with these words, it is still possible to identify the ones that tend to have a more scientific rather than standard flavour (*asse*, *campo*, *curva*, *fuoco*) or a more standardised one (*corpo*, *distanza*, *massa*, *forza*). The process of creation of this transference of meaning is due to the use of metaphors³⁸² as ‘da una parola del lessico comune, come *scudo*, si prendono uno o più *semi* (cioè tratti semantici), in questo caso la forma, lo spessore, le dimensioni, e li si applica per analogia e somiglianza a un altro oggetto che ha funzioni diverse’.³⁸³

Neologisms, on the other hand, are the most representative feature of the lexicon of scientific languages. However, it is interesting to point out that science very rarely adopts absolute neologisms, often preferring re-shaping and working on terms and words that are already in use in other disciplines or codes. This is why it is very common to see neologisms created via suffixes or prefixes. In chemistry, for example, the only way to express the quantity of an element is using the prefixes *exa-*, *peta-*, *giga-*, *mega-*, *chilo-*, *etto-*, *deca-*, *deci-*, *centi-*, *milli-*, *micro-*, *nano-*, *pico-*, *femto-*, *atto-*. On the other hand, suffixes, to keep using the example of chemistry, often indicate the level of *valency*: superior (*-ico*: *nitrico*), inferior (*-oso*: *nitroso*) or define the difference between acid (*-ico*) and salt (*-uro*). It goes without saying that chemistry is just an example and processes like this occur in every scientific discipline. In medicine, for example, suffixes like *-ite* indicate severe inflammatory process (*appendicite*, *epatite*), whereas suffixes like *-osi* refers to likely chronic diseases (*osteoporosi*, *tubercolosi*). In the category of neologisms there is also space for affixes which are a bound morpheme added to a word. They are normally from a Latin or Greek origin and are often used in medical language: *ema-*, *pneumato-*, *-filia*, *a-* are some examples.

³⁸²As noted by Lauretano, ‘Residui metaforici nei linguaggi scientifici’, in *L’educazione linguistica e i linguaggi delle scienze*, ed. by Anna Rosa Guerriero (Florence: La Nuova Italia, 1988).

³⁸³Gualdo - Telve, p. 83.

Disciplina	Totale	Polirematiche	Monorematiche	Confissi	Suffissi	Prefissi
Biologia	4.829	810	3.884	125	5	5
Botanica	9.097	783	8.122	180	11	1
Chimica	13.283	3.721	9.288	234	26	14
Diritto	4.663	2.391	2.272	-	-	-
Economia	2.622	1.461	1.160	1	-	-
Fisica	5.283	2.659	2.597	25	1	1
Matematica	2.459	1.229	1.225	2	-	3
Medicina	19.319	4.543	14.253	510	5	7
Zoologia	7.326	447	6.637	234	7	1

Table 7 - Cristina Lavinio, *Comunicazione e linguaggi disciplinari. Per un'educazione linguistica trasversale*, (Rome: Carocci, 2004), p.29..

The table above indicates the lexicon in sectorial-based languages after an analysis carried out in 2003 on words from the GRADIT³⁸⁴ (*Grande dizionario dell'italiano d'uso*) with specific attention to neologisms. Medicine and chemistry appear to be the disciplines with a higher rate of new words, confirming the tendency of natural science to create new names for large numbers of phenomena and items. In this survey, medicine and chemistry seem to prefer the creation of new words via prefixes, suffixes and affixes, rather than using phrasal processes as is found in for law and finance.

Loanwords are indeed very popular among scientific and technological/IT terminologies. Other than the usual list of loanwords that, every year, seems to become longer in Italian scientific language (*cracker, gel, bit, byte, feed-back*, etc.), I should mention also acronyms such as bit (*binary - digit*), laser (*light amplification by stimulated emission of radiation*) or radar (*radio detection and ranging*).

Eponymy is the process that tends to name the linguistic object with the name of the person/s that discovered it, researched, made it popular. It may be helpful to remember that eponyms (volt, ohm, ampere) can also be affected by suffixation (*einstenio, russelite, aragonite*) or becoming part of phrasal constructions ('legge di Boyle', 'numero di Avogadro', 'teorema di Pitagora'). Eponymy, as will be seen in the next section, is crucial from an educational point of view not only because it helps teachers or experts to build bridges between a very specific and aseptic dimension and a more human one, but also because it offers a strong connection between the world of science and the humanities, giving the possibility to discover the humans involved in experiments and their processes.

³⁸⁴ Tullio De Mauro, *Grande dizionario italiano dell'uso*, (Turin: UTET, 1999-2007).

‘Specific collateral terminology’ is a definition created by Serianni (2005), by which the linguist points out the terms ‘caratteristici di un certo ambito settoriale, che però non sono legati a effettive necessità comunicative, bensì all’opportunità di adoperare un registro elevato, distinto dal linguaggio comune’.³⁸⁵ Perhaps the most appropriate example comes from the medical language: doctors tend to say ‘accusare un dolore’ rather than the most colloquial and understandable ‘provare un dolore’ because it is less accessible to the profane audience. While the specific terminology can be learnt by a non-*specialistic* audience, the collateral terminology is more exclusive even though completely replaceable.

Finally, scientific lexicon has a general nominal tendency within the sentence. As will be seen when dealing with morphology, it is accepted, in sectorial based-languages, that sentences avoid the use of verbs or tend to nominalise them. As Lavinio notices: ‘la semantica del verbo, cioè quell’elemento che è centrale in ogni frase, tende a scaricarsi (e spesso si scarica) sui nomi. Di contro i verbi usati sono poveri di significato (si tratta di verbi come *essere, consistere, presentare, comportare, dipendere, ottenere...*)’.³⁸⁶

5.2.2 Morphosyntax

If, on the one hand, lexicon is the most exploited and evident aspect of sectorial-based languages, on the other hand, morphosyntax is probably the most undervalued. Teachers and educators are more likely to spend time on specific words and neologisms than analysing the importance of how sentences are constructed in sectorial based-languages. Nevertheless, morphosyntax is crucial because it is the perfect bridge between the general knowledge of scientific languages (lexicon) and one of the more effective ways of teaching them in school (textuality). Morphosyntax represents the way three major features of the language of science can be pointed out: the tendency to depersonalise and make less personal what it is written or said; the capacity to be timeless; and the use of passive verbal forms. All of the above features address scientific language as needing to be deprived of the agent (the person who makes the action) and deprived of subjectivity. Grammatically, this is evident when the language prefers a sentence like ‘il paziente è guarito grazie alla somministrazione della tale medicina’ rather than ‘il medico ha guarito il paziente grazie alla somministrazione...’. Furthermore, it is also found in the use of

³⁸⁵ Luca Serianni, *Un treno di sinonimi. I medici e le parole: percorsi linguistici nel passato e nel presente* (Milan: Garzanti, 2005), pp. 127-128.

³⁸⁶ Lavinio, p.107.

passive forms such as ‘è stato osservato che’, ‘se x viene posto’ or non-animated subject as ‘il termometro misura la temperatura’. It is important to underline that, though these features are generally accepted and have been always present in scientific languages, their occurrence depends on historical and geographical factors and also according to different disciplines. According to a study by Martinez (2001),³⁸⁷ passive forms are more likely to be found in medicine and physics (42%), and far less in biology (35%) and sociology (27%).³⁸⁸ Moreover, more recently, studies have shown a significant increase of personal forms in scientific communication,³⁸⁹ suggesting a greater emphasis on making the agents responsible of the actions: terms like *supponiamo* or *immaginiamo* are starting to make their way into the language, together with the use of *noi*, rhetorical questions and so on. This is crucial for educational purposes, as it allows students (especially in primary and early secondary school) to feel the communicative system more familiar to their own experience and standards.

Finally, as far as concerns the use of verbal tenses, it is universally accepted that scientific language prefers the present tense so as to confer the most timeless dimension possible. The present tense allows scientific languages to be universal and share general truths or opinions: the sentence ‘l’acqua bolle a cento gradi’ uses the present tense, but it does not need to be referred to a possible ‘now’. However, some specific texts, such as laboratory reports, experiment reports or, in some cases, scientific posters, seem to prefer past tenses, as they tend to *narrate* the experience. Conditional and subjunctive are regularly found in mathematics (‘sia X il coseno di...’), while some regulative texts such as instructions on taking medicine present forms of imperative tense (‘non assumere in caso di gravidanza’).

³⁸⁷ then cited by Gualdo - Telve, p. 252.

³⁸⁸ Of course, one problem is scientists preferring writing in English rather than Italian, to increase their reachable audience.

³⁸⁹ It can suffice to visit daily Nature or Science Mag websites, to incur in scientific articles that prefer the use of “we” on impersonal forms. See, for example Simon J. O’Hanlon and others, ‘Recent Asian origin of chytrid fungi causing global amphibian declines’, in *Science*, 360 (2018), pp. 621-627; or the abstract of Julian A. Steele and others ‘Thermal unequilibrium of strained black CsPbI₃ thin films’, in *Science*, 366 (2019), <https://science.sciencemag.org/content/early/2019/07/24/science.aax3878?rss=1> [Acc. July 2019]; or the abstract of Lei Wang, ‘Nuclear hnRNPA2B1 initiates and amplifies the innate immune response to DNA viruses’, in *Science*, 365 (2019), <https://science.sciencemag.org/content/early/2019/07/17/science.aav0758/tab-figures-data>.

5.2.3 Syntax

All of the features that regard morphosyntax can be applied to syntax as well. Firstly, as is well known, every linguistic sentence is formed by a topic (all that is known) and a comment (the new information). In linguistic situations, the realisation of these two can take place with: a) a topic kept constant through the entirety of the sentence; b) the topic becoming the comment and the comment becoming the topic and so forth; c) a disarticulated topic. Spoken languages tend to realise the topic-comment dynamic through b), with constant reprises of arguments and points already occurring previously in the conversation. However, the language of science seems to use b) as well, because of its need to be extremely specific and not to leave anything open to the interpretation. Moreover, the dynamic often sees the comment preceding the topic in the most nominal variations: ‘L’uso tipico del cloro da parte dell’industria è quello di energetico disinfettante’ is a more focused version than ‘Il cloro è usato dall’industria come energetico disinfettante’, which appears to be more thematic. The tendency of scientific languages to be as clear as possible often by means of repetitions throughout the sentence is crucial when dealing with the version of scientific language that school provides. In fact, in Italy, Italian language teachers seem keen to avoid repetitions in written assignments from their students,³⁹⁰ trying to find synonyms even when not specifically needed. This is something that language of science cannot accept at any level and needs to be kept in consideration during the case studies of this work.

5.2.4 Textuality

Textuality deals with communicative situations and contexts, which, as seen in previous chapters, are something that have often been downplayed in the school curricula. Scientific language, as any other sectorial-based language, has a variety of genres which vary according to communicative situations and contexts. Dardano noticed:

Caratteristica di un testo scientifico è in genere una struttura esplicativo-dimostrativa che si esprime mediante: determinati tipi di collegamento tra le parti, suddivisioni interne, formule di introduzione, di presupposizione e di

³⁹⁰ An interesting opinion can be found in Michele Cortelazzo, ‘Le ripetizioni inevitabili’, in ‘Guida agli Enti Locali’, weekly publication of the newspaper ‘Il Sole 24 Ore’, 2nd March 2002. The short text is also available online at <http://www.maldura.unipd.it/buro/> [Acc. December 2018].

dipendenza (è noto, dato che, ammesso che, ne segue, da X dipende Y), la ripetizione degli stessi vocaboli o sintagmi a breve distanza.³⁹¹

It can be said that scientific texts seem to be presented only as demonstrative or explicative texts with recurrent characteristics, such as introduction, exposition of a problem, solution and conclusion, as well as a very high presence of charts, tables and images. However, when considered in a different context, such as educational events or school classes, the chosen style may look slightly different. The demonstrative or explicative seems to become a more narrative style, which aims to get events into the readers' memory. In the light of this, it is evident that the linguistic medium and the communicative situation can change the result not only of the tone, but also, of the features of a scientific text. For example, in relation to the diffusion of science, nowadays, alongside *specialistic* publications, essays and journal articles, there are abstracts, TV or radio talks, and so forth. This demonstrates that the linguistic vehicle affects the nature itself of the language, to the point that, while in the seventeenth and eighteenth centuries a sentence counted between 63 and 53 words, in the last century it count less than 27, and this number seems likely to decrease.³⁹²

5.3 The sociolinguistic level of analysis

After having analysed the most evident and important features of the linguistic levels of languages of science, it is crucial to bear in mind that perhaps the most interesting feature of them, for the purpose of this dissertation, is their realisation at sociolinguistic level. By sociolinguistic it is meant the level of analysis which goes beyond grammar alone and focuses on what has been previously called the *vertical* dimension of sectorial based-languages, their realisation in particular times, contexts and communicative situations. Theoretically, three different levels can be noticed, as far as the sociolinguistic analysis is concerned: an extremely *rigid* level which regards the expert to expert type of communication; an intermediate, more *educational* level, which involves communications between an expert and an interested, though non-expert, audience; a *didactic* level which is the level of school education. The effective difference between these levels, though, is primarily that terms and constructions that are very specific on one level of analysis tend to change towards a more 'standardised' approach in the other

³⁹¹ Dardano, 'Profilo dell'italiano contemporaneo', p. 498.

³⁹² Matteo Viale, 'Note sulla costruzione del periodo nella formazione storica del testo scientifico italiano', in *Sintassi storica e sincronica dell'italiano. Subordinazione, coordinazione e giustapposizione*, ed. by Angela Ferrai (Florence: Franco Cesati, 2009).

level: *leucociti* from the rigid level becomes *globuli bianchi* in the more educational and didactic level; *nefropatia* becomes *malattia dei reni*, etc. It is very much an understandable process considering how, on a didactic level, the extreme rigidity might often generate aridity and lack of interest or incomprehension in the young learner. However, very often with the attempt to *negotiate* a language that is not too specific and more approachable for every learner, the school system has developed an incorrect language that wrongly and confusingly tries to find a middle ground between the rigid and didactic level (an example is the so-called *matematichese*).³⁹³ Assuming that the mix between registers and levels is unavoidable, the only way to make language and language teaching more efficient is through a documented and careful use of the scientific basis of the language. Too often, as noticed, manuals and educational scientific articles neglect the very evident sense of research and work that lies behind scientific subjects. Students often have been presented a form of science that appears to be a collection of universal and natural truths, forgetting that behind every theory, every theorem, every axiom, there is work of research and experimentation.³⁹⁴ With this consideration, the next section concerns students and teachers, who are challenged with the creation of scientific texts.

5.4 Teaching for teachers: continuing education courses with the *Marino Golinelli Foundation*

Although it is not appropriate to define as *new* the interest shown by the school system in functional forms of writing and teaching linguistic varieties, by analysing the development of the legislation and the outcomes of the case studies of the next chapter, it can be said that Italian teachers, in every school cycle, seem to struggle to find helpful collaborations with their colleagues who teach science, mathematics, and related subjects. In the past thirty years, it can be noticed a growing number of conferences, laboratories, workshops and publications on behalf of Italian language scholars and researchers that has highlighted the rising interest in technical varieties of the language and the need for schools to adapt to it.³⁹⁵ It has been pointed out, in the previous sections, the importance of activities such as ‘Laboratorio di scrittura’, organized by the Ministry of Education and the GISCEL in 1998, following the reform of the final exam. The main goal of this project was to place and address teachers’ and students’ abilities in the light of the new assignments for the Italian language exam, and, more importantly, of the new

³⁹³ For which I remand to chapter 1.

³⁹⁴ See the analysis of exercises in chapter 4.

³⁹⁵ See the Introduction of this work.

communicative needs of pupils ahead of the year 2000. The project starts from the consideration that:

la scrittura è un'abilità complessa e come tale richiede una didattica esplicita, cioè un insegnamento che non dia nulla per scontato ma che anzi eserciti progressivamente, gradualmente e ripetutamente i diversi livelli di competenza e le diverse modalità di scrittura, e l'assunzione di una prospettiva curricolare in cui l'educazione linguistica sia praticata sistematicamente fino alla fine del triennio superiore.³⁹⁶

In 2003, the 'Crusca' Academy and the National Science Academy hosted a joint conference entitled 'Lingua italiana e scienze', with evident reference to this particular type of language variety. The final goal was to encourage a reflection upon sectorial-based languages, and, more importantly, their didactic methodological application. In the case of scientific language, the conference examined the many linguistic levels through which it can be delivered: the official scientific debate (scientific articles, posters or conference presentations), the educational level, the journalistic level and so forth, always keeping in careful consideration 'i connessi problemi di una didattica efficace che introduca al linguaggio scientifico specialistico di ogni disciplina'.³⁹⁷ In 2014, GISCEL association dedicated its annual conference to the relationship between the linguistic and the scientific field. The conference, which took place in Rome, was entitled 'Educazione linguistica e apprendimento/insegnamento delle discipline matematico-scientifiche' and aimed to investigate how science or mathematics teaching/learning process can depend on linguistic faculties and how the correct acquisition of scientific language skills is a crucial part of the methodological framework of language education. Accordingly, the final aim was to verify what benefits can derive from the joint action of language and science teachers in order to facilitate a multi-disciplinary approach to learning. Finally, in 2018, the 'Società internazionale di Linguistica e Filologia italiana' held a conference in Genoa with the title 'SILFI 2018: Linguaggi settoriali e specialistici: sincronia, diacronia, traduzione, variazione', in which the main features of sectorial-based languages and their interaction with the school system were discussed.

Analysing results from surveys such as the Euridyce (November 2011) called 'Key Data on Education in Europe', but also international analysis such as TIMMS and PISA and surveys OCSE-PISA, the Lincei Academy launched in 2010 a project called 'I

³⁹⁶ Anna Rosa Guerriero (ed. by), *Laboratorio di scrittura, Non solo temi all'esame di Stato, Idee per il curricolo* (Florence: La Nuova Italia, 2002), p. XIII.

³⁹⁷ Annalisa Nesi, Domenico De Martino, *Lingua italiana e scienze, Atti del convegno internazionale, Firenze, Villa Medicea di Castello, 6-8 febbraio 2003* (Florence: Crusca Edizioni, 2012).

Lincei per una nuova didattica nella scuola: una rete nazionale' aimed to teachers of every school cycle. The project has, since then, taken different shapes and, currently (2018), the Lincei Academy is no longer involved, although many public partners (such Universities) and private ones (such as associations and research centres) continue to contribute. The initial purpose was to create a network, across the entire Italian territory, that 'imposti, nella pluralità delle iniziative, una rinnovata metodologia di insegnamento delle materie scientifiche e delle conoscenze linguistiche e concettuali, capace di stimolare l'apprendimento al metodo scientifico'.³⁹⁸ To do so a methodology has been adopted that involved experimentation and work within the 'classroom environment', seen in contrast with the traditional sciolism. As far as language teaching is concerned, for example, language is to be considered not only as a way to communicate efficiently one's thoughts, but also to make more accessible scientific and functional-based languages. In particular, it can be read in the manifesto of the project:

Alla cura della competenza linguistica va affiancato l'arricchimento della competenza testuale per stimolare l'interesse intellettuale ed emotivo dei giovani proponendo scritture che veicolino significati. Scritture letterarie, e articoli o saggi scientifici sui problemi più rilevanti della storia naturale e umana servono bene allo scopo, e introducono gli studenti a testi latamente argomentativi e descrittivo-espositivi. Mettere in condizione un adolescente, qualunque sia la scuola frequentata, di comprendere pienamente un testo di questa tipologia è evidentemente un requisito che potremmo considerare minimo per l'istruzione superiore ed essenziale per la comprensione del ragionamento scientifico.³⁹⁹

For this research, I observed in person the training classes of the 'Polo di Bologna-Emilia Romagna', focusing my interest on the joint scientific and linguistic module called 'Insegnare la scienza oggi in un'ottica trasversale', which intended to propose to teachers of every school cycle a different approach to scientific subjects that involved the idea of multidisciplinary teaching/learning. In order to do so, the coordinators and designers of the module⁴⁰⁰ opted for what they believe is the most appropriate method for this multidisciplinary occasion: the laboratory. It must be noted that, even if I witnessed the activities in their entirety and helped with administrative tasks, the project was designed by the coordinators, following the guidelines of the original Lincei Academy manifesto. The data and the comments of this chapter are the product of external observation.

³⁹⁸ Official manifesto: <<http://www.linceiscuola.it/progetto/>> [Acc. April 2018].

³⁹⁹ Ibid.

⁴⁰⁰ The module was designed by two academics from the University of Bologna (departments of Modern Languages) and a team of scientific researchers of the Golinelli Foundation.

The project, which received validation as a continuing education course, saw around 600 participants, 221 of whom took part in the module in exam. More than 90% of them were female teachers between 41 and 50 years old, mostly from primary schools. To be more specific, the module has seen 10 participants from nursery schools, 91 teachers from primary schools, 40 secondary humanities teachers and 80 secondary science or math teachers. Although the teachers were all Italian, it can be noticed that the module represented a significant mix of teachers and educators from different backgrounds, ages and specific interests. To facilitate the best results of the project, the organisers planned a scientific experiment aimed for beginners that could be replicated in classes of every cycle. In fact, the whole idea was not to focus on which experiment was undertaken, but rather on which methodology to use when approaching teaching/learning of scientific subjects. The methodology used for this project was the IBL, ‘inquiry based learning’.⁴⁰¹ The inquiry-based methods are essentially the group of methodologies that contrast with mainly deductive methods, and, by doing so, increase interest and attainment levels. As noticed by Osborne and Dillon (2008), ‘such learning requires space to discuss, to think critically and to consider others’ views’.⁴⁰² As far as concerns the project, both humanities and science teachers were involved in a laboratory that consisted in two steps. The first step involved the crafting and making of a popular cosmetic item: lip balm. Needless to say that this choice represented the easiest way to reach every school involved, regardless of their technological equipment, because the experiment uses easily accessible materials. The second step, which regards this research more closely, was the realisation of a scientific poster that would present and explain the experiment.

5.4.1 The scientific poster and examples of text types

As mentioned, the project focused on finding effective ways to address functional and scientific languages at schools and the laboratory creates a favourable environment for one specific type of text: the scientific poster. The activities changed slightly according

⁴⁰¹ Bennet Holman, ‘Context-based approaches to the teaching of chemistry: What are they and what are their effects?’, in *Chemical education: Towards research-based practice*, ed. by John K. Gilbert (Dord: Kluwer Academic, 2002), pp. 165-184; see also: Jonathan Osborn, Justin Dillon, *Science Education in Europe: critical reflections* (London: King’s College Publications, 2008), available online at: <https://www.nuffieldfoundation.org/sites/default/files/Sci_Ed_in_Europe_Report_Final.pdf> [Acc. April 2018].

⁴⁰² Osborn, Dillon, p. 9.

to the school level which the teachers belonged to. However, the intent of the course was the same for every level, therefore there is no need to differentiate the results on this occasion. The poster was chosen as a text type because one of the objectives of the laboratory was indeed finding new possibilities of teaching/learning scientific languages by experimenting different modules that, in the case of the poster, would point out the ‘rapporto tra struttura testuale ed efficacia di comprensione sulla scrittura collettiva’.⁴⁰³ Furthermore, the poster is a text type that is both alternative and complementary to oral exposition, especially in events such as public congresses or conventions. The poster, in fact, can reach a larger and more inter-disciplinary audience, thanks to the synthetic communicative style and ease of use. Moreover, it breaks down barriers between the authors and those who, among the receivers, would be interested in discussing more closely the topics developed. Finally, its graphic quality and its ability to convey a large amount in a visual representation facilitate the understanding of its results and objectives. Above all, however, the best feature of the poster is its potential impact on teaching/learning methodologies. Firstly, it allows to reflect on a vast range of contents regarding both the subject itself (science in this case) and the linguistic and textual applicability of the subject. Secondly, the scientific poster was preferred over laboratory reports because it seemed a text type better suited to group-based methodologies, which are strictly concerned with IBL. Finally, it represented a text type with which most teachers from both humanistic and scientific backgrounds could be familiar. The laboratories, in fact (both scientific and linguistic), were addressed for both humanities and science teachers which were then eventually divided into groups, facilitating the convergence between different backgrounds, different approaches to teaching and, addressing ways to find a possible co-existence between the two macro-subjects which are, as pointed out throughout this work, traditionally separated.

Before going further and analysing the features of the poster, it is important to point out that the scientific poster is not the only possible text type that can favour a discussion on multidisciplinary teaching/learning practices. In fact, the most popular type has traditionally been the laboratory report, and this represents a way to discuss scientific experiments and its related methodology just like the poster. However, the project designers⁴⁰⁴ believed that a new type was necessary in order to treat in depth technical-scientific languages and its reflection on everyday Italian didactic. As highlighted

⁴⁰³ From the official manifesto: <<http://www.linceiscuola.it/progetto/>> [Acc. April 2018].

⁴⁰⁴ As seen, they are academic and researchers from both the Humanities areas and scientific backgrounds.

previously, it is believed that schools should also address, in their curricula, objectives such as the ability to recognise the level of rigidity (depending on the communicative situation) of particular texts and yet, in practice, this does not always happen. For example, an assignment such as ‘Dopo ciò che hai studiato, relaziona sull’argomento che ha suscitato in te interesse e curiosità e ha soddisfatto la tua naturale inclinazione verso quella disciplina’⁴⁰⁵ says little about the addressee of the text or the communicative situation in which the text should be placed. Such assignments are likely to produce responses that see language as nothing more than the repository of information.

I will now return to the scientific poster. Because of its functional-based features, the poster is strongly related to other scientific texts (such as scientific reports, official dissertations, etc.), which are characterised by a high level of rigidity both grammatical and semantic. However, the communicative approach of the poster seems to differ slightly from other such texts. For example, in a laboratory report, an extremely detailed and exhaustive approach is needed so as to be able to replicate the particular experiment in other circumstances; on the other hand, the poster is to be read and understood in very short time and, often, it is a communicative form between experts of the same sector. Accordingly, both contents and form of the poster will aim to ensure and promote communicative efficiency, and, just like other functional texts, it arises from fundamental questions such as: ‘which message does the author want to communicate?’ or ‘who is the referent of the text?’. Once these questions are answered, the poster may present difficulties with regards to its graphic presentation: the dimensions, for example, are often provided by the scientific committee of the conference it is presented at, even though, for didactic purposes, the standard 70x100 centimetres may be advisable. Furthermore, in order to facilitate the readability of the poster, it is important to maintain 30-35% of it completely blank, leaving 65-70% to images, graphics and text. Finally, it is advisable to mark the border of every section, in order to help readers to work through every step of the process. It goes without saying that, in recent years, several software packages have become available for the creation of scientific posters; however, for the purpose of this research, teachers and students were advised to use Power Point. As far as concerns the contents and the organisation of the poster, teachers were advised to follow the IMRAD⁴⁰⁶

⁴⁰⁵ Real assignment noted by Ilaria Tempesta, ‘La relazione nella scuola media’, in Anna Rosa Guerriero (ed. by) *L’educazione linguistica e i linguaggi delle scienze* (Florence: La Nuova Italia, 1988), pp. 341-351.

⁴⁰⁶ Amongst vast bibliography, see Luciana B. Sollaci and Mauricio G. Pereira, ‘The Introduction, methods, results, and discussion (IMRAD) structure: a fifty-year survey’, *Journal of the Medical Library Association*, 3 (2004), pp. 364-371.

(Introduction, Materials and Methods, Results and Discussion) model. This model, which has been centre of discussion for years amongst scientists and experts, is strongly recommended by major organisations such as the International Committee of Medical Journal Editors and the American Psychological Association, and it is nowadays the most utilised format by the Journal of Medical Library Association. In one of their studies,⁴⁰⁷ they notice how, if in the 1970s the IMRaD was utilised by 80% of medical publications, in the 1980s it spread not only to medical disciplines but to all the varieties of scientific publications.

For the specific didactic purposes of this work, a ‘simplified’ approach was adopted, avoiding all the discussion on, for example, whether it is necessary to specify the title of every section (Introduction, Materials, etc.) or not and whether it is more appropriate to include *summary* and *conclusions* to the discussion or not. Before the teachers were able to work on their posters, they were told that the *introduction* is the section which aims to illustrate the project, fitting it in the vaster range of the available scientific literature and summarising the objectives. *Materials* and *Methods*, on the other hand, is the section that includes the list of the techniques and the scientific tools used during the experiments. Unlike traditional laboratory reports, lists of materials and methodologies do not have to be as detailed and must aim to the communicative efficiency of the text. As far as the *results* section is concerned, it is evident that it will contain the final exposition and explanation of the conducted experiment: and very often this section is confused with the *discussion* section which, on the other hand, should include a proficient comparison between the hypothesis presented in the introduction and both the results of the experiments and the current literature on the problem. As will be noticed, this format has caused some confusion for the teachers who, for obvious reasons, did not have many instruments to compare their rather small experiment to the general scientific literature. However, it resulted in a good exercise that improved their knowledge on ‘simulated’ occasions of functional based writing.

5.4.2 The writing laboratories⁴⁰⁸

The ultimate goal of the writing laboratories was to produce a scientific poster with the features that were just mentioned in order to encourage teachers to reflect upon

⁴⁰⁷ *ibid.*

⁴⁰⁸ For this part of the project, I took on the role of external observer. As mentioned, the course was presented by the designers and the tutors (academic staff of Bologna University and scientific researchers of the private Golinelli Foundation).

functional-based languages, multidisciplinary teaching/learning and eventually re-propose the experiment within their schools of origin. The different groups of teachers, mixed between science and language teachers and divided according to school levels, were left considerable freedom to interpret the assignments. In fact, tutors of the course aimed meticulously to leave the teachers free to give the tone they wanted to the poster in order to highlight how, according to communicative situations, this may vary. Furthermore, one of the main objectives was to produce a lively discussion on how, when it comes to functional-based texts, the writer must always bear in mind to whom the text is addressed and the communicative environment in which the text occurs. Teachers were, therefore, left free to imagine their preferred communicative event and referent. However, it must be noted that occasionally the relative freedom of interpreting the assignments generated results that, from a sociolinguistic point of view, appeared rather controversial. Examining Appendix 1, for example, it can be noticed that the scientific relevance is reduced to a minimum: the title (B come Burro... C come Cacao) seems to suggest that this group of teachers planned to adopt an educative approach, but then, reading through the text, not only it can be noticed the use of scientific terminology (*monoporzione, becker, pipetta di Pasteur*) mixed with everyday language (*scatolina*) but also the overall tone seems to be drifting towards a more commercial approach (**Risultati:** un efficacissimo burro di cacao idratante, protettivo, naturale, spalmabile con le dita, facilmente realizzabile e anche economico') and even approximates to the use of a slogan advertised in the conclusions (**Conclusion:** un regalo ideale per il Natale!!!!!!! e...se le labbra della Minetti vuoi imitare, l'acido ialuronico devi versare!!!'). Another example of personal interpretation refers to the content of the posters itself. In Appendix 2 and in many other results, teachers seemed more interested in reporting the event (in this case, the procedure followed to create the lip-balm in the laboratory), rather than illustrate the scientific achievement of the experiment itself. It can be read, in fact: 'Lo scopo di questa esperienza di laboratorio è la realizzazione del burro di cacao utilizzando il metodo IBL (Inquiry Based Learning) che prevede il confronto fra i vari soggetti, la realizzazione di diverse prove, l'analisi degli errori, che portano al raggiungimento dell'obiettivo' and, therefore, the results address the general experience rather than the actual final experiment: 'il gruppo A ha realizzato il prodotto atteso, con consistenza, proprietà emollienti e lucidanti adeguate. Il gruppo B ha ottenuto un prodotto liquido non utilizzabile. Il gruppo C ha ottenuto un composto secco, privo di proprietà emollienti. Il gruppo D ha ottenuto un composto non spalmabile'. It is believed that the interpretation of the assignment can be personal as long as it is clear 1. the approach utilised, 2. the

communicative situation and 3. the referent of the text. The results of this work seem to indicate a tendency, among teachers, to report meticulously every step of their experience utilising a more didactic and educational approach. This seems to happen because of the persistence in schools of laboratory report text types, which are the more traditional way to show, in a written form, what students learnt and what the results meant for a scientific experiment. However, on the other hand, posters are normally less binding and can regard solely the experiment rather than what was learnt or what it meant for the project. Nevertheless, any approach, for the didactical purpose of these laboratories, was accepted and a poster like Appendix 2, on this note, represents a good example of a text with an inclination to analyse the surrounding of the experiment rather than the scientific results themselves. The conclusions, in fact, address directly the method of the inquiry based learning: 'l'utilizzo del metodo IBL ha permesso il coinvolgimento partecipato di tutti gli autori che sono stati fortemente motivati alla riflessione, alla ricerca etimologica e alla collaborazione che hanno consentito una visione globale superando i limiti dei vari saperi disciplinari'.

With regards to sociolinguistic aspects of the texts, it can be noticed that the principal area of discussion, amongst the results, refers to whether it is more advisable to use a purely scientific approach (therefore imagining a communicative situation such as scientific conference) or an educational one (imagining to be in a classroom or to use the experiment for didactical purposes). Of the 40 posters analysed, across every school cycle, 18 of them preferred an aseptic scientific approach (9 from secondary schools of the first cycle, 5 from the second cycle and 4 from primary school) and 22 adopted a more educational one (mostly from primary school). Whilst it is interesting to note that primary school teachers decided to adopt a more educational/*familiar* approach to the poster whereas more advanced levels opted for a more *rigid* text tone, it must be noticed that there is a very narrow line that separates the two approaches. Most of the time, in fact, the difference can be noticed only thanks to sociolinguistic parameters (such as their ways to imagine the poster presentations in specific linguistic occasions), rather than linguistic ones, as the number of *specialistic* terms, special phrasal constructions or particular textual approach. This is because it appears that all the posters had a high number of lexical and morphological choices that match the standards of scientific texts (in this more educational version), but seemed to differ only in the type of tone adopted.

As far as lexicon is concerned, terms from a broad scientific terminology like *becker*, *pipetta di Pasteur*, *piastra riscandante*, *Falcon*, *capsula Petri* occur in all the posters because of the nature of the text which incentivizes the authors to report the

materials and methodology. Furthermore, the use of such terminology was crucial in underscoring the importance to create bridges across different disciplines. A word like *pipetta di Pasteur*, for example, was the opportunity to reflect, from an historical point of view, on the importance of a scientist like Louis Pasteur, from a scientific point of view on the uses of the specific scientific tool, and, from a linguistic point of view, to highlight how scientific languages tend to use joined words and eponyms. The same can be said about *Falcon* and *capsula Petri*, whereas *becker* generated an interesting discussion on foreign loanwords. All of the posters share (again, thanks to the nature of the text type) the use of terms from cosmetics and biology such as *cera d'api*, *olio di jojoba*, *vitamina E*, *tocoferolo*, but sometimes, as in the case of Appendix 3, they even reported the corrected scientific traditional definition: *theobroma* referring to the cacao, *prunus dulcis* in reference to almonds and *simmonsia chinensis* referred to the jojoba oil. The use of traditional Latin terminology can generate discussions on the reasons why a large majority of science words derive from Latin (or Greek) and why the language of biology, for example, tend to still use Latin to identify animal or plant species.

With regards to morphosyntax, it must be noted at the outset that teachers seemed to have felt the need to ground their poster in plausible real life events, which, it is believed, matched the very goal of the laboratory. Many texts were produced imagining school occurrences, such as promoting the lip-balm at a school market or displaying the final product to a school fair or to parent-teacher meetings. Very often (34 posters), they produced the text putting themselves in the position of their own students, identifying themselves with them. This particular feature facilitates a reflection on the use of morphosyntax in these texts. Out of the total 40 posters, 23 opted for the third-person, impersonal approach (with significant use of passive and phrasal verbs), while only 14 used forms of the first person plural *noi*. Three posters, on the other hand, showed how this particular topic is still the object of discussion when dealing with scientific languages: they use both forms of impersonal, passive and phrasal verbs and the first person plural, showing evident indecision on the direction to take. It is known that scientific texts traditionally prefer impersonal forms,⁴⁰⁹ but it has been noticed that the use of *noi* is not only very much more acceptable but also present at any level of communication,⁴¹⁰ particularly in didactic environments, where it is even preferable. It was expected, in fact,

⁴⁰⁹ Riccardo Gualdo, Stefano Telve, *Linguaggi specialistici dell'italiano*, p.252.

⁴¹⁰ See, as an example, Niccolò Candelise and others, 'Applications of the real-time quaking-induced conversion assay in diagnosis, prion strain-typing, drug pre-screening and other amyloidopathies', in *Expert Review of Molecular Diagnostic*, 17 (2017), pp. 897-904.

to find these ‘familiar’ approaches to scientific texts in posters produced by primary school teachers and indeed 9 texts out of 16⁴¹¹ present forms of *noi*, whereas only 4 out of 14 in secondary school of the first cycle. It is interesting to highlight how, even when not directly utilising impersonal forms or using the passive forms of *si*, the posters produced by secondary school teachers of the first cycle often preferred a temporal and linear approach: the authors were very keen to specify the temporal order in which the events of the experiment happened, and, by doing so, they gave to their final product a more ‘familiar’ approach without the use of *noi*. For example, in Appendix 2, it can be read:

La ricerca, attraverso l'uso di internet, ha focalizzato l'attenzione sulle proprietà del prodotto cosmetico, il cui compito è evitare la disidratazione della pelle delle labbra, lenire irritazioni, proteggere dall'aggressione degli agenti atmosferici, ecc. L'analisi metacognitiva dei procedimenti effettuati e l'analisi accurata degli errori commessi ha permesso di chiarire l'importanza degli ingredienti utilizzati e la corretta procedura per la realizzazione del burro di cacao.

As regards the posters produced by secondary school teachers of the second cycle,⁴¹² the depersonalisation seems to be a common trait: 10 posters out of 10, in fact, present traditional forms of scientific language with a slight propensity towards an expert-to-expert approach, rather than a more didactic one. Only in some occasions, the title (‘Labbra screpolate?’, ‘Sai com’è fatto il tuo burro cacao?’, ‘Burro cacao: facile a dirlo!’) seems to suggest a more informative/commercial purpose, but the body of the texts conforms to a standard scientific approach: ‘Si procede miscelando i vari ingredienti...’, ‘Si confrontano i quattro prodotti ottenuti’, ‘I grassi saturi sono stati preventivamente scaldati e fusi ponendoli all’interno del becher sulla piastra riscaldante’ and so forth. In Appendix 5, for instance, it can be noticed a very successful realisation of the initial aims of the laboratory: the final product is clear and follows the guidance lines instructed during the preparatory briefings; it follows the IMRaD style meticulously and its content is exhaustive but not too specific. Linguistically, it can be noticed that the section named ‘Metodo’ is the only section in which the dimension of *time* is present: ‘Una volta fusa la componente solida, aggiungere 5 ml...’, but, even there, the style is not personal, but rather simplified almost like a recipe book, with verbs all declined to their infinite forms (*introdurre, lasciare, aggiungere, mescolare, rendere*); all the other sections represent very well the main features of scientific morphosyntax, with the deprivation of agent and subjectivity and the recurring use of passive forms of *si* such as ‘Si ottiene un prodotto

⁴¹¹ See Appendix 4: ‘*Creiamo il burro di cacao*’.

⁴¹² Let me remind that the groups were mixed between science and humanities teachers.

solido...’, ‘Si può ottenere un burro cacao di differente consistenza’ and ‘Si possono aggiungere coloranti alimentari...’.

From a first outcome to the analysis of the posters produced by the teachers involved in the continuing education course, it can be said that all the educators involved found the IBL approach to be stimulating, especially because it relates not only to the scientific part of the laboratories, but also to the linguistic one. Working within groups of learners facilitates the inquiring approach and helps to develop a discussion upon different disciplines. Most importantly, the interactive dimension of the poster facilitated a reflection on the reasons why schools have traditionally downplayed writing languages with everyday purposes, always preferring a mono-linguistic approach to functional-based languages. This resulted in poor performances in scientific disciplines (when compared to the standards required by the EU)⁴¹³ and the long-lasting problematic issues with the language of public communications and bureaucracy.

5.4.3 Follow-up in schools

Once the experience of the continuing education course was concluded, as a continuation of the experience, and in order to collect more data, I decided to organize a small activity to follow up the project with language and science teachers from secondary school of the first cycle in the area of Bologna, Italy. I designed the activity to imitate the project of the Golinelli Foundation and I was present whilst this was taking place. It consisted in a questionnaire⁴¹⁴ regarding multidisciplinary teaching/learning and functional based languages, a scientific experiment to be conducted in the classroom and the realisation of a scientific poster. The first and most important factor to highlight is that out of the 10 teachers contacted for follow-up activities, only 2 language teachers showed interest in the project and agreed to participate. The science teachers, on the other hand, perhaps concerned by the results of science students in European surveys, showed interest and dedication to the project. The 10 teachers were asked whether their activity in the classes underwent any relevant changes compared to the activities of the continuing education course. Ten out of ten teachers answered that their methodology, from both a scientific and a linguistic point of view, did not particularly change. Interestingly, it was discovered that, following the course, teachers did not learn new methodologies, but rather found

⁴¹³ See the above mentioned Euridyce, OCSE and Pisa reports.

⁴¹⁴ A sample of the questionnaire (excluding selected questions) is available at the end of this thesis. The answers from the teachers are not included, because I did not receive explicit authorization to release them.

confirmation and support of the appropriateness of the ones they were already using. This seemed to be given by the fact that 55,6% replied 'Abbastanza' and only 26,6% 'Molto' to the question 'Quanto ritiene che il laboratorio di ITALIANO abbia contribuito a farle acquisire nuovi strumenti utili al lavoro in classe?'. Additionally, teachers were asked about whether the curriculum in their school included hours of co-teaching between science and language; the answer was 'No' in 100% of the cases. Admittedly, it could be the case that teachers may not be aware of the possibility of having such hours that, indeed, are suggested (as we have seen) by national indications. However, in any case, it is interesting to highlight this factor. On the other hand, it must be said that co-teaching is not essential to the realisation of the project or even to generate productive discussion on sectorial languages and, from working on the project with these group of teachers, it was noticed that often it is difficult to fit co-teaching in the very tight space and time of state schools. With a sample of classes from secondary schools of the first cycle, teachers seemed to opt for a safer and very simplified version of the project. The scientific material of some of these projects is often reduced to a minimum. In one case, for instance, the experiment consisted in noting the colours of the trees in the schoolyard throughout the seasons. It is assumed that perhaps the science teachers believed it to be premature for their students experimenting on more complex physical or biological phenomena, but nonetheless decided to share the result with the fellow teacher of Italian language. Although this path seems to differ radically from the directions which were intended in the continuing education course, it is interesting to point out that, nonetheless, the language teacher decided to make the best of it and use a more literary and poetic approach, creating, instead of the suggested scientific poster or laboratory report, a poem. Ultimately, if one should accept that one of the main points of the course was to encourage public school methodologies to multidisciplinary teaching, this approach can be viewed as more than acceptable.

a) *Planned writing: Appendix 6 and 7*

Two cases of the poster produced, in particular, are very interesting for a reflection upon scientific language and methodologies. They were conducted in a first-year class from a secondary school of the first cycle (11 years old) consisting of 25 students, including one special educational needs subject and two Italian L2 learners from the Philippines. The science teacher, who had attended the continuing education course, claimed she attempted to operate the project in conjunction with the language colleague, but, due to the busy school schedule, it was not possible. However, the same teacher affirms that she was

helped by the school manual⁴¹⁵ which was particularly careful about the language realisation of science experiments. In this case, the teacher preferred the ‘safer’ option of the laboratory report, over the ‘unfamiliar’ poster, but, as can be noticed, the procedure was extremely similar, being structured in *Titolo, Problema, Ipotesi, Materiali, Fasi di lavoro* and *Osservazioni*. As can be noticed, the experiment in Appendix 6 was on the laws of buoyancy while Appendix 7 deals with thermal conductivity. The high peculiarity of the subject resulted in a specific lexicon (*cavità, peso, volume, forma, cilindri graduati, sensibilità, piastre elettriche*) which often opened to an everyday language terminology (*sassi, palline, matita*). As far as the phrasal construction is concerned, it can be noticed how these students are very keen to keep the experiment under the dimension of *time* capitalized, as much as possible. Connectives such as *in seguito, infine, inizialmente, dopodiché* are found widely in these works and, in one case, it is even specified the exact time (‘9.16 am’) the experiment started. With regards to the morphosyntax, the most exploited tense is the present perfect which facilitates the discussion in a more temporal dimension, respecting the chronological order of the steps they were undergoing. In fact, to be more specific, it can be noticed that, while in the *Problema* and *Ipotesi* section the present tense is generally preferred (‘Il galleggiamento di un oggetto dipende e viene influenzato dal tipo di materiale da cui è composto’), in the sections that actually describe the experiment, a narrative past tense is preferred in order to be as specific as possible regarding the process. Finally, the first person plural form of verbs seems generally accepted and, it is safe to say, it does not contrast the understanding of the product. Regarding the use of a table in the conclusive section, it can be noticed that it generated discussions on the use of graphics, charts and tables in scientific texts and ‘accepting’ them as linguistic objects as well. On the same note, according to the teacher, the writing of the result sections was particularly problematic for the students because part of them preferred a written version over the table and they eventually compromised by using a mixture: ‘abbiamo stabilito il peso di ogni oggetto pesandoli sulla bilancia, in seguito abbiamo riempito i cilindri d’acqua...’, ‘... abbiamo registrato i dati nella tabella sottostante’. From a more general and sociological point of observation, it must be noticed that the idea of making a single work (in contrast to the suggested work in groups and therefore creating different products) in an extremely varied class of 25 is certainly controversial. The benefits of working in groups are, as noticed before, of several kinds: at this stage of education, in particular, it seems fundamental to use methodologies of

⁴¹⁵ Federico Tibone, *Le scienze di ogni giorno* (Bologna: Zanichelli, 2013).

self-correction on class-produced exercises. Working with a different pool of texts would facilitate a confrontational moment which would perhaps benefit the students. Moreover, it would help the idea of integration among special educational needs and L2 learners who, on their sides, would have something to add to the discussion. Using this monolingual approach, which is less aware of social varieties, leads to the production of a text that does not differ greatly from a simple dictation by the teacher and, therefore, does not focus on the importance of language variety for functional based languages. Not by chance, in fact, the texts examined here do not have any strong purchase on reality: what is the communicative situation for which these texts are conceived? which communicative event are they realised for? who is the referent? Science and language seem to live in abstract realities in these two texts and it is difficult to imagine how students may benefit from it.

b) Medical Leaflets: Appendix 8 and 9

In other cases, teachers seemed to be much more aware of the social impact the language of science may have in everyday life. This is the case of another class of secondary school of the first cycle, which undertook an exercise based on an activity of re-writing medical leaflets. As noticed in chapter 3, informational leaflets of generic medications are texts conceived for wide distribution and therefore they must be univocal and very specific, but, at the same time, accessible to all the users. An interesting didactic approach is to 'translate' them to a language more accessible to young students, trying to maintain the scientific specificity of the text. The science teacher of this particular school asked the students to bring a medical leaflet from home and the variety of medicines that was brought to the class generated a discussion on the differences between medicines and para-medicines, but also between medicines which act directly on the disease (antibiotics), symptomatic treatments (painkillers), para-medicines (vitamins integrators) and vaccines. The words which define these concepts proved to be very helpful to understand the use of medicines in students' lives and they appeared surprised to understand how, for example, the majority of medicines used by their families, do not actually cure the disease, but act on the symptoms. The following phase of this project included a linguistic reflection on the texts: the information contained in the texts was divided in four categories: '1. Che cos'è?, 2. A cosa serve?, 3. Informazioni importanti, 4. Cosa può provocare di non voluto?'. The operations seem to be more successful with dated medical leaflets, ones that do not include a clear division in sections and therefore are difficult to understand. However, many repetitive concepts have been eliminated,

156

especially in the sections ‘che cos’è?’ and ‘a cosa serve?’ that included similar ideas: under ‘che cos’è?’ the teacher kept the basic description (‘medicinale a base di paracetamolo’) in order to highlight possible precautions against allergic reactions; the section ‘a cosa serve?’, on the other hand, describes the effect that the medicine is desired to have on the patient. A third step of the project involved the students highlighting on their medical leaflets difficult words or constructions that they did not understand; this facilitated a discussion, together with the teacher, on lexicon and morphology of the language of medicine. Finally, the last step consisted in the actual re-writing of the texts which, in this case, was meant to be addressed to children aged 10 to 12. This often leads to an excessive emphasis upon the simplified version (‘Il Lactiv è una medicina che serve a far star bene l’intestino. Dentro alla medicina ci sono i fermenti lattici e la vitamina B. Il Lactiv è molto bravo a dare benessere all’intestino’), but mostly produced a very successful ‘translation’. During preliminary briefings, many difficult words were turned into very accessible concepts: *stitichezza* in ‘difficoltà di andare in bagno’, *cefalea* in ‘mal di testa’, *disfagia* in ‘difficoltà ad ingoiare’, *dermatie* in ‘irritazione della pelle’, *dispnea* in ‘difficoltà di respirazione’. From a morphological point of view, it can be noticed in this extract from a text not present in the Appendix, how the use of infinite verbal forms is joined with the uses of the passive *si*:

Fare attenzione se... si soffre di disturbi al fegato... si usa il pantoprazolo per più di un anno... si ha sofferto di una carenza di vitamina B 12 ...si soffre di malattie reumatiche ...si ha sofferto di ulcera gastrica o duodenale durante il trattamento con tali medicinali ...si ha perso peso di recente o se si soffre di vomito ricorrente...si ha vomitato sangue o se si trova sangue nelle feci.

Overall, the methodological approach to multidisciplinary teaching/learning and to functional-based languages utilised in these case studies seemed very efficient, especially looking at the positive feedback and responses achieved throughout the project, that I was able to observe. In both the teachers’ courses and the follow-ups in schools, it could be noticed an engaging spirit generated by the methodologies exploited. In the follow-ups, in particular, although not responding directly to all the suggestions coming from the training course of the Golinelli Foundation, it could be noticed an approach that favoured a discussion on school curricula that involves language variety and inter-disciplinary paths to knowledge. Whether this approach is in practice within secondary schools of the first cycle in Italy is a question that will be addressed in the next chapter.

6. A case study of technical-based writing experiences in secondary schools of the first cycle

This chapter aims to analyse several examples of texts that focus upon technical-functional proficiencies, written by students in Italian secondary schools of the first cycle. In the previous chapter, the discussion was pivoting around important initiatives carried on by associations, both public (universities, government, etc.) and private (in this case, the Golinelli Foundation in Bologna), initiatives which aim to connect everyday life and sectorial-based languages in teaching Italian composition. The present chapter will now study the extent to which such information is actually absorbed and put into practice in Italian state secondary schools of the first cycle. To do this, several controlled tasks, which I designed personally, were enhanced in selected Italian schools, on the assumption that teachers were aware of the latest version of Indications for the curriculum (2010, 2012 or 2018), and were therefore able to build activities that included reflections upon language education and technical-functional writing. In line with the choice of case studies made in the previous chapter, another assumption underlying this work is that the most appropriate cycle to focus on is the secondary school of the first cycle (i.e. students aged 11 - 14). This is not only because the results would be more suitable for possible comparison with the project highlighted in chapter 5 (in particular the follow ups in schools), but also because, as pointed out previously, it is believed that this age and school period represent the most formative in the development of a more self-aware *linguistic consciousness*.⁴¹⁶ It must be pointed out that I organised the activities following the model of the training course analysed in chapter 5. For this case study I took on the role of observer: I presented the participants with the task and collected the results. Even when my presence in the classrooms was not guaranteed, I kept an ongoing open conversation with the participants and I carefully analysed the results (see below). Before going on to analyse the methodology used in the case studies, it is important to point out the limitations of the enquiry. First of all, given the size of the sample, what is offered is not an exhaustive demonstration of how sectorial-based language teaching works over the national territory of Italy, in accordance and/or response to government indications, textbooks and new methodologies. Here, nonetheless, there is an attempt to diversify the

⁴¹⁶ As observed by Cristina Lavinio, ‘L’impegno del GISCEL nel “Laboratorio di scrittura”’, in *Laboratorio di scrittura. Non solo temi all’esame di stato. Idee per il curricolo*, ed. by Anna Rosa Guerriero (Milan: La Nuova Italia, 2002), p. XIX.

samples from a geographical point of view as much as possible. It is done so by selecting five schools that represent five different cities covering the Italian peninsula (north, mid-north, centre, south and Sicily). The absence, among these, of examples from rural areas and/or border/bilingual schools, makes the sample specific. Although it is believed that the results of these case studies are helpful in highlighting aspects of the impact of government indications, textbooks and new methodologies, it is essential to handle these results with care. The project, which was initially conceived to be the same for every class, met with a certain degree of opposition from some teachers who preferred to keep following the strict schedules of their curricula. Once again, it can be seen here how difficult it can be to move away from the traditional approach, in the intense schedule of contemporary schools. In spite of this, it is believed that the methodology (rather than the content) should be the main focus of the activities. Although it would have been ideal to have a common term of comparison for the content of all of the case studies, it was adopted an approach that follows the directives expressed in the previous chapter. Indeed, while the features analysed and the methodology will remain unchanged from the previous chapter, different results from the case studies in this chapter are expected. This is so not only because the circumstances of the project are different (i.e. it is no longer the dedicated environment of a continuing education course laboratory, but the real-life ‘habitat’ of the classroom), but also because the experiments are carried out by 11-14 years old learners rather than by teachers and the teachers are not *influenced* by any specific academic theory and have been deliberately left free to interpret the assignment and whether to follow (or not) the official indication of the curricula.

6.1 The *teachability* of written Italian

One of the main reasons for which a case study that focused on the technical-scientific aspect of written Italian is here developed, refers to the idea of its *teachability*. As saw in previous chapters, while written Italian was traditionally the only focus of language education (neglecting oral communication skills), its teaching methodologies have always shown a preference for a mono-linguistic approach, detached from students’ everyday life.⁴¹⁷ In response to this, linguists such as Adriano Colombo compiled a short list of features that highlight the qualities that written languages teaching should have.⁴¹⁸ This

⁴¹⁷ See chapter 1 and 2

⁴¹⁸ Adriano Colombo, *Dubbi, errori correzioni nell’italiano scritto* (Milan: Franco Angeli, 2011).

list was then discussed with the teachers of the project, once the experiments were completed.

1. **Varietà di tipi di testo**
2. Uso di modelli
3. Consegne particolareggiate
4. Criteri di valutazione differenziata

5. **Occasioni frequenti, testi (anche) brevi**

6. **Scrivere è riscrivere**
7. Testi da testi
8. Scrittura per fasi
9. Correzione formative > autocorrezione

10. **Gradualità**⁴¹⁹

The list highlights some of the features that have already been addressed in previous sections of this dissertation. Its main objectives are to make teachers and educators aware that writing is, regardless of school cycle, an activity that should include a variety of text types. What is more, writing should be an occasion for learners to reflect on textuality and different text types, among which scientific-based texts represent a milestone. It can also be noticed how the list points out the importance of having models, which helps learners to reflect on the efficiency and validity of official texts such as, for example, bureaucratic communications, scientific reports, etc., in order to re-write them at school. Even though there is a risk of having an artificial form of language, which is not related to students' everyday life, Colombo points out how simulated forms of writing (for the classroom or school newspaper, for the scientific fair, for parent-teacher meetings, etc.) offer a very efficient means of teaching written in technical based languages. Furthermore, Colombo places a strong stress on how the renewed enthusiasm towards language variety and different types of texts should go alongside a reformed way of evaluating written production. Schools should no longer praise long texts, filled with refined and difficult words, that may have relatively little communicative impact: rather, new evaluation criteria should consider that: 'alcune volte sarà richiesta e premiata l'espressione di idee personali, altre volte sarà richiesta la più piatta neutralità, a volte la vaghezza può essere un pregio, altre volte lo è solo la precisione, e così via...'.⁴²⁰

⁴¹⁹ Colombo, *Dubbi, errori correzioni nell'italiano scritto*, p. 15.

⁴²⁰ Colombo, *Dubbi, errori correzioni nell'italiano scritto*, p. 2.

According to Colombo, writing and reflecting upon writing theories, can be effective only if this activity is practiced beyond the few hours dedicated to the ‘compito in classe’, including every aspect of language education and, most importantly, involving other disciplines. There is no need, it is said in *Dubbi, errori correzioni nell’italiano scritto*, to misuse the weekly hours dedicated to the language education: it would be instead much better to find different occasions to exercise every-day written practices (point 5 of the list). As far as concerns ‘scrivere e riscrivere’, ‘testi da testi’ and ‘scrittura per fasi’, it can be noticed that they pertain to the subject of *planning* a written text, whose importance has already been mentioned in previous chapters. Point 7, in particular, highlights the need to deal with documented types of writing, which are nowadays the most interesting and popular forms of evaluating learners’ written production. As seen in chapter 3, in 1997/98, the final exam introduced the ‘saggio breve’ and the ‘articolo di giornale’ which are text types that encourage documented, planning textual approaches. Finally, points 9 and 10 are perhaps the most crucial of the entire list: that ‘correzione formativa’ which leads to ‘autocorrezione’ is an interesting and innovative idea, since it allows to deal with both writing techniques and correction methodologies. Correction is without any doubt part of the writing process and it is important that its effectiveness can be learnt and put into practice by learners. Finally, the importance of the ‘gradualità’ is vital because it puts together and balances every text for every school cycle, with the idea of gradually improving towards different and more complex text types.

The list above highlights different points of discussion regarding possible weaknesses and doubts students might have when dealing with technical and functional writing. As previously mentioned, the following case studies will focus on the difficulties that secondary school students may encounter when dealing not only with the linguistic problems of a scientific text, but also with the socio-linguistic and semantic approach of considering the communicative situation and referent the text may require. Documents such as *Indagine sulle capacità di scrittura nella prima prova del nuovo esame di Stato*, edited by Mario Ambel and Patrizia Faudella in 1999 and, more recently, various reports (2007, 2008, 2012) monitored by the *Istituto Nazionale per la valutazione del sistema educativo di istruzione e di formazione* (INVALSI) seem to support the principles and methodology of the approach of this chapter. These studies notice ‘incertezze sulla forma testuale, cioè incapacità di scegliere le caratteristiche in funzione del destinatario e dell’obiettivo, che rivelano uno scarso controllo degli indicatori riportati nella scheda

allegata'⁴²¹ and 'difficoltà maggiori nel controllo del contenuto che rivelano capacità inadeguate di gestione dei materiali forniti dalla traccia (dossier)''⁴²². The report, filled in 2008 by the Crusca Academy and INVALSI about Italian language final exam of secondary school, shows some interesting results that support a sociolinguistic approach to the case studies.⁴²³ The main features highlighted in the reports were: textual, grammatical, lexical and creative competences. The features regarding textual competence showed very poor performances by students who chose the 'saggio breve' or 'articolo di giornale', because they show 'una ancora carente capacità di rispondere in modo corretto alle consegne e di strutturare in modo valido tale prova'.⁴²⁴ Finally, it is important to point out that this research considers concepts such as *teachability* and *understandability* of a text as a crucial point for scientific writing and the process of teaching and learning sectorial-based languages. It is believed that, albeit in a limited way, the results of the following case studies will put into perspective the status of technical and scientific writing methodologies in Italian state secondary schools of the first cycle.

6.2 Methodology and levels of analysis

The starting point for the case studies was the assumption that analysing how/if official indications, curricula and textbooks are put into practice by state schools would help to shed light on the status of functional-based languages in Italian secondary schools of the first cycle. The results of chapter 5 provided a general picture of a possible disjunction that can be found between academic research on the subject and everyday didactic methodologies at school. Of course, the strategy that led to the adopted methodologies conforms to what is presented in governmental indications and the main aim was to leave teachers and students as free as possible to experiment with a given assignment. In this case, the assignment was to produce a scientific poster with specific features (see below), in order to encourage teachers to reflect upon functional-based languages. Before going further, it is important to point out a few different features of the current case study: How is the project structured? Who are the recipients of the experiment? Which were the main

⁴²¹ Maria Emanuela Piemontese, 'La scrittura: un caso di problem solving', in *Laboratorio di scrittura. Non solo temi all'esame di Stato. Idee per il curriculum*, ed. by Anna Rosa Guerriero (Florence: La Nuova Italia, 2002), p. 16.

⁴²² *Ibid.*

⁴²³ INVALSI and Crusca Academy, 2008, <http://www.invalsi.it/download/FASCICOLO_3giugno2008.pdf> [Acc. Sep. 2018]

⁴²⁴ 'Rivelazione Apprendimenti Prova Scritta Italiano, Raccolta materiali e Analisi dei Dati, Sessione 2007'.

features we looked at when analysing the results? What was the area and subject with which teachers and students were mostly concerned?

6.2.1 The structure of the project

As mentioned before, in order to obtain results that would include a geographical (and socially relevant) variety of Italian secondary schools, a project that would involve five different schools covering different areas of the Italian peninsula was personally designed.⁴²⁵ The five teachers contacted showed themselves willing to participate in the project, but they wanted to decide the topic of the laboratory/poster. Teachers and school headmasters from Milan, Bologna, Rome, Cosenza and Palermo were contacted. The cities range from population of a few million - Milan and Rome - down to Cosenza, with a population of 70.000. The project consisted in re-creating similar circumstances to the ones of the continuing education course of the Golinelli Foundation, with an audience of students and teachers that were not necessarily engaged in any 'induced' ideas of renewing functional based language teaching methodologies or didactic. It will shortly be seen to whom the project was addressed and who was in fact involved, but, I will focus now on the structure of the events. The project drew on the idea of Inquiry Based Learning and cooperative learning/teaching for both the scientific and the linguistic part; it was supported the possibility of having both language and science teachers present in both the scientific and the linguistic part of the project; it was encouraged, for practical reasons, the idea of producing a poster with the IMRaD methodology and, if possible, in electronic format; and finally, and most importantly, it was highlighted the importance of having a communicative circumstance (real or simulated) for the posters. In other words, the posters would ideally be addressed to a referee (a scientific conference, a school meeting, a scientific fair, etc.) and the discussion that would follow was to take place in an appropriate communicative circumstance. It will be shortly seen how the participants responded to these suggestions. Here, however, it is important to point out that, in the scheme provided, it was explicitly supported the idea that teachers and students should be entirely free to make changes to the suggested pattern and approach the experiment the way they considered more appropriate for their classes. Teachers seemed to embrace the 'personalised' way with particular care: one of the reasons may be due to the *safe* environment of their original classes, one that allowed both students and teachers to

⁴²⁵ As mentioned before, for this project not only I took on the role of external observer, but also of designer and coordinator of the activities.

incorporate this exercise into their standard curriculum and yet do so in line with their own subjects.

Most of the activities lasted approximately three hours, as predicted by the scheme that I provided. Students carried out experiments on different scientific topics. As mentioned before, the idea of having a single experiment for all five classes was ruled out by the teachers who, understandably, took advantage of the event to focus more carefully on one of the subjects of their current year's curriculum. The project was intended to be divided into two main parts: a scientific laboratory and a language exercise on the scientific experiments. In both parts, ideally, students should have been assisted by a language and a science teacher (though this happened only in the case of Rome, Bologna and Palermo) and should have been divided into small groups (this happened irregularly for all 5 classes). As noticed in chapter 5, working on very interactive texts as a group of learners facilitates an enquiring approach and gives each student the opportunity of being involved in the project. What is more, group writing is typical of *real* scientific publications and therefore would be working as an example of simulated form of writing. An important final step of the activity would be to have a productive discussion, in each class, in which students could present their works and discuss the important features highlighted from both a scientific and linguistic point of view.

6.2.2 The method of enquiry

The nature of this enquiry required intensive field work and a continuous exchange of opinions and ideas with the participants. As detailed below, my physical presence was limited to the case of Cosenza and Palermo, for which not only I observed the activities during their development, but also I learnt, from the teachers involved, how they structured them and what were their ideas on the project. Perhaps inevitably in schools in which the task was carried out through my personal participation, the outcomes are more detailed because I had the chance to notice and appreciate the reactions of the students towards the activities proposed. In what follows, personal observation of this kind is marked by phrasing such as students' *engagement*, *interest* or *level of attention*. On the other hand, when my physical presence was not guaranteed, terms such as the *involvement* of the students refer to comments based upon information received by teachers who filled out a report, focusing not only on what was *being done* during the activities, but also on *how it was perceived* by their students. This resulted in a more complex set of outcomes than expected, because the teachers seemed more interested in *showcasing* their projects, rather than verifying whether their groups of learners were engaging with the subjects or

not. However, thanks to further email exchanges and (in the case of Bologna) phone calls with the teachers, the case studies of Milan, Rome and Bologna schools still provide sufficient details for analysis. As mentioned before, at the beginning of the enquiry, an scheme was provided to the subjects, pointing out the main features that were believed would help students to carry out tasks in ways consistent with the methodology and research questions proposed and which included IBL and cooperative learning/teaching and, more importantly, a multidisciplinary dimension. The case studies are not based on sociological or ethnological frames of enquiry, but have made use of tried and tested models such as the IMRaD and the Inquiry Based Learning, as guidelines for better outlining the methodologies. Once the activities were finished, the reports were collected and the written results forwarded by email. They then underwent examination according to the parameters that are detailed below. Finally, once the data were processed, teachers were given a questionnaire regarding multidisciplinary methodologies and its results will be analysed at the end of this chapter.

6.2.3 The addressee of the project

Whereas the teachers attending the Golinelli project ‘belonged’ to different areas of expertise (language, mathematics or science) and undertook the project together, in the five schools involved in this study, only three included both language and science teachers. In the other two schools, the project seemed to be primarily focused on the science aspects with the science teachers taking part and the language teachers often being absent. This is probably due to the activities taking place within school hours, and, as confirmed by questionnaire responses,⁴²⁶ relates to the fact that Italian schools do not normally provide co- or shared teaching hours with teachers of other disciplines. The project seemed more suitable for progressing with the science curriculum or, at least, the science teachers seemed to be more interested in being in charge compared to their language colleagues.

The following table sets out the main features of each class:

⁴²⁶ Five out of five teachers replied “no” to the question: “Does your school provide any co-teaching hours?”

	Milan	Bologna	Rome	Cosenza	Palermo
Age	11-12	11-12	12-13	13-14	13-14
Students	18	20	22	28	22
Males	10	13	8	11	10
Females	8	7	14	17	12
L2 (Second Language Education)	4	3	0	0	0
SEN (Special Education Needs)	NO	NO	NO	NO	YES
Main Teacher	<i>SCIENCE</i>	<i>LANGUAGE</i>	<i>SCIENCE</i>	<i>SCIENCE</i>	<i>SCIENCE</i>
Co-Teaching	NO	YES	YES	NO	YES
Group Learning	NO	NO	YES	NO	YES
IBL	NO	YES	NO	YES	YES
IMRaD	YES	YES	YES	YES	YES

Illustration 8 – The main features of the subjects of the current case study.

As the table shows, four classes out of five opted to let the science teacher be the primary reference for the activities. As noted, co-teaching was experienced by three out of five classes, although, in some cases this was not exploited fully, as it will be seen. In terms of methodologies, the table shows a predominant presence of the IMRaD system, which, as reported in chapter 5, even when it is not closely discussed or explicitly invoked, represents the most obvious and easiest way to verbalise a scientific experiment. Furthermore, it can be noticed how a methodology, which was found to be very effective in the previous chapter, namely, group learning, was not exploited by three out of five classes. Despite being believed to be effective, especially for scientific subjects, and in spite of the directives that were outlined in the illustrative scheme, teachers of three out of five classes preferred to keep students working individually on their verbal realisation. Finally, three classes adopted an Inquiry based approach with the aim of improving the level of attention and engagement of the students, whereas the other two classes adopted an approach that preferred a more traditional and rigid lecture format. As far as the students were concerned, the five classes belonged to what was formerly called ‘scuola

media', and so their age range was between 11 and 14. To be more specific, the two classes of northern Italy were first classes (11-12), the class in Rome was a second class (12-13) and the two classes in the South were third (and final for the cycle) classes (13-14). In terms of the number of students taking part, the five classes had between 18 (Milan) and 28 (Cosenza) students, with approximately 60% of them being female. Whereas all the teachers were white female (40 years old average age), students in the classes represented a variety of ethnicities and cultural backgrounds: 3 Middle-East, 2 Romanian, 2 North-African in the two schools from the North of Italy. One class, in Palermo, had a student with special education needs, who participated in the activity with no particular difficulties.

6.2.4 The main features analysed

With regards to the linguistic features that have been investigated in this sample of texts, a similar methodology to the one used in the case studies analysed in chapter 5 was adopted. The difference was that, given the nature of the environment in which these new texts and experiments were conceived, a more flexible approach was granted. Within the pattern of the production of the scientific poster, in fact, the use of IMRaD was recommended, leaving the subjects free to make changes to the structure. As for the examples in chapter 5, the main level of analysis was the sociolinguistic level. In other words, the focus was given primarily to features beyond grammar and to what was previously addressed as the *vertical* dimension of technical-scientific languages.⁴²⁷ However, in order to give a more detailed picture of the current situation in functional writing teaching/learning, it was essential to point out strictly linguistic and grammatical features of the texts produced as well. For this reason, attention is also given to lexicon, morphosyntax, syntax and textuality, as well as on issues related to the sociolinguistic level.⁴²⁸

It has been repeatedly pointed out how lexicon is the most exploited feature of technical scientific language. This is because, when reading a technical text, for example, lexicon seems to be the most evident characteristic, given the presence of specific terms. However, as observed in the previous chapter, neologisms, words formed from prefixes or suffixes are not the only ways to build a technical scientific vocabulary and this is a

⁴²⁷ Following Michele Cortelazzo, *Lingue speciali. La dimensione verticale* (Padua: Unipress, 1994).

⁴²⁸ See chapter 5, paragraph 4.

subject that can even be discussed in class. Other major categories⁴²⁹ are loanwords (*cracker, gel, bit, byte, feed-back*, etc.), eponymy (*volt, ohm, ampere*), specific collateral terminology (expressions such as ‘accusare un dolore’) and the tendency of scientific language to use nominal constructs and verbs (*essere, consistere, presentare, comportare, dipendere, ottenere...*).⁴³⁰ In the current case studies, lexicon represents an important feature to analyse since it is the feature of scientific languages with which both teachers and students feel more at ease. Its popularity within contemporary language (words like *termometro, alcol etilico, beuta, ecologia, amido* are words that are used on a daily basis in their classroom environments) makes it a congenial way for teachers to start a discussion on this particular technical language.

On the other hand, it has been already pointed out the tendency to undervalue syntax and morphosyntax, that represent an ideal bridge between knowledge regarding scientific languages (lexicon) and the most efficient way to teach them in school (textuality). In fact, it is rare for textbooks to spend time on features such as the tendency that technical languages have to depersonalise what is written or said, or their concern with a ‘timeless’ construction of the sentence or the use and abuse of passive forms. As is confirmed by the results of the current case studies, syntax and morphosyntax do not seem to be subject to discussion within secondary schools of the first cycle. And yet, as is well known, the educational intent of morphosyntax of sectorial-based language represents an important way of making students familiar with language variety.

Finally, it is believed that textuality deserves an important focus when analysing these case studies. Following the idea that a scientific text normally trails a ‘struttura esplicativo-dimostrativa’,⁴³¹ careful consideration was given to textuality. In the examples used in the case studies, in particular, it is interesting to point out whether the text type of the scientific poster was presented as a structured genre, with recurrent characteristics (introduction, exposition of the problem, solution and conclusions) and whether there has been a discussion about different levels of communicative situations and text types. As saw in previous sections, school indications and textbooks are particularly concerned with categorising text types in order to prepare students to achieve their best for the final

⁴²⁹ Following Michele Cortelazzo, *I sentieri della lingua. Saggi sugli usi dell’italiano tra passato e presente* (Padua: Esedra, 2012).

⁴³⁰ Following Cristina Lavinio, *Comunicazione e linguaggi disciplinari. Per un’educazione linguistica trasversale*, (Rome: Carocci, 2004).

⁴³¹ Maurizio Dardano, ‘Profilo dell’italiano contemporaneo’, in *Storia della lingua italiana, II, Scritto e parlato*, ed. by Luca Serianni, Pietro Trifone (Turin: Einaudi, 1994), p. 498.

exams, which include the production of a particular text type. If the importance of textuality is related to the ability to discriminate between different text types at the sociolinguistic level (i.e. given certain communicative circumstances), then it can be appreciated the high relevance given to these features in the analysis of these case studies.

In short, then, the variety of topics did have a common ground in the procedure of both the experiment and the scientific text. The poster represented the ideal text type for these case studies because of its collaborative writing aspects, its planned organisation and its high level of rigidity from both a grammatical and semantic point of view. However, the focus of the analysis, rather than on a particular text type, was on the abilities of these produced texts to answer to questions such as: to whom am I referring? What is the communicative circumstance in which this text is happening? It seemed necessary to highlight whether or not these texts considered the importance of having a referent and a communicative event, whilst dealing with planned forms of functional writing. The emphasis given by Italian linguistics and governmental institutions (that was seen in previous chapters) on the idea of contextualising the writing events⁴³² is here under observation and, from the results, it is expected to emerge a disjunction with the everyday teaching methodologies.

6.3 Methodologies and topics of the different cases

Before analysing the results, it is important to point out which methodologies the teachers decided to exploit in both the scientific and linguistic part of the activities. As mentioned above, they were left free to undertake whichever approach they felt more at ease with and this is the main reason why a section dedicated to their methodologies and different topics treated was needed. Throughout the following sections and also highlighted in the table above, I have signalled whether or not the methodologies adopted were in line with the preferred approach, from both a multidisciplinary and a linguistic point of view.

The class of students from the first year of public secondary school of the first cycle of Binasco (about 15 kilometres South of Milan) undertook an experiment regarding the observation, through a microscope, of bacteria in a sample of yoghurt. The class was led by the science and mathematics teacher, who brought in the microscope during her regular teaching hours. Although the school provided the microscope, it may be interesting to notice that the school was not equipped with a scientific laboratory. However, the nature of the experiment was easy enough for students to take part in

⁴³² Refer to chapter 1, 2 and 3.

without any particular difficulties being encountered. In addition to that, the number of students that formed the class (18 in total, 10 male and 8 female) facilitated a more dynamic activity. The nature of the experiment involved *watching* and *observing*, rather than making and crafting, which might have affected the engagement of the students. Although not present during the activities, I was provided by the teacher with a report that made no reference to the use of any methodology relating to an inquiry-based approach, as it could be expected for this case study. In fact, one of the reasons an inquiry-based approach was suggested, relates to the fact that it is believed that the space to discuss and think critically is a crucial part of this particular educational methodology.⁴³³ What it can be seen within the scientific dimension of this case study is primarily a deductive approach, one in which students are asked to watch and learn, rather than ask, discuss and create. This approach has implications for the linguistic part of the project; for, not only was the language teacher not involved in the project, but the science teacher decided to ‘assign’ the realisation of the text only to a small group of students, rather than to the whole class divided into groups. In fact, the verbal realisation of the experiment was assigned as ‘homework’ rather than as an activity to be approached in groups during normal teaching hours. As a result, only four students (two males and two females) submitted their work which they completed together at home, so they submitted a single ‘relazione’. Only one text was therefore produced by this class and it is conceived as a ‘relazione’, rather than ‘poster’. It is important to remember that, even though the project deviated considerably from the original intent and, in fact, in some aspects, runs quite counter to the ideas underpinning this work, a flexible approach was adopted and the teacher was left free to work with the methodology with which she was more familiar.

The class from Bologna is a first-year class (students aged 11-12) and worked on a particular version of a rather stimulating topic (at least when dealing with multidisciplinary teaching and language of science): namely, the Galileo thermometer. This particular thermometer is made of a glass cylinder that contains water or a clear liquid and vessels of different density. With the variation of the temperature, the vessels float or fall, according to the respective density and the density of the liquids surrounding them. As is well known, Galileo Galilei was not the inventor of this thermometer;⁴³⁴ however, having a project focused on such an important character for both humanities

⁴³³Bennet Holman(2008), available online at:

<[https://www.nuffieldfoundation.org/sites/default/files/Sci Ed in Europe Report_Final.pdf](https://www.nuffieldfoundation.org/sites/default/files/Sci_Ed_in_Europe_Report_Final.pdf)> [Acc. April 2018].

⁴³⁴ Peter Loyson, ‘Galilean Thermometer Not So Galilean’, *Journal of Chemical Education*, 89 (2012), pp. 1095–1096.

and the history of science, certainly helped students to explore one of the main objectives of the case studies: the importance and didactic effectiveness of multidisciplinary teaching. Although the science teacher when asked whether the school provided any co-shared teaching hours answered ‘NO’,⁴³⁵ this class managed to make time for the experiment that was proposed by involving both the science and the language teacher, both of whom were present during the 3 hours of the duration of the project.⁴³⁶ As the pictures enclosed in the posters show, the class seemed to be very engaged and the experiment chosen appeared to be very interesting for the students. Even if the class was made up by a relatively small group (20, 13 females and 7 males), the report by the teacher informs us that all the students had the opportunity to be involved in the creation of the thermometer and, more importantly, in thinking about how it was made and the reasons certain procedures were adopted to make the thermometer work. All the same, with regards to the scientific part of the project, it is important to notice that, in spite of suggestions made in the explanatory scheme provided, the students were not divided into groups. For reasons that relate to the practicality and the space available for the experiment, the science teacher preferred to use the classroom as a location for the experiment that would involve the creation of a single thermometer.⁴³⁷ However, she also fostered an active environment in which students were strongly engaged with questions on topics that were explored during the year. Finally, perhaps the most important feature of the scientific part of the experiment is the participation of the language and humanities teacher, who, as the science teacher stated in her report, in a small introductory part, pointed out some interesting historic events related to the thermometer and its impact on scientific progress. This approach is, of course, very much in line with the idea of the didactic importance of multidisciplinary teaching. However, while the historical background was well addressed, the science teacher confirmed that the process of the realisation of the poster was not explained in detail. The students eventually divided into small groups, working with Power Point software and perhaps more interested in making the final product look presentable, rather than well informed or well structured.

The ‘Scuola Media’ of Rome is located just in the South West of the Capital City. The class involved in the project is a second-year class and the scientific experiment that was carried out regarded the observation of starches and vitamins. Once again, the

⁴³⁵ See the below paragraph ‘Answers to the questionnaire’.

⁴³⁶ Bologna, Rome and Palermo were the only classrooms that showed co-teaching experiences.

⁴³⁷ Once again, the experiment happened in the classroom environment, rather than in a scientific laboratory that was not provided by the School.

teachers seem to differ from the suggested scheme that was provided with a version of the project that involves more activities centred on the *watching/observing* rather than on *creating*. The class was made up of 22 students, with a slight majority of female ones (14), and the students were encouraged by the science teacher to take part in this observation. The scientific part of the project is a simple experiment that aimed to show the physical behaviour of certain elements, such as vitamins and starches, in particular circumstances. The class undertook two different experiments, both of which, unlike the other cases examined, took place in the scientific laboratory within the School, and with equipment provided by the institution. The language teacher was present but not very participative, as pointed out by the report emailed by the science teacher. As stated in the rather concise introduction of the final product, the main objective of the experiment seemed to be the collaborative teaching/learning, which is certainly a trait in line with most recent official indications. However, the way the experiment was set up, with the student on *observing* duties, seemed to work against the basic ideas of inquiry based learning. The twenty-two students were divided in two groups: one observed the behaviour of the starches, with two different ways of cooking a potato; and the other observed the behaviour of vitamin C when cooking broccoli. The two groups would eventually compare their results and the teacher *translate*, nearly *dictate* the discussion in a sort of scientific 'relazione'. The overall process was quite similar to the style of the project analysed for the school in Milan.

The class from Cosenza that participated in the project was made up of third-year students, aged between 12 and 13, and hence there were higher expectations for a more complex scientific experiment and a more detailed verbalisation of it. The class was made up of 28 students, with the majority of them being female (16 against 12 male). The 'scuola media' is located in the very centre of the city (70.000 inhabitants) in Calabria and, according to the answers given in the questionnaire, there was nothing new about the use of multidisciplinary projects that, as stated, happen regularly with particular regards to crossovers of Arts and Science or Language and Technical Education. The science teacher, who was in charge of the tasks, not only booked the science laboratory to make observations about the main features of DNA, but also took the class to a Secondary Technical School Institute to work with a more professional laboratory and more appropriate tools. Because the study of DNA traditionally represents a complex science subject for middle school learners (according to the teacher), the idea of the science teacher was to explore its features in a more approachable and recognisable environment. One part of the experiment was, in fact, recreating a crime scene and determining whether

the *killers* had left genetic traces of themselves and if so, how. Having followed these activities in person, it can be said that it resulted in an effective scenario for the young learners who showed themselves engaged and filled with inquiring spirit. Furthermore, working directly with older students and being *guests* in an institution with older fellow students, as it emerged from the observation, made them feel more responsible and involved in the process. The class was initially not divided into groups for the experiment and, in fact, this experiment seemed mostly concerned with *observing* an activity rather than *creating* and being involved in the crafting of a scientific product. However, the level of engagement of this particular class looked different, because the teacher carefully drove the class through an inquiry based approach. The scientific part of the project included a first section, taking place in the scientific laboratory, of extraction of the DNA from a kiwi cell. This section, even though carried out as a class (not divided in groups), saw the realisation of two posters. The second section of the scientific part of the project involved, as mentioned, the analysis of the crime scene and led to the creation of a single poster, designed by the entire class, under the teacher's supervision. Nevertheless, in both parts, what was most notable was the interesting work that the class made on the literature around the subject: DNA is one of the most exploited scientific subjects at school, however it is noteworthy to see how much time and energy were given to the historical background and this had, it is believed, evident effects on the students' linguistic products.

Finally, as for the school in Cosenza, the class from Palermo, Sicily, is a third class of a Secondary School of the First Cycle. The teacher approached affirmed to be a long-term supporter of multidisciplinary teaching methodologies and that, although the school does not always allow her the space and time for her multidisciplinary ideas, she is always on the front line trying to promote this didactic methodology. Therefore, the expectations for having a product that would represent the features of communicative efficiency, terminological balance and scientific relevance, were extremely high. Moreover, the scientific material that this class had decided to work on was of strong interest and, more importantly, very up-to-date: Earth's ecological footprint. The project was carried out by the language teacher with the co-operation of the Technical Education teacher in a class made up of 22 students (12 of which female, 10 male), two of them with learning disorders and one in need of a special assistant teacher for 18 hours a week. The overall competences of the class, according to the teacher, are varied, even though no students seemed to be particularly struggling with the realisation of the experiments. The

activities were meticulously planned,⁴³⁸ divided into four phases, and the students were immediately divided into groups of four or five. Although some phases were conceived to make them work on their own, the teachers believed it would be more efficient to have the groups formed from the moment they began the experiment, because exchange and discussion between small groups assist the outcome. The topic of the ecological footprint was decided by the two teachers who, as seen with other previous cases, took the opportunity to examine more closely subjects of their respective curricula: the language teacher (that for Italian secondary schools of the first cycle is also a geography teacher) deepened the topic of reading the thematic maps, whereas the technical education teacher did so with regards to energy sources and resources. The first phase of the activity involved documentation: students were encouraged to read and understand information regarding the so-called Earth overshoot day, which is the day in which, according to environmental organisations, humanity's demand for ecological resources exceeds its supply. In 2017, 3rd August was the scheduled date.⁴³⁹ The topic has an abundant literature and varying opinions, but students used the information set out in the official website and translated into Italian by the scientific educational webzine and magazine for children Focus Junior.⁴⁴⁰ It is noteworthy that the documentation phase took place with students working by themselves, but during the normal school hours (two hours, to be more specific), with the laptops being provided by the school's I.T. department. At the end of the documentation phase, students were given a form to fill in with under the rubric the 'informazioni utili nel testo' and the 'informazioni utili in forma grafica': this methodology, which is very close to the 'riassunto', is of crucial importance for the creation of any planned text. As can be noticed, students were encouraged to read the text critically, practicing therefore the use of their reading abilities and competences, and, more importantly, they had to select relevant information that would need to be included in a final linguistic product. Despite the very interesting methodology, the teachers have said that 'dalla compilazione della scheda 1, è emersa qualche difficoltà nel gerarchizzare le informazioni tra primarie e secondarie, poiché, probabilmente, gli alunni non possedevano nessuna abilità tecnica per effettuare questa operazione sui testi. E' stato

⁴³⁸ The teachers even provided us with a very detailed final report of the activities.

⁴³⁹ As it can be read on their official website, <<https://www.overshootday.org/about-earth-overshoot-day/>> [Acc. Sep. 2018]: 'Earth Overshoot Day is hosted and calculated by Global Footprint Network, an international think tank that coordinates research, develops methodological standards and provides decision-makers with a menu of tools to help the human economy operate within Earth's ecological limits'.

⁴⁴⁰ Particularly <<https://www.focusjunior.it/scienza/ecologia/overshoot-day-stiamo-gia-consumando-le-risorse-del-futuro/>> [Acc. Sep. 2018]

perciò necessario affiancare gli alunni nell'effettuare questa selezione'.⁴⁴¹ Of course, being able to discriminate between primary and secondary level information is a reading ability required by the general indications for the curricula of the Schools of the First Cycle. However, it is believed that bringing the problem to the students' attention and experimenting with some supervised activities on it may certainly represent an efficient first step towards the fuller comprehension of the subject. Furthermore, textuality and planning a text were not the only features exploited in phase one of the activities: students were given another form that had the aim of their working on the lexicon, with the requirement of listing specialist or scientific terms. Not only did students have to take notes of the terms that were *technical* or *specialistic*, but they were also required to specify whether or not they were aware of the existence of the word before and, more importantly, whether or not they had been able to understand the meaning in a specific communicative context. This exercise shows how easily a discussion that involves multidisciplinary teaching and technical-scientific languages can be carried out. Thanks to the use of a simple form, students were able to list the 'difficult' words and, therefore, generate a discussion on them, on their use and their formation. Furthermore, being able to understand unknown words from the communicative situation helps to open up a debate on sociolinguistic aspects of technical languages, their use and their affinity with certain text types and genres. Accordingly, the Italian teacher seems to confirm the effectiveness of this methodology, as, in her opinion, the second form 'ha riscosso successo perché ha consentito di attivare immediatamente meccanismi cognitivi di tipo inferenziale che agevolano la comprensione dei contenuti anche in presenza di mancanze lessicali'. While the second phase was devoted to comparing information and linguistic results, the third phase sought to bring such a global and apparently distant topic to a more familiar dimension. In fact, the students had time to bring the 'experiment' home and, with the help of their families, calculate their ecological footprint. As a result, once they were back at school, they were able to calculate the overall ecological footprint of the class, which then they represented in a chart, created under the supervision of the teachers and that is reproduced in the Appendix. The global ecological impact of the class was also an opportunity for the students to discuss their behaviour towards the environment and a chance to reflect on energy resources to be used as an alternative to current ones. This had the result of favouring a discussion that would now include the use of specific terms and would serve as a starting point to plan the final textual product. Finally, the last phase

⁴⁴¹ From a discussion an Italian language teacher of the project.

consisted in the actual realisation of the poster, which took three hours and was made, because of the lack of digital competences of the students, with Google Slides. Every group, following the indications of the teachers, created a slide/poster. On this note, it must be pointed out that these products do not strictly belong to the scientific poster text type: a clear structure was often lacking, the features of IMRaD were not present, and the communicative context would more likely be a discussion within the ‘familiar’ space of the class. However, the effectiveness of the methodology is worth stressing: not only the teacher strongly supported cooperative teaching/learning and planned writing methodologies, but she also encouraged the students to highlight within the completed poster the most important concepts and key words. Words like *biodiversità*, *habitat*, *ecosistema*, *specie*, *equilibrio*, *sovrastuttura* are words that have embodied the principles of multidisciplinary teaching by being the focus of discussion for their meaning and for their linguistic occurrences.

6.4 Linguistic and sociolinguistic results of the different cases

I will now focus on the results that these different approaches generated. Once again, it is important to bear in mind that the five classes worked on different topics and employed methodologies with which they felt more comfortable. Thus, this following section takes into consideration all the classes individually, making comparison with different results from other classes and also case studies from the previous chapter when necessary.

In the case of Milan,⁴⁴² the ‘relazione’ was titled ‘OSSERVAZIONE MICROSCOPICA A FRESCO DI BATTERI PRESENTI IN UN CAMPIONE DI YOGURT’⁴⁴³ and follows the IMRaD structure with interesting changes. Firstly, it adds the dimension of the ‘obiettivo’, trying to specify why the class has taken this particular experiment and what they were trying to achieve. What is more, the sections dedicated to the ‘materials’ in the IMRaD procedure was separated into ‘materiali’, ‘strumenti’ and ‘sostanze’. The final sections, dedicated to results and conclusions, are separated out into two segments that may often be confused with one another. However, although the structure of the text seems to be perfectly in line with what was suggested as the preferred outline, the content has become detached from any real communicative context, not only from a linguistic point of view, but also for the very lack of scientific relevance of the experiment. From a lexical point of view, it can be noted how this text abounds with

⁴⁴² Appendix 10.

⁴⁴³ It can also be noticed the indecisiveness in the spelling of yoghurt, as in the results section it is spelled *yogurth*.

specialist terminology, a feature that is normally viewed as a merit⁴⁴⁴ and not as a problem. This raises questions concerning whether or not this terminology is included in these young learners' vocabulary, but also it may represent an obstacle for the smooth reading of the product. Examples are terms such as *spettro elettromagnetico*, *fasci di elettroni*, *scansione di sonda*, *cellule procariote*, *biochimico*, *biomolecolare*, *cellule eucariote*, which not only would call for sufficient preparation and confidence in order to be used in such texts, but would also require special care and discussion by the educator, which, as was noted in an email exchange with the teacher, did not happen either before or after the project. It almost looks like these terms emerge from the teacher reading a scientific text or textbook and the students slavishly taking notes, as one finds in the methodology of the 'dettato', which was mentioned in chapters 2 and 3. On the other hand, a more significant use of terms describing the tools and procedures used during the experiments was expected: *microscopio*, *ansa*, *provetta*, *pipetta Pasteur*, *vetrino copri oggetto* are all objects used and listed in the 'relazione' that would have merited more discussion before, during or after the project. Words like *sospensione* (the mixture that contains particles sufficiently large for sedimentation), for example, would be the perfect example to open up a discussion on the transfer/translation of common/standard language words into scientific meanings. *Sospensione* is more used within the common/standard language meaning rather than the more technical one and it seems to be used in the scientific meaning almost exclusively in biochemistry environments.⁴⁴⁵ Finally, with regard to lexicon, it is worth noting, in the section dedicated to describing the procedure, the marked presence of verbs in the infinitive tense, which is, as observed in chapter 5, a recurrent feature of technical-scientific writing. With regards to syntax and morphosyntax, as noticed, for example, in texts like Appendix 4, the most relevant features are the use of first person (plural) or third person forms of the verb, impersonal and phrasal forms. This particular 'relazione' shows how complicated it can be to adopt a univocal approach to syntax and morphosyntax when producing a functional based language text. In fact, if the introduction and the procedure sections make detailed use of the third person and passive and impersonal forms of the passive forms of the *si* (*Si definiscono*, *si è sciolto*, *si sono potuti osservare*, *si presentano come piccole macchioline*, *si riuscivano solamente a osservare*), the conclusions abruptly bring the tone to a more personal voice, using the *noi*: *siamo riusciti*. In the texts that are analysed in this chapter,

⁴⁴⁴ I should recall that this is or should be a text produced by 11 years old learners.

⁴⁴⁵ Perhaps with the exception of automotive language where it refers to the system of tyres of a vehicle.

there is a notable oscillation between texts that adopt the personal voice versus those using passive and impersonal constructions. For example, 9 texts adopt the *si* passive forms while 7 use the first plural and more familiar form. Together with this particular text from the school in Milan, which shows indecisiveness, another text from a school in Palermo adopts an interesting approach that readily combines passive and impersonal forms with the use of *noi*. Another feature that really stands out, in relation with morphosyntax, is the use of a style that seems to recall that of a set of instructions for cooking, with an abundance of verbs in their infinitive tense:

1. Prelevare con un'ansa una piccola quantità di yogurt e metterla in una provetta riempita per metà con dell'acqua.
2. agitare fin quando l'acqua diventa torbida e il campione di yogurt si è sciolto.
3. lasciare a temperatura ambiente per qualche minuto.
4. prelevare con la pipetta 'Pasteur' una goccia di sospensione (acqua + yogurt).
5. spalmare la goccia sul vetrino con un vetrino copri-oggetto inclinato di 45 gradi da sinistra verso destra.⁴⁴⁶

As can be noticed, contrary to most scientific texts, here the dimension of time is present, even if the style is not necessarily personal. Connective constructs such as *fin quando* and *per qualche minuto* help to place the experiment in a rather generic temporal frame, in the simplified style that can be typical of instruction or cooking manuals. Finally, the product of this class seems to reveal one problem that goes beyond general grammatical observations, given that it appears to be difficult to try to find a real sociolinguistic approach to this text. It may be worth recalling that national indications for the curriculum and the most recent changes to the final exam⁴⁴⁷ of the secondary school cycle point out the importance of experimenting with diversified communicative situations; and, in fact, the idea itself of offering to students a large set of text types through which to prove their writing abilities, is founded on the didactic importance of textual varieties. In the example here analysed, the linguistic features and the tone are clearly not concerned with bringing the experiment to a level of consideration for any specific purpose, which makes the operation an end in itself, with very little educational impact. The title, for example, places emphasis on the 'osservazione', which relates the text to the passive dimension of *observing* rather than *making* and, more importantly, it does not easily suit any communicative situation. The objective of the experiment, as stated, is to 'osservare tramite microscopio i batteri presenti in un campione di yogurt', whereas the introduction seems to explain (but to whom?) the importance of the microscope: as a result, the person or institution referred to and the communicative circumstance are completely absent.

⁴⁴⁶ Appendix 10.

⁴⁴⁷ These were broadly analysed in chapter 3.

I will now take a look at the outcome of the experiments carried out by the class in Bologna. Observing Appendix 11, for example, it can be noticed that only three parts of the standard IMRaD procedure are present: the title (with names and affiliations of the authors), the materials and the method. It is evident that it lacks scientific relevance, given the almost complete absence of any hypothesis, results or even literature on the problem. Furthermore, regarding lexicon, the posters present some terms that would have needed a discussion and explanation by both the language and the science teacher.⁴⁴⁸ Thus, for example, words like *beuta*, *alcol etilico*, *equilibrio termico*, *bulbo con capillare di vetro* are interesting instances of how lexicon could be the perfect occasion to reflect upon the importance of scientific languages and the impact of them in everyday life.

Perhaps the most interesting feature of the posters from Bologna is their morphosyntax, which, compared to the posters of the cases analysed so far, presents a general preference for a more *familiar* and *confidential* tone. Four out of six posters, in fact, seem to prefer forms using the *noi* rather than passive forms or the *si*. In one case⁴⁴⁹ students show signs of indecisiveness, which seems to be a recursive feature of these case studies: it can be read, in fact:

Si prende il bulbo di vetro si *miscuglia* acqua e alcol etilico, si aggiunge colorante alimentare si immerge nella vaschetta piena di ghiaccio fondente; *aspettiamo* che il liquido termometrico si metta in equilibrio Termico. Appena il liquido si ferma, *segniamo* dove si ferma, poi *immergiamo* in un pentolino pieno di acqua bollente, appena il liquido si mette in equilibrio termico col l'acqua bollente si segna dove è arrivato. E il termometro è concluso.⁴⁵⁰

Regardless of the fact that this section appears very difficult to understand, given the rather complicated syntax and grammar utilised, it can be noticed that the section starts with impersonal forms of *si*, it soon switches back to the *noi*, only to use the *si* again at the end ('si segna dove è arrivato'). In fact, comparing Appendix 13 (which makes exclusive use of the first plural person) with the 'relazione' of the previous chapter, the difference appears evident. The list of verbs declined in the infinitive tense seems to be more suitable for a manual or cooking instruction, whereas the use of *noi*, as noted in chapter 5, is seen in a significant number of traditional scientific publications. These texts are important for what they reveal in terms of their aspects regarding textuality and the sociolinguistic level of analysis. Whereas the textuality aspects of them are evident because of the fact that they fall into the specific genre of scientific poster, their lack of a relevant communicative context (real or simulated) makes the use of the genre less

⁴⁴⁸ Which, as stated in the report, did not happen.

⁴⁴⁹ Appendix 12.

⁴⁵⁰ *Italics* is mine.

impactful. Once again, it can be observed here an individual adaptation (by the teacher) of the official and governmental directives on written language variety and use of multidisciplinary teaching. Although the students were encouraged to see the connection between science and language, in the realisation of the poster, the operation itself resulted in something of an end in itself, because it did not bring into account the communicative circumstances in which the posters might appear. The absence of a contextualised environment is reminiscent of the detached and abstract forms of writing found in the 'tema' and seems to be retrograde when the findings made by sociolinguistics in paying attention to referees, contexts and communicative situations are taken into account.

As far as the class in Rome is concerned, it can be noted that the linguistic product does not seem to represent an efficient product, when measured against functional writing methodologies and results analysed so far. As it can be observed, the structure seems to suggest that the teacher was giving instructions on how to make the experiment work and, therefore, the language used reflects the style of a laboratory report. The IMRaD structure was taken into consideration but substantially reworked. In fact, it lacks of an Introduction regarding the literature or the background of the subject, and of a discussion on how to consider the result in relation to the communicative environment.⁴⁵¹ Finally, the section dedicated to Materials and Methods is simply a list of the equipment utilised, whereas the methodology is here addressed as 'svolgimento'. The idea of 'svolgimento', in fact, could make one think of a bare manual execution in which students replicate what they are instructed to do. In fact, the entire set-up of the text seems to suggest the idea of replicating an operation that they had just been shown by the teacher. Contrary to other texts examined, a list of achieved objectives in science, language and multidisciplinary perspectives is here provided. Interestingly, the achievements in Italian language are: 'abbiamo osservato, conosciuto e descritto, abbiamo cercato di utilizzare un linguaggio appropriato e pertinente'. It is certainly relevant and important to see students, especially from an early school cycle, familiarise themselves with scientific words and constructions; however, perhaps the most important feature of the experiment, the one that would really help to redefine writing methodologies and finally look at writing abilities relevant also to technical communications, would have been the ability to contextualise the product in a communicative situation. Furthermore, it can be observed that the *multidisciplinary* achievements are that 'tutti hanno partecipato, a tutti è stato permesso di parlare e rivolgersi ai compagni per chiedere aiuto o informazioni

⁴⁵¹ This is because even this linguistic product seems to forget to be addressed to anyone and to insert itself in any communicative situation, as said below.

raggiungendo un accordo'. Although such broad participation is welcome within the classroom environment, and in this case included encouraging every student to share their opinion and, therefore, favouring the self-correction of errors and proficient debates,⁴⁵² it must be said that the multidisciplinary outcomes appear slightly different from what it was expected. Previous case studies, the questionnaire and the discussions with teachers, confirmed how projects like these ones that can benefit from the presence of an Italian language and a science teacher, are unusual. As a consequence, an ideal dimension of multidisciplinary teaching, for example, would involve having an environment in which students can understand the more humanistic aspects of the science topic (as for Bologna's case study) or would understand how a scientific experiment can effectively represent an occasion to reflect on technical scientific terminology or, more importantly, on textual variety. In the text, it can be found use of accurate scientific register, as far as concerns lexicon: *lugol*, *Backer*, *piastra a induzione*, *contagocce*, *amido*, *saturo*, that are words that, as stated by the teacher's report, generated discussion in the laboratory. From a morphological point of view, the text presents similar characteristics to the Milan experiment, with the section 'svolgimento' representing a sort of instruction manual, with one, interesting difference. While for the text produced by the class in Milan, it could be noticed the use of verbs in the infinitive tense, this class prefers the present tense of the first plural person. It seems to be not only in line with the familiar idea of a cooking instruction manual, but, one might say, even with a more familiar set of cultural practices, almost in the style of some cooking instruction blogs or TV programs. Let me read, for example, the recipe of this 'chickpeas pasta' from a popular cooking website:

In una pentola capiente mettiamo abbondante acqua con gli aromi a pezzettoni, ovvero l'aglio, la carota ed il sedano. Portiamo a bollore. Nel frattempo, tritiamo finemente la cipolla e la facciamo rosolare in un tegame con un filo d'olio. Uniamo i ceci ben sgocciolati (e sciacquati) e facciamo cuocere qualche minuto, in modo che si insaporiscano.⁴⁵³

Now I will compare it with the product here in exam:

Prendiamo una patata, la tagliamo in due parti uguali e mettiamo la prima nel forno a microonde per 3 minuti, mettiamo la seconda nella pentola a cuocere per 3 minuti in ½ litro d'acqua. In seguito togliamo le parti della patata dai diversi ambienti di cottura, le disponiamo in un piatto e tagliamo in due ogni metà, in modo da avere la patata sezionata in 4 parti.

⁴⁵² As for Colombo, *Dubbi, errori...*

⁴⁵³ 'Ricette in TV', <<https://www.ricetteintv.com/detto-fatto-pasta-e-ceci-di-sergio-assisi/>> [Acc. Sep 2018].

Although it is certainly true that, especially for young learners, a comparison between cooking instructions and scientific reports could help to understand the nature of planning based texts, it is nonetheless interesting to observe the use that is made of it here. The *familiar* use of the *noi* goes inevitably along with the presence of passive forms, to highlight the scientific relevance of the results; constructs such as *si deduce*, *viene modificato*, *si trasforma*, *legandosi* are typical of scientific writing, and certainly would have deserved a moment of discussion, which, once again according to an email exchange I had with the science teacher, did not happen. To conclude, it must be noticed how this text does not seem to be part of any particular textual variety: its title ('2 esperimenti') does not help us to include it in any text genre and it can be noticed that it does not show any signs of planned writing, preferring instead a more impulsive style, almost like the notes that students took during the class, rather than a planned, reflective and clearly argued product.

For the class in Cosenza, the language teacher did not supervise the linguistic part of the project. Therefore, the project lacked the multidisciplinary approach built into its methodology. However, it must be noticed that these posters seem to address some aspects of linguistics and sociolinguistics in a rather relevant way. To start with, from the point of view of textuality, the way the posters were structured, strictly following the IMRaD scheme, makes them look very relevant for a professional environment. The careful use of schemes, title, authors and their affiliations, shows how, even if not explicitly addressed, these texts can be relevant for specific communicative situations. Here, for example, even if it was not discussed in class, it is evident that the *professional* look of the posters can be presented, for example, in a scientific fair with the presence of other schools and the discussion of other posters. As can be seen, every section is detailed with relevant information: the introductions of the three posters are an interesting outline of the literature on the problem and the aim of the experiment. The Materials and Methods sections are not only a list of tools and items used in the experiment (as it was for Appendix 10 and 15), but also a more detailed description of the procedure. The Results point out the different ways outcomes were obtained from the single experiment and the Conclusion whether the initial objectives were fulfilled or not. Other levels of analysis confirm how accomplished these products were. From the lexical point of view, it can be observed the careful use of a specific terminology that was interestingly discussed in class, even without the presence of the language teacher. *Genoma*, *cromosomi*, *cromatidi*, *cariotipo*, *molecola*, *gameti*, *corredo cromosomico*, *eterozigote*, *omozigote*, *fenotipo* are typical words in the language of biology which, as is observed, is rich in mono-semantic

words, with words like *nucleo* (which generated a discussion on the meaning that it may have in different communicative situations) reduced to a minimum. One area for note and further reflection, regarding lexicon, is the preference that the language of biology has for single words (*monorematiche*) rather than phrasal groups of words (*polirematiche*): in an analysis⁴⁵⁴ conducted on the GRADIT,⁴⁵⁵ out of the 4.829, only 810 were phrasal words, whereas 3.884 of them are single words. Furthermore, the majority of technical terms (125) are formed via linguistic *confix* (*genoma, nucleotidi, cromosomi, cariotipo, omozigote, fenotipo, etc.*), rather than *suffix* or *prefix*. This is certainly of extreme interest and could represent an occasion for discussion in the classroom environment, which, in this particular case, did not happen. Finally, as far as the morphology and syntax aspects of these texts are concerned, it can be noticed that they have been addressed in a rather formal tone, in conjunction with what is believed could represent the ideal communicative situation: a communication between experts (or as expert as the authors) of the subject. Accordingly, and contrary to most of the texts analysed for this chapter, these posters from Cosenza explicitly prefer an impersonal approach, filled with passive forms, phrasal verbs and the use of passive *si*. In Appendix 17, for example, it can be noticed the need for de-personalisation and the adoption of a timeless dimension that are typical of this approach of scientific language. This is thanks to the use of verbs in their present tense (*‘Il test di tipizzazione genetica di un individuo (DNA profiling) si basa sulla possibilità di analizzare regioni del genoma umano...’*) and the presence of passive forms such as *viene applicata, vengono depositati, viene irradiata* and *si* forms such as *si deposita, si avrà, si possono utilizzare, si documenta*. The syntax also presents characteristic features of the language of science: a sentence such as *‘L’elettroforesi su gel di agarosio è una tecnica utilizzata per analizzare e separare frammenti di acidi nucleici’*⁴⁵⁶ seems to be preferable in this context to the more thematic⁴⁵⁷ variation *‘Una tecnica utilizzata per analizzare e separare frammenti di acidi nucleici è l’elettroforesi’*. The tendency of giving the new information (*topic*) as the first information in the sentence is typical of language of science and may represent a valid point of discussion at school.

Finally, it was previously seen how the project about the ecological footprint of the school in Palermo was very rigidly and accurately structured in phases and the linguistic results seem to reflect this care for the planning and organisation. In fact, even

⁴⁵⁴ Cristina Lavinio, *Comunicazione e linguaggi disciplinari. Per un’educazione linguistica trasversale* (Rome: Carocci, 2004).

⁴⁵⁵ Italian Vocabulary of Use.

⁴⁵⁶ Appendix 17.

⁴⁵⁷ See 5.3.3.

if these products are not particularly interesting from a syntactical and morphosyntactical point of view, some of the features are worth noting. In an experiment focused on the students' ecological impact, it seems natural to assume that the linguistic product would adopt a more familiar and 'personal' tone: this is, in part, confirmed by Appendix 18, which also presents a section entitled 'Cosa possiamo fare noi?' that not only makes use of the first plural person *noi*, but also seems to use a very familiar standardised register. Words like *abbassare*, questions like 'Come?', sentences like 'piuttosto che farci scarrozzare in auto' signal this phenomenon. Interestingly, all the products contain a description of the ecological footprint that was 'scientific' enough to use a higher register, one that felt more impersonal and formal. In Appendix 19, for example, it can be read: 'Per calcolare l'impronta ecologica si mette in relazione la quantità di ogni bene [...] con una costante di rendimento espressa in kg/ha (chilogrammi per ettaro). Il risultato è una superficie espressa con l'unità di misura 'ettaro globale'. The tone feels more formal and scientifically appropriate, with the use of *si* as passive agent. What is more, the use of the present tense helps to render this section timeless in feel and far from personal interactions. On a final note, regarding the morphosyntax of these texts, it is interesting to see that the initial assumption regarding having products focusing on the use of *noi* in a much familiar tone, is contradicted by the good balance (2 out of 4) of posters that include the word *noi* or 'nostra' only in the title ('La nostra impronta ecologica', 'Noi & il mondo'). In a case such as Appendix 19, for example, a phrase that could have been 'impronta ecologica: un valore che calcola (di) quante risorse naturali *abbiamo* bisogno' is, on the other hand, more impersonal: 'impronta ecologica: un valore che calcola (di) quante risorse naturali *l'uomo ha* bisogno', thereby highlighting the awareness of these students of using appropriate structures according to the communicative circumstances. Communicative circumstances are, to conclude, extremely relevant in this case: even if the final products evidently lack a more complex system of scientific references, the whole operation seemed to have worked in line with the parameters of this methodology. Not only did the methodology help the students to bring both language and technical education out of the confines of their normal school hours, but also the final product seemed to represent a good example of how to make a discussion regarding the language of science and technical matters topics of everyday interest.

6.5 Questionnaires⁴⁵⁸

Before concluding, this paragraph will focus on the answers that the teachers involved in the project gave to the questionnaire, which I conceived personally and delivered to them at the end of the activities. The aim of the questionnaire was to obtain as much information on teachers' ideas on multidisciplinary teaching and its methodologies. It was also asked whether in their schools there was enough awareness on the subject and/or any activities that would involve reflections on textuality or technical - scientific languages. Furthermore, it was asked whether the textbooks and continuing education courses that they used/attended in the last five years had ever involved subjects such as multidisciplinary teaching or technical scientific languages. These questions were asked to gain a better sense of what the relationship is between traditional teaching and the reflections on multidisciplinary teaching, textuality and language varieties practices in schools. These theories have been brought to an advanced status by linguistic and sociolinguistic theories,⁴⁵⁹ a certain number of textbooks⁴⁶⁰ and by some high developed continuing education courses for teachers.⁴⁶¹ Even though the evidence base is relatively small, the case study and the questionnaire point to the existence of this gap, exposing some evident difficulties that schools may have with the introduction of a multidisciplinary approach and the use of language classes for technical or scientific purposes.

At the end of the activities, teachers of both science and Italian language were handed the questionnaire to which they answered candidly. The focus was firstly on general effective methodologies such as co-teaching and multidisciplinary teaching: all five answers confirm that their schools' internal curricula do *not* include co-shared teaching ('anche se sarebbero efficaci per gli alunni ed interessanti per noi docenti' one affirmed), but, interestingly they are all also aware of the existence of multidisciplinary teaching projects taking place at their schools. All five, in fact, mention examples of multidisciplinary teaching projects, most of them, however, focused on giving continuity with Primary school methodologies, where most subjects are taught by a single teacher. In one case, the answer to 'È al corrente dell'esistenza di progetti di didattica trasversale nella Sua scuola?' seems to be controversial because it mentions the existence of them, but '*purtroppo* limitati ai compiti di realtà (o autentici) finalizzati alla valutazione delle

⁴⁵⁸ The sample and the answers to the questionnaire can be seen at the end of the thesis.

⁴⁵⁹ See chapter 2 and 3.

⁴⁶⁰ See chapter 4.

⁴⁶¹ See chapter 5.

competenze europee'. It is rather unusual to see that the official national indications are here addressed as a limitative and negative event.

Perhaps the most interesting data that can be observed from these results is the opinion of these teachers on how the national indication for the curricula refer to subjects such as multidisciplinary teaching or language variety. It was pointed out, in the previous chapters, how long and complex was the process that would led these ideas to be included within the official documentation. However, teachers that have been interviewed do not seem to be satisfied by the results. In providing detailed reasons, all five respondents think that multidisciplinary methodologies and *specialistic* languages deserve more space in the national indications. The reasons for this are because, as one states, these subjects are treated 'in modo troppo superficiale', although, in two cases, more reasoned answers can be read:

Per ogni disciplina, è chiaramente espresso che il profilo di competenza dell'alunno in quell'ambito si definisce anche per l'uso dei linguaggi specifici, ma non è dedicata sufficiente attenzione alla didattica per l'apprendimento di tali linguaggi, cioè ai percorsi e alle dinamiche utili all'apprendimento e all'uso consapevole, da parte degli alunni, dei lessici specialistici non solo come 'bagaglio aggiuntivo', ma come forma ulteriore di organizzazione delle conoscenze e delle procedure delle discipline, in particolare di quelle scientifico-tecnologiche.

And:

Le Indicazioni Nazionali costituiscono il riferimento per la progettazione curricolare che deve mirare allo sviluppo delle competenze chiave europee, alle competenze del profilo dello studente e ai traguardi per lo sviluppo delle competenze disciplinari. Quindi, in questa ottica, noi docenti effettuiamo scelte didattiche significative con attenzione allo sviluppo di competenze trasversali. Attraverso la trasversalità pedagogica è sottinteso che anche i linguaggi specifici disciplinari dovrebbero integrarsi e dare l'opportunità di ampliare la conoscenza linguistica in generale. Ritengo, però, che nelle Indicazioni Nazionali il linguaggio settoriale e la varietà linguistica non siano messi in notevole evidenza come obiettivo a cui tendere.

The general feeling is that the indications are used as the most important point of reference, but they would need a further update to include an appropriate discussion on language variety.

Regarding textbooks and whether or not Italian or Science textbooks should include reflections on technical-scientific languages, teachers seem to agree that such sections are absent from their current textbooks. In fact, whether it was the science teacher or the Italian teacher who responded, all respondents notice how textbooks do not dedicate enough space to these ideas, and that they would certainly make use of it if there

were. Science teachers, however, seem to notice that some textbooks ‘usano un buon linguaggio specifico, stimolano ad un uso adeguato del linguaggio scientifico, ma momenti effettivi di riflessione sulla lingua, a parte il significato etimologico di alcune parole, sono pochi’. Finally, in one case, it is pointed out that the lack of reflection on these subjects, may cause a sort of frustration in the teachers that would be forced to explain the use or the meaning of certain words or constructions: ‘In un libro di scienze, i chiarimenti sul diverso uso che si fa di un termine nel linguaggio corrente e nel linguaggio scientifico, sono del tutto assenti o limitati a pochissimi termini. Questo è un lavoro che spetta all’insegnante’.

As far as the questions about cooperative learning are concerned, it can be safely said that this kind of methodology is very much absorbed and utilised by secondary school teachers. This is not in itself surprising given the interconnections between primary school and the first cycle of secondary school. For this reason, it is understandable that teachers would make use of methodologies that are extremely popular in lower school cycles. However, its effectiveness is not to be underestimated, even in more advanced classes of secondary schools of the first cycle. All the teachers interviewed, in fact, seem to make use of these methodologies to explain or examine results in their science classes. In one case, cooperative learning is used to strengthen the results at the end of every disciplinary unit and the teacher notices that what she finds effective in this methodology is not the fact that it helps students to understand the subject itself, but rather ‘il bisogno formativo che la classe manifesta, per cui la cooperazione e la produzione comune consentono ai singoli di mettere in atto le competenze migliori e recuperare quelle più fragili’. Interestingly, on the other hand, the cooperative methodologies are not part of language teachers’ preferred approaches. The three Italian teachers that agreed to take part in this survey preferred not to answer the questions, probably assuming that this was only directed to the science teacher. This is unfortunate because it would be of extreme interest to find out how students would react to cooperative learning methodologies when it comes to Italian language teaching/learning. In the previous chapter, it was observed that the scientific poster could be an excellent occasion for young learners to start a discussion regarding cooperative learning/teaching methodologies. However, the results that are learnt from this chapter’s case studies and from the answer to the questionnaire show that the application of cooperative learning is an approach that humanities and language disciplines have not yet decided to adopt, as far as this sample is concerned.

Moreover, Italian and science teachers were questioned separately: it was asked the Italian teachers what is their preferred methodology in teaching how to write a text

and how much time they spend (if any) talking about sectorial-based languages during the year. Two of the three teachers involved agree that their normal routine involves the reflection on how to plan a text and the kind of genre they are approaching when writing a text. However, one interesting case noticed that their favourite methodology is the free ‘tema’, but ‘unfortunately’ ‘le recenti innovazioni in tema di esame di stato mi hanno costretto quest’anno a dedicare maggiore tempo (2 ore settimanali) ai testi descrittivi e argomentativi. Per raggiungere gli obiettivi utilizzo brani scelti, articoli di giornali o riviste, a volte risorse telematiche’. It is interesting to notice that the introduction of the new final exam⁴⁶² is here seen as a problem that ‘forces’ the teacher to leave behind their favourite methodology and focus on more ‘functional’ text types. Despite the fact that all educational systems have, of course, strong elements of conservatism in them, it is believed that this approach represents a good indicator. On the other hand, one case pointed out the importance of the new objectives of the final exam and multidisciplinary in general; her ideas are, in fact, that:

Il percorso per la scrittura espositiva e argomentativa è da me messo in atto soprattutto a partire dalla seconda classe, ma risulta centrale per la terza classe. La metodologia che seguo, solitamente, parte dalla lettura e dall’esame di testi espositivi scritti da altri, per individuarne le caratteristiche compositive e sviluppare una metodologia per la risoluzione autonoma delle difficoltà di comprensione di singoli termini od espressioni strettamente connesse con l’argomento esposto. Per raggiungere questo sviluppo esercizi sulla composizione delle parole e sul rapporto tra termine e contesto. Si passa poi all’elaborazione di una macrostruttura generale in cui vanno organizzate e distribuite le informazioni da esporre, che si realizza sia in un organizzatore grafico sia in una scaletta di passaggi da sviluppare, per dare la possibilità a tutti gli alunni di scegliere l’assetto compositivo che più si confà allo stile di apprendimento individuale. Passo poi all’esercizio di scrittura vero e proprio, che si sviluppa in attività individuali, in una prima fase, che vengono commentate collettivamente in classe, evidenziando le piste di miglioramento per ciascuno. In una seconda fase, si propongono attività in assetto collaborativo, generalmente su temi che riguardano civiltà e società contemporanea, la cui parte centrale è costituita da un testo espositivo con esplicita finalità e destinatario.

The teacher who provided such a detailed analysis of her methodology is, not by chance, a member of the CIDI, ‘Centro Iniziativa Democratica Insegnanti’,⁴⁶³ an association of teachers that is concerned with sharing of opinions and ideas with teachers and educators from all the school cycles and with experts of particular areas. Once again it can be noticed that, when familiar with academia or with more advanced structures and

⁴⁶² Which is broadly discussed in chapter 3.

⁴⁶³ For more information, see CIDI’s website <<http://www.cidi.it/>>.

associations, teachers can upgrade their methodologies, being more focused on the progress of the scientific world, the universities and the reforms. On a similar note, when questioned about whether they think possible that students may not understand scientific topics because of linguistic problems they may encounter with a scientific text, science teachers agreed that it is certainly possible. In one case, to avoid the problem, the teacher tried to ‘chiarire quale significato dò ai termini che uso e, se gli stessi sono usati in modo anche solo leggermente diverso nel linguaggio comune, lo chiarisco. Se detto delle definizioni in cui si usano termini settoriali, faccio scrivere in parentesi un termine del linguaggio comune a cui associare il significato. Se un termine settoriale ha un sinonimo settoriale, lo specifico e lo faccio scrivere’. As a result, it feels more natural for science teachers to deal with linguistic problems, rather than the other way around: even though in this small pool of examples, it looks like the opportunities for talking about sectorial-based languages come from the science subjects, rather than from the linguistic ones, despite the fact that official documentation seems to suggest that there must be a presence of language variety and different textual approaches in the curriculum.

Finally, to understand better the relationship between the work done by academics, linguists and educators in the past 40 years and the everyday practices at school, it was asked if any continuing education course that these teachers followed recently, mentioned or involved any idea on sectorial-based languages: 4 out of 5 answered ‘no’, whereas in one case the teacher admits that ‘oggi si parla molto dei linguaggi settoriali, e di come questi possano essere di ostacolo all’apprendimento’, but also specifies that, even if the subject was vaguely treated, ‘non si è mai entrati nel merito del linguaggio’. The comment suggests that, together with a more careful selection of textbooks that involve and make evident such subjects, continuing education courses for teachers are one key to bridging the gap between the progress made by academia, the European, international and national indications and the demand and pressure of a difficult and busy school system. The results of this questionnaire show that cases such as the Golinelli Foundation course are rare within the Italian school system. Of course, even though this chapter’s findings represent only a small portion of an analysis that require further studies, the answers given by the teachers to the questionnaire and, more importantly, the fact that different teachers from different parts of the country gave extremely similar answers, demonstrate that these results are not to be underestimated.

Conclusion

I will now summarise the results of this dissertation, highlighting the most crucial research findings and discussing their implication. This dissertation has shown how functional-based languages, textuality and multidisciplinary teaching are ideas that have been established in Italian curricula (especially, but not only, for secondary schools) and official documentation since the 1970s. After a long period of experimentation, during the 1980s and the early 1990s, these ideas were adapted as part of a vast process of reforms, beginning in 1997 with the Berlinguer educational reform. One central question addressed in this dissertation concerns whether and, if so, to what extent these ideologies and related ideas about Italian language pedagogy informed everyday school practices. The enquiry was concerned firstly to examine the reforms and curricula between 1997 and 2012, with a particular focus on the sections regarding textual varieties and sectorial-based languages. Secondly, to what is believed to be the most interesting result of the process of debates and institutional changes, that is, the new Italian language assignments, proposed by the reform in 1998. The outcomes of this debate and these changes within the school system and were then investigated by undertaking an analysis of the following: 1. grammar schoolbooks for secondary school before and after the changes to the final exam assignments; 2. the role of teachers' courses in articulating and driving institutional directives within the school system; and 3. the status of multidisciplinary teaching and functional-based language within the school system (this analysis was conducted through case studies).

Chapter 1 showed not only that the linguistic discussion around textuality and functional-based languages was undergoing a vibrant debate during the years around the Berlinguer reform (1992-1997), but also that the ideas and the methodologies that were taken into account were part of the discussion even before the significant changes of the late 1990s that represent the starting point of this dissertation. In fact, it was demonstrated that concepts such as multidisciplinary teaching, sectorial-based languages, textual and linguistic varieties were part of a broader discussion regarding the 'educazione linguistica democratica' at least since 1975, when the *10 Tesi per l'educazione linguistica democratica* were published.⁴⁶⁴ The chapter also highlighted that it is indeed possible to follow these ideologies and concepts throughout the recent history of educational policies and ideological discussion. This was done by examining the most important documents and reforms, which include the 1979 and 1985 programmes, the experimental period of

⁴⁶⁴ GISCEL, *10 Tesi per l'educazione linguistica democratica*, 1975.

the Brocca programmes in 1988 and 1992 and, finally, the Berlinguer reform between 1997 and 2000.

Chapter 2 considers how in 2000-01, the discussion upon these concepts was being validated and encouraged by European institutions. Not by chance, in fact, the Lisbon European Council in 2000 set up new objectives for educational policies in order to have them to ‘adapt both to the demands of the knowledge society and to the need for an improved level and quality of employment’.⁴⁶⁵ The results of the analysis of the new curricula by Education Ministers Moratti (2001), Fioroni (2006/08) and Gelmini (2010/12) in chapter 2, confirmed the initial research objectives of the chapter. It is, in fact, possible to highlight, within these documents, the presence and the persistence of elements and suggestions regarding functional-based languages and language variety. This chapter also includes the analysis of the 2010 and 2012 curricula,⁴⁶⁶ that is the most recent and most updated version of the curricula studied in this dissertation. The outcome of the analysis shows the dominant focus on multidisciplinary teaching within the sections of the official documentation on language education. The main research question of the first two chapters is not whether features such as sectorial-based languages and methodologies such as multidisciplinary teaching/learning were present in the secondary school curricula after the 1990s, but whether they informed everyday school practices and, if so, through which channels this took place.

Consequentially, in the following chapters, the most indicative channels that generated from the discussion upon these concepts were analysed, starting from the reform of the assignment for the Italian final exam for secondary school students. In chapter 3, it was assessed how the discussion between linguists and academics from the 1970s to the 1990s might have affected the creation of a new language assignment for the final exam, which, for the first time, involved different text types, such as the newspaper article or the so-called ‘saggio breve’. As can be seen, pre-Reform assignments tended to be disconnected from any relevant communicative context, reference or linguistic occasion. On the other hand, the new guidelines for the final assignments address different text types, which, in some cases (such as the newspaper article and the ‘saggio breve’) require the writer to have a (simulated) linguistic context, reference and linguistic occasion in mind, before any writing is undertaken. In this regard, the attention was called to the fact that, from a theoretical point of view, the new assignment could have become

⁴⁶⁵Lisbon European Council, 23 and 24 March 2000, ‘Presidency Conclusion’, <http://www.europarl.europa.eu/summits/lis1_en.htm> [Acc. Dec. 2016]

⁴⁶⁶The most recent version is now the 2018 curricula for primary schools.

the cornerstone of a discussion upon language and textual varieties, textuality and multidisciplinary teaching within the school practices that was not in place, within the classroom environments, before the changes. In order to verify whether or not this happened, a number of case studies were undertaken and were regarded as potentially revealing of the current situation within the school system. The case studies dealt with the following materials and contexts: textbooks (chapter 4); continuing education courses for teachers (chapter 5); and the classroom environment (chapter 6).

As far as chapter 4 is concerned, the aim was to find and evaluate differences between grammar schoolbooks before and after the 1998 reform of the final assignment. The case study considers a small but significant sample of textbooks, which (as noted in the chapter) were the ones most utilised in 1992 and 1995 (and hence before the reform itself) and those that were used after the reform in 2011 and 2012. It was considered how the textbooks evolved and adapted to the institutional changes, and brought into the discussion elements of sociolinguistics, textual varieties and different text types. Interestingly, the analysis of textual features and sociolinguistic elements showed that the two books published before the reform, and which one might have expected to show signs of old-fashioned methodologies, often contained instead up-to-date contents and ideas.⁴⁶⁷ What is more, the two more recent textbooks do not always show major or radical changes that can be related to the final exam reform.⁴⁶⁸ While perhaps unexpected to some degree, these findings are revelatory. In fact, the analysis helped to provide some support for the view that the pre-reform textbooks confirm the persistence of concepts which were monitored during the analysis of chapters 1, 2 and 3. Language and textual varieties are in fact not by any means new elements of linguistics theories that were somehow ‘generated’ after the reform of the exam.

Further studies on larger samples will be needed to consider the question of whether the changes brought about by the reform to the exam actually led to changes in classroom practices. The current situation within the classroom and its practices is addressed in the final two chapters whose primary aim is to gauge, through case studies, the extent to which textuality and sectorial-based languages find a place within the current teaching methodologies, with particular (but not exclusive) attention to secondary schools of the first cycle. The principal preoccupation of these chapters was to investigate closely

⁴⁶⁷ It was surprising, in fact, to find elements of very advanced ideologies, such as the description of how to plan a text in *Italiano insieme*, 1995.

⁴⁶⁸ *Datti una regola*, in particular, does not show signs of updated methodologies, in particular, for what concerns the section dedicated to sectorial-based languages and the planning of a text.

the possible gap between the progress made by institutional directives, academia and the practical methodologies. The results of chapter 5 show that continuing education courses for teachers are indeed powerful indicators of how these ideologies are absorbed. This particular case study addressed activities on the language of science and its connection with textual linguistics and multidisciplinary teaching. The data gathered and addressed reveals that a multidisciplinary approach to language teaching is possible and it addresses not only the basic grammar analysis (lexicon, morphosyntax, syntax and textuality), but also, and perhaps more importantly, the sociolinguistic level of analysis (communicative situations, context, addressee, referees). Through the project designed by the Golinelli Foundation in Bologna, it was observed how the academic trainers of the course deployed methodologies, with the intent of helping teachers to replicate similar activities in their school practices. Following the analysis and the description of the language of science, the results for this chapter highlight the place and value of multidisciplinary teaching for pedagogical theories. The use of Inquiry Based Learning and the IMRaD methodology for the scientific posters, for example, was revealing not only because it connected different disciplines, but also because it facilitated a discussion on sectorial-based languages. The findings for the follow-up activity carried out in schools, finally, show that very often the teachers who attended the continuing education course followed its suggestions and engaged with the spirit of the experiment, contributing to a more developed discussion upon sectorial-based languages and multidisciplinary teaching within their classrooms.

With regards to the current situation, in chapter 6 I designed an activity addressed to a selected number of classes, following the model of the course of the Golinelli Foundation. In order to offer a broad-based sampling of the current pedagogical situation, five secondary school classes, across the entire Italian peninsula were taken into consideration. By arranging an activity designed to stimulate a discussion on sectorial-based languages and multidisciplinary teaching, the research goal of the chapter was to explore the main features of current teaching methodologies with regards to the subject of this study and in comparison with the previous case study, the textbooks and the curricula. The results illustrated a situation in which, either through continuing education courses or by following the most advanced theories, teachers can keep themselves updated and deliver the most advanced methodologies, in line with the institutional directives and the academic debate. In practice, this was, however, the case for only one

out of the five cases analysed.⁴⁶⁹ The results showed that, although the most advanced indications, curricula and, in some cases, textbooks highlight the importance of a reflection upon sectorial-based languages and textual and language varieties, their application often seem to depend on the *curiosity* and the *awareness* of the teacher. In some cases, the outcome of the activities not only showed that the teachers did not seem interested in a possible cooperation between disciplines and/or in a reflection upon functional-based languages, but also that they had little enthusiasm or interest for carrying out such a collaboration. When the teachers shows interest⁴⁷⁰ for updated methodologies, on the other hand, the results illustrate that the outcome can be very revealing. As part of this case study, activities based on shared teaching/learning were in place and it was noticed that they facilitated inquiry-based multi- and inter-disciplinary teaching approach. Furthermore, it was observed that the students, when confronted through these methodologies, are more engaged with the subject and understand the content with greater facility.

As we reflect on the findings, it is important to recall the practical context of the dissertation. If, on the one hand, the sections regarding reforms and curricula are an exhaustive consideration of the occasions in which textual varieties and functional-based language discussion occur within the context of official documentation and related discussion, on the other hand, the aim of the chapters dedicated to the case studies offers a different contribution to the field. This section of the dissertation, in fact, has the aim of delivering an illustrative sampling of how the ideas highlighted in chapters 1 to 3 are received in real classrooms. For this reason, it is important to remember that factors such as the sample size, the territorial and geographical impact and the different contexts of the results should be taken into consideration. Future works on the subject will be needed to expand the sample size and perhaps also to allow comparison, where data is available, with non-Italian contexts.

The final set of considerations concerns the way the results of this dissertation can be placed within the theories of language education. More specifically, the contribution is above all concerned with Italian language education, textual and sociological theories,

⁴⁶⁹ In this case, a teacher who, even if not having attended the course in the case study of chapter 5, was aware of the most updated methodologies.

⁴⁷⁰ As for the case of the school in Palermo, in which students and teachers were engaging in a very interesting activities and some very advanced methodologies were exploited. It must be remembered that the teacher contacted for this class was indeed a member of CIDI, a teaching association which connects teachers of the whole of Italy and keeps them updated with the most recent theories.

as well as the dynamics between ideologies and teaching practices. If crucial works on the subject such as those by Anna Rosa Guerriero (2002), Cristina Lavinio (2004, 2006) and Tullio De Mauro (2014) have recently shown that, despite progress, language education methodologies in Italy can and must still be improved, this dissertation shows that one of the fields in which this can be done with effective results is textuality and functional-based languages. The results of the thesis show that there is a way in which these ideas can be re-traced to the early linguistic discussion firstly of the 1970s and then of the 1990s, and can be connected to school practice. What is more, it was found that often the problematic tension between theory and practice is addressed in the gap between academia and school practices. As highlighted recently by Francesco Sabatini: ‘i mali del nostro sistema di istruzione vengono spesso denunciati pubblicamente non dalla scuola, ma dall’Università e, a livelli più avanzati, dagli ordini professionali’.⁴⁷¹ It has been the main concern of this dissertation to study, document and analyse how this gap might have been generated, to address the channels in which the tensions are most evident and to indicate cases in which some institutions have found possible ways to close it.

⁴⁷¹ Francesco Sabatini, ‘La denuncia di Sabatini: la scuola ha smesso di insegnare la lingua italiana’, in *Tecnica della Scuola* (2017), <https://www.tecnicadellascuola.it/la-denuncia-di-sabatini-la-scuola-ha-smesso-di-insegnare-la-lingua-italiana?fbclid=IwAR0F1oathPGSOvAXjgCp2Er4ayLioDe3DiAtQqENLc8_IT88ANo vAztG7A> [Accessed May 2019].

Bibliography

Primary Sources

All the D. Lgs ('decreti legislativi'), the laws, the programmes and the 'Indicazioni' are available online at the archives of the Ministry of Education, University and Research. Therefore, they will be not cited in this section. Refer to the chapters for the exact location, within the online archives of the Ministry

(<https://archivio.pubblica.istruzione.it/>) [Accessed July 2019].

Berlinguer, Luigi, Panara, Marco, *La scuola nuova* (Roma-Bari: Laterza, 2001).

Bottero, Antonella, Drago, Paola, Gallo, Tiziana, Rossini, Rosaria, *L'ora di italiano* (Florence: Giunti Marzocco, 1992).

Colombo, Adriano, 'I programmi Brocca di italiano', in *Lingua e nuova didattica*, Vol. XXIII, n. 3 (Rome: LEND, 1994) p. 8.

Della Casa, Maurizio, *Italiano Insieme* (Brescia: La Scuola, 1995).

GISCEL, *Dieci tesi per l'educazione linguistica democratica*. This document most recent 'home' is the GISCEL official website, <https://giscel.it/> [Acc. Jan. 2019].

Green Paper on The European Dimension of Education, available online at: <http://aei.pitt.edu/936/> [Acc. September 2019].

Lisbon European Council, 23 and 24 March 2000, Presidency Conclusions http://www.europarl.europa.eu/summits/lis1_en.htm], [Acc. June 2019], p. 1.

Loyson, Peter, 'Galilean Thermometer Not So Galilean', *Journal of Chemical Education*, 89 (2012), pp. 1095–1096.

MIUR, 'Focus Esiti degli esami di stato nella scuola secondaria di secondo grado' for the year 2014/2015, http://www.istruzione.it/allegati/2016/focus_esiti_esami_stato_II_grado_b.pdf > [Acc. Feb. 2017].

MIUR, 'Focus Esiti degli esami di stato nella scuola secondaria di secondo grado' for the year 2012/2013 http://www.istruzione.it/allegati/2014/Notiziario_esami_scrutini_II_ciclo2012_2013_completo.pdf > [Acc. Feb. 2017].

O'Hanlon, Simon J. and others, 'Recent Asian origin of chytrid fungi causing global amphibian declines', in *Science*, 360 (2018), pp. 621-627.

Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006H0962> > [Acc. June 2019].

- ‘Regolamento degli esami di Stato conclusivi dei corsi di studio di istruzione secondaria superiore’, 23rd July 1998,
 <<https://archivio.pubblica.istruzione.it/news/1998/ne98002.shtml>> [Acc. June 2019], p. 3.
- Sabatini, Francesco, Carmela Camodeca, Cristiana De Santis, *Sistema e Testo* (Turin: Loesher, 2011), p. 541.
- Steele, Julian A. and others, ‘Thermal unequilibrium of strained black CsPbI₃ thin films’, in *Science*, 366 (2019),
 <<https://science.sciencemag.org/content/early/2019/07/24/science.aax3878?rss=1>> [Acc. July 2019].
- Testa, Francesco, Mattioli, Mauro, Rosato, Italo, Singuarolil, Massimiliano, *L’italiano passo passo* (Milan: Mondadori, 2009/10).
- Wang, Lei, ‘Nuclear hnRNPA2B1 initiates and amplifies the innate immune response to DNA viruses’, in *Science*, 365 (2019),
 <<https://science.sciencemag.org/content/early/2019/07/17/science.aav0758/tab-figures-data>>.
- Zordan, Rosetta, *Datti una regola* (Milan: Fabbri, 2011).

Secondary Sources

- Altieri-Biagi, Maria Luisa, ‘Imparare l’uso della lingua’, in *La Vita Scolastica* n. 11 (Florence: Giunti Scuola, 2005).
- Altieri-Biagi, Maria Luisa, *La programmazione verticale. Continuità dell’educazione linguistica dalla scuola primaria alla scuola superiore* (Milan: La Nuova Italia, 2000).
- Arnauld, Antoine, Lancelot, Claude, *Grammaire générale et raisonnée, ou La Grammaire de Port- Royal* (Stuttgart-Bad Cannstatt: Frommann, 1966).
- Bachis, Dalila, ‘Norma e uso nella grammaticografia scolastica attuale’, in *Studi di grammatica italiana* Vol. 29 (2010/2011), pp. 329- 348.
- Benincà, Paola, Ferraboschi, Gabriele, Gaspari, Giovanni, Vannelli, Laura, ‘Italiano standard o italiano scolastico?’, in *Dal dialetto alla lingua, Atti del IX Convegno di studi Dialettali Italiani (Lecce 1972)* (Pisa: Pancini, 1974).

- Bennet, Holman, 'Context-based approaches to the teaching of chemistry: What are they and what are their effects?', in *Chemical education: Towards research-based practice*, ed. By John K. Gilbert (Dord: Kluwer Academic, 2002), pp. 165-184.
- Bernstein, Basil, *Class, Code and Control: Theoretical Studies Toward a Sociology of Language* (London: Routledge & Kegan Paul Ltd., 1971).
- Berruto, Gaetano, 'L'italiano popolare e la semplificazione linguistica', *Vox Romanica* XLII (1983), pp. 38-79.
- Berruto, Gaetano, 'Una nota su italiano regionale e italiano popolare', in *Scritti linguistici in onore di Giovan Battista Pellegrini*, Vol. 2 (Pisa: Pacini, 1983).
- Berruto, Gaetano, *Studi di sociolinguistica e linguistica* (Alessandria: Edizioni dell'Orso, 2012), pp. 141-181.
- Bolondi, Giorgio, Viale, Matteo, 'Abilità linguistiche e discipline scientifiche: un'esperienza di formazione del corpo insegnante nel Polo dell'Emilia-Romagna del progetto «I Lincei per una nuova didattica nella scuola»' (XVIII Convegno nazionale GISCEL "Educazione linguistica e apprendimento/insegnamento delle discipline matematico-scientifiche") (Rome, 27-29 marzo 2014), in *Educazione linguistica*, ed. by De Renzo, Piemontese.
- Briguglio, Anna Erminia, 'Dal Ministero Berlinguer alla Riforma Gelmini: note cursorie per riflettere sugli itinerari della formazione e dell'istruzione in Italia', in *Quaderni di Intercultura* (Anno III/2011 DOI 10.3271/N24), (Messina: Università degli Studi di Messina Press, 2011), pp. 2-3.
- Cardinale, Ugo, *L'arte di riassumere. Introduzione alla scrittura breve* (Bologna: Il Mulino, 2015).
- Chomsky, Noah, *Aspects and Theory of Syntax* (Cambridge, Mass.: MIT press, 1965).
- Colombo, Adriano, 'Contenuti essenziali o abilità essenziali?', in *Scuola e città* (Rome: La Nuova Italia, 1998), p. 451.
- Colombo, Adriano, 'Riflessioni di un conservatore', in *LEND, Quale Grammatica* (Milan: Edizioni scolastiche Bruno Mondadori, 1982), pp. 12-70.
- Colombo, Adriano, *A me mi. Dubbi, errori, correzioni nell'italiano scritto* (Milan: Franco Angeli, 2011).
- Colombo, Adriano, Graffi, Giorgio, *Capire la grammatica. Il contributo della linguistica* (Rome: Carocci, 2017).
- Colombo, Adriano, *Per un curriculum verticale di riflessione sulla lingua* (Padua: G&D - Grammatica e Didattica, N. 4 - 5), pp. 25-42.

- Corno, Dario, *Scrivere per comunicare. Teoria e pratica della scrittura in lingua italiana* (Milan: Mondadori, 2012), p. 24.
- Cortelazzo, Manlio, 'Avviamento critico allo studio della dialettologia italiana', in *Lineamenti di italiano popolare*, Vol. 3 (Pisa: Pacini, 1972).
- Cortelazzo, Michele, 'L'italiano e le sue varietà: una situazione in movimento', in *Lingua e stile* 36(2001), pp. 417-430.
- Cortelazzo, Michele, 'Un'ipotesi per la storia dell'italiano scolastico', in *Scritture bambine*, ed. by Quinto Antonelli and Egle Becchi (Roma-Bari: Laterza, 1995) pp. 237-252.
- Cortelazzo, Michele, *I sentieri della lingua. Saggi sugli usi dell'italiano tra passato e presente* (Padua: Esedra, 2012), p.185.
- Cortelazzo, Michele, *Lingue speciali. La dimensione verticale* (Padua: Unipress, 1994).
- Coseriu, Eugenio, *Lezioni di linguistica generale* (Turin: Boringhieri, 1973).
- Dal Passo, Fabrizio, 'Storia della scuola italiana', in *Il codice della scuola, Vol 2*, ed. by Livia Barberio Corsetti, Giampiero Paolo Cirillo, Evelina Ciarrapico, Domenico Croce, Giuseppe Scribano (Brescia: La Scuola, 2011), p. 29.
- Dardano, Maurizio, 'Profilo dell'italiano contemporaneo', in *Storia della lingua italiana, II, Scritto e parlato*, ed. by Luca Serianni, Pietro Trifone (Turin: Einaudi, 1994).
- de Beaugrande, Robert-Alain, Dressler, Wolfgang U., *Einführung in die Textlinguistik* (Berlin: De Gruyter, 1981/2011).
- De Mauro, Tullio, 'I linguaggi scientifici', in *Studi sul trattamento linguistico dell'informazione scientifica* (Rome: Bulzoni, 1994), p. 35.
- De Mauro, Tullio, 'La grammatica e le grammatiche, dossier', in *Riforma della scuola* (9/10) (Rome: Riforma della scuola press, 1981), pp. 17-48.
- De Mauro, Tullio, 'Linguaggi scientifici e lingue storiche', in *L'educazione linguistica e i linguaggi delle scienze*, ed. by Anna Rosa Guerriero (Florence: La Nuova Italia, 1988).
- De Mauro, Tullio, *Anche l'italiano serve a parlare di scienze, Lingua Matematica e scienze. Anche le discipline scientifiche parlano l'italiano.* (Florence: Accademia della Crusca Edizioni, 2014).
- De Mauro, Tullio, *Guida all'uso delle parole* (Rome: Editori Riuniti, 1980), p. 37.
- De Mauro, Tullio, *Storia linguistica dell'Italia unita* (Bari: Laterza, 1974).
- Flower, Linda, Hayes, John R., 'A Cognitive Process Theory of Writing', in *College Composition and Communication*, Vol. 32, No. 4 (Dec., 1981), pp. 365-387.

- Giovanardi, Claudio, 'Storia dei linguaggi tecnici e scientifici nella Romania: italiano', in *Romanische Sprachgeschichte. Ein internationales Handbuch zur Geschichte der romanischen Sprachen*, 3/08 ed. by Gerhard Ernst and others (Berlin and New York: De Gruyter, 2008) pp. 2197-2211.
- Gualdo, Riccardo, Telve, Stefano, *Linguaggi specialistici dell'italiano* (Florence: Carocci, 2012).
- Hymes, Dell, 'On Communicative Competence', in *Sociolinguistics*, ed. by John B. Pride, Janet Holmes, (Harmondsworth: Penguin Books, 1972).
- Jakobson, Roman, 'Closing statements: Linguistic and Poetics', in *Style in language*, ed. by Thomas A. Seabook (Cambridge: M.I.T. Press, 1960), pp. 350-377.
- Labov, William, *Language of The Inner City* (Philadelphia: University of Pennsylvania Press, 1973).
- Labov, William, *Sociolinguistic Patterns* (Philadelphia: University of Pennsylvania Press, 1972).
- Lavinio, Cristina, 'L'impegno del GISCEL nel "Laboratorio di scrittura"', in *Laboratorio di scrittura. Non solo temi all'esame di stato. Idee per il curricolo*, ed. by Anna Rosa Guerriero (Milan: La Nuova Italia, 2002), p. XIX.
- Lavinio, Cristina, 'Per un rilancio dell'educazione linguistica democratica', in *Lingua, scuola e società. I nuovi bisogni comunicativi nelle classi multiculturali*, 'Atti del Convegno organizzato dall'Istituto Gramsci del Friuli Venezia Giulia con il patrocinio dell'Università degli Studi di Trieste', Trieste 6-7 ottobre 2006, ed. by Elena Pistolesi (Trieste: Istituto Gramsci del Friuli Venezia Giulia, 2007) pp. 30-31.
- Lavinio, Cristina, *Comunicazione e linguaggi disciplinari. Per un'educazione linguistica trasversale*. (Rome: Carocci, 2004), p. 29.
- Lepschy, Giulio, *Mother Tongues and Other Reflections on the Italian Language* (Toronto: University of Toronto Press, 2002).
- Leung, Constant, 'Convivial communication: recontextualizing communicative competence', in *International Journal of Applied Linguistics*, 15 (2) (Leuven: Peeters, 2005), pp. 119-144.
- Lo Duca, Maria Giuseppe, Solarino, Rosaria, *La lingua italiana, una grammatica ragionevole* (Padua: Unipress, 2004).
- Longacre, Robert E., *The Grammar of Discourse* (New York and London: Springer Science & Business Media, 1983).

- Martinet, André, *A Functional View of Language* (Oxford: Clarendon, 1962).
- Meecham, Majorie, Rees-Miller, Janie, 'Language in Social Context' in *Contemporary linguistics*, ed. by William O'Grady, John Archibald, Mark Aronoff and Janie Rees-Miller, (Boston: Bedford/St. Martin's, 2001), pp. 537-590.
- Mengaldo, Pier Vincenzo, 'Il Novecento', in *Storia della lingua italiana* (Bologna: Il Mulino, 1994).
- Michael, Gregory and Carroll, Susanne, *Language and situation: Language varieties and their Social Context* (London: Routledge, 1978).
- Milani, don Lorenzo and the 'Scuola di Barbiana', *Lettera a una professoressa* (Turin: Einaudi, 1967).
- Nesi, Annalisa, Di Martino, Domenico, 'Lingua italiana e scienze', 'Atti del convegno internazionale, Villa Medicea di Castello, 6-8 febbraio 2003, Accademia della Crusca' (Accademia della Crusca Edizioni: Florence, 2012).
- Patota, Giuseppe, *Grammatica di riferimento dell'italiano contemporaneo* (Novara: De Agostini Scuola-Garzanti, 2006).
- Pearsall, Thomas E., *The Elements of Technical Writing*, (London: Longman, 2009).
- Porro, Marzio, 'I linguaggi della scienza e della tecnica', in *I linguaggi settoriali in Italia*, ed. by Gian Luigi Beccaria (Milan: Bompiani, 1973), p. 187.
- Prandi, Michele, *Le regole e le scelte: introduzione alla grammatica italiana* (Turin: UTET, 2006).
- Rossi, Fabio, Ruggiano, Fabio, *L'italiano scritto: usi regole e dubbi* (Rome: Carocci, 2018).
- Schwarze, Cristoph, *Grammatik der italienischen Sprache* (Tübingen: Niemeyer, 1988).
- Serianni, Luca, Benedetti, Giuseppe, *Scritti sui banchi. L'italiano a scuola fra alunni e insegnanti* (Roma: Carocci, 2009/2015).
- Serianni, Luca, *Terminologia medica: qualche considerazione tra italiano, francese, spagnolo*, *Studi di lessicografia italiana* (Rome: Le Lettere 25, 2008), pp. 253-269.
- Serianni, Luca, *Un treno di sinonimi. I medici e le parole: percorsi linguistici nel passato e nel presente* (Milan: Garzanti, 2005), pp. 127-128.
- Simone, Raffaele, Cardona, Giorgio, 'Strutture teoriche di alcune grammatiche scolastiche italiane', in *L'insegnamento dell'italiano in Italia e all'estero*, ed. by Mario Medici and Raffaele Simone, (Rome: Bulzoni, 1971), pp. 365-393.
- Simone, Raffaele, QRZ. *La macchina da scrivere e lo sviluppo del linguaggio. "Riforma della scuola"*, XXX, 7-8:40-46, in Guerriero, *Laboratorio di scrittura*, p. 6.

- Sobrero, Alberto, 'Il peso della grammatica', in *Il test fa scuola*, ed. by Rosa Calò, Silvana Ferreri (La Nuova Italia: Florence, 1997), pp. 489-502.
- Sobrero, Alberto, 'Lingue speciali', in *Introduzione all'italiano contemporaneo. La variazione e gli usi*, ed. by Alberto Sobrero (Rome-Bari: La Terza, 1993), pp. 237-277.
- Sollaci, Luciana B., Pereira, Mauricio G., 'The Introduction, methods, results, and discussion (IMRaD) structure: a fifty-year survey', in *Journal of the Medical Library Association* v.92 (3), July 2004, pp. 364-371.
- Tesnière, Lucien, *Éléments de syntaxe structurale* (Paris: Klincksieck, 1959).
- Toury, Gideon, *Descriptive Translation Studies and Beyond* (Amsterdam/Philadelphia: John Benjamins Publishing Company, 1995).
- Trifone, Pietro, Palermo, Massimo, *Grammatica italiana di base* (Bologna: Zanichelli, 2000).
- Trudgill, Peter, 'Standard English: what isn't', in *Standard English: The Widening Debate*, ed. by Tony Bex and Richard J. Watts (London: Routledge, 1999), pp. 117-128.
- Viale, Matteo, 'Migliorini tra grammatica ed educazione linguistica', in *Bruno Migliorini, l'uomo e il linguista. Atti del convegno* ed. by Matteo Santimpolo and Matteo Viale (Rovigo: Accademia dei Concordi Editore, 2009), pp. 291-311.
- Viale, Matteo, 'Note sulla costruzione del periodo nella formazione storica del testo scientifico italiano', in *Sintassi storica e sincronica dell'italiano. Subordinazione, coordinazione e giustapposizione*, ed. by Angela Ferrai (Florence: Franco Cesati, 2009).
- Viale, Matteo, *Studi e ricerche sul linguaggio amministrativo* (Padua: Cleup, 2008).
- Virtanen, Tuija, *Discourse Functions of Adverbial Placement in English: Clause-Initial Adverbials of Time and Place in Narratives and Procedural Place Descriptions* (Åbo: Åbo Akademi University Press, 1992).
- Werlich, Egon, *A Text Grammar of English*, (Heidelberg: Quelle & Meyer, 1976).

Web Sources

- Ambel, Mario, 'Perché non è bene parlare così di riassunto!' on the online version of *Insegnare, rivista del centro di iniziativa democratica degli insegnanti*, <<http://www.insegnareonline.com/orizzonti/educazione-linguistica-democratica/mario-ambel-parlare-riassunto>> [Acc. Nov. 2017].
- Berruto, Gaetano, 'Variazione linguistica', <[http://www.treccani.it/enciclopedia/variazione-linguistica_\(Enciclopedia-dell'Italiano\)/](http://www.treccani.it/enciclopedia/variazione-linguistica_(Enciclopedia-dell'Italiano)/)> [Acc. June 2017].
- Berruto, Gaetano, 'Variazione Linguistica', in *Enciclopedia dell'Italiano Treccani*, <[http://www.treccani.it/enciclopedia/variazione-linguistica_\(Enciclopedia-dell'Italiano\)/](http://www.treccani.it/enciclopedia/variazione-linguistica_(Enciclopedia-dell'Italiano)/)> [Acc. June 2019].
- Berruto, Gaetano, 'Italiano standard', in *Enciclopedia dell'Italiano Treccani* <http://www.treccani.it/enciclopedia/italiano-standard_%28Enciclopedia-dell'Italiano%29/> [Acc. July 2017].
- Bertagna, Giuseppe, 'Raccomandazioni per l'attuazione delle Indicazioni Nazionali per i Piani di studio personalizzati nella Scuola Primaria', <http://archivio.pubblica.istruzione.it/news/2002/allegati/sperimentazione/raccomandazioni_primaria.pdf> [Acc. June 2019].
- Cerini, Giancarlo, 'La riforma come ipotesi di lavoro', <<http://www.edscuola.it/archivio/riformeonline/ipolav.html>> [Acc. June 2019].
- Colombo, Adriano, 'Attraverso i curricoli delle associazioni disciplinari', in *Coordinamento del Forum delle associazioni disciplinari, Progettare la scuola*, <<http://www.adriancolombo.it/compemodu/compemodu04.pdf>> [Acc. June 2019].
- Colombo, Adriano, *Berlinguer ti ho voluto bene. Sette anni di interventi sulla scuola*, (Turin: Trauben, 2002), <<http://www.adriancolombo.it/poliscola/poliscola06.pdf>> [Acc. June 2019].
- De Martin, Gian Candido, 'Autonomia dell'istruzione e riforme istituzionali: note introduttive', in *Atti del Convegno 'Autonomia dell'istruzione ed autonomia regionale dopo la riforma del Titolo V della Costituzione'*, Università degli studi di Trento, 14 novembre 2003, <https://www.regione.emilia-romagna.it/affari_ist/rivista_2_3_2004/217-227%20De%20Martin.pdf>, [Acc. June 2019].

- De Mauro, Tullio, *Semantica* (1982), in Enciclopedia dell'Italiano Treccani: http://www.treccani.it/enciclopedia/semantica_%28Enciclopedia-del-Novecento%29/ [Acc. Sep. 2017].
- 'Forum delle associazioni disciplinari della scuola', *Indicazioni nazionali e profili educativi, Pareri e commenti delle associazioni disciplinari sui documenti ministeriali per il primo ciclo di istruzione* (Bologna, 2003), <http://www.italia-liberazione.it/novecento/LibroBianco.pdf> [Acc. June 2019].
- Giovanardi, Claudio, *Linguaggi settoriali* (1993), in Enciclopedia dell'Italiano Treccani, http://www.treccani.it/enciclopedia/linguaggi-settoriali_%28Enciclopedia-Italiana%29/ [Acc. September 2017].
- GISCEL, *Oltre la riforma Moratti: Le proposte dell'educazione linguistica democratica*, <http://giscel.it/wp-content/uploads/assemblee/2004/2004-09%20OltrelaRiforma.pdf> [Acc. June 2019].
- Osborn, Jonathan, Dillon, Justin, *Science Education in Europe: Critical Reflections* (London: King's College Publications, 2008), available online at: https://www.nuffieldfoundation.org/sites/default/files/Sci_Ed_in_Europe_Report_Final.pdf [Acc. April 2018].
- 'Parole per scrivere: nell'officina del dizionario', such activities can be found online at: http://www.scrivereinitaliano.it/cms/index.php?option=com_content&view=article&id=118:parole-per-scrivere-spezzariga-nell-officina-del-dizionario&catid=8:laboratori&Itemid=114 [Acc. June 2019].
- Passi, Gaia, *L'evoluzione dei libri di testo nella scuola digitale*, Università degli Studi di Milano, https://www.fondazionemondadori.it/wp-content/uploads/2018/12/06_Passi-29-35.pdf [Acc. May 2019].
- Poggi Salani, Teresa, 'Italiano regionale', in *Enciclopedia dell'italiano* (2010), [http://www.treccani.it/enciclopedia/italiano-regionale_\(Enciclopedia-dell'Italiano\)/](http://www.treccani.it/enciclopedia/italiano-regionale_(Enciclopedia-dell'Italiano)/) [Acc. Nov. 2017].
- Rovere, Giovanni, *Registro* (2011), in Enciclopedia dell'Italiano Treccani: http://www.treccani.it/enciclopedia/registro_%28Enciclopedia-dell'Italiano%29/ [Acc. July 2017].
- Sabatini, Francesco, 'La scuola ha smesso di insegnare la lingua italiana', <https://www.tecnicaldellascuola.it/la-denuncia-di-sabatini-la-scuola-ha-smesso-di-insegnare-la-lingua->

[italiana?fbclid=IwAR0F1oathPGSOvAXjgCp2Er4ayLioDe3DIiAtQqENLc8 IT88ANovAztG7A](http://www.treccani.it/enciclopedia/lingua-scritta_%28Enciclopedia-dell%27Italiano%29/)> [Accessed May 2019].

Serianni, Luca, *Lingua scritta* (2010), in Enciclopedia dell'Italiano Treccani, <http://www.treccani.it/enciclopedia/lingua-scritta_%28Enciclopedia-dell%27Italiano%29/> [Acc. September 2017].

SILFI 2018: Linguaggi settoriali e specialistici: sincronia, diacronia, traduzione, variazione, in *XV Congresso della Società internazionale di Linguistica e Filologia italiana*, Genoa 28-30 May (book of abstracts available online at: <http://www.silfi.eu/SILFI_2018/pdf/ABSTRACT_SILFI_2018.pdf> [Acc. March 2019]).

Simone, Raffaele, 'Modelli per la grammatica scolastica', in *Proposte didattiche. Insegnamenti linguistici storico-geografici filosofici*, ed. by Vertecchi and Maragliano (Turin: Loescher, 1974). The reference is available online at: <<http://www.adrianocolombo.it/riflelin/riflelin01.pdf>> [Acc. June 2019].

Appendix 1

B come Burro...C come Cacao

Autori: Dallavalle Silvia, Frisoni Giovanna, Giardini Nicoletta, Valducci Rita, Vezzosi Patrizia
Scuola Secondaria di Primo Grado

Introduzione: come realizzare nel nostro laboratorio burro cacao idratante, protettivo, naturale e spalmabile con le dita

Materiali e strumenti: (monoporzione) 1 g burro di cacao, 1 g cera d'api, 5 ml olio di mandorle dolci, 1 g burro di karite, una goccia di olio essenziale di limone, una goccia di tocoferolo; un becher, una pipetta Pasteur, una bilancia, una piastra riscaldante, una scatolina di plastica per uso alimentare, un cucchiaino.

Procedura:

- pesiamo nel becher il burro di cacao, la cera d'api e il burro di karite;
- aggiungiamo l'olio di mandorle;
- riscaldiamo il tutto sulla piastra portandolo a fusione, mescolando;
- aggiungiamo il il tocoferolo e l'olio essenziale di limone;
- versiamo il composto nella scatolina, aspettando che il tutto solidifichi;
- chiudiamo la scatolina.

Risultati: un efficacissimo burro di cacao idratante, protettivo, naturale, spalmabile con le dita, facilmente realizzabile e anche economico

Conclusione: un regalo ideale per il Natale!!!!!!! e...se le labbra della Minetti vuoi imitare, l'acido ialuronico devi versare!!!



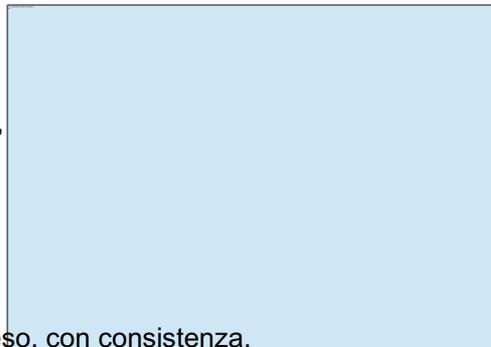
Appendix 2

IL BURRO CACAO

SCUOLA: Secondaria di 1° grado

INTRODUZIONE: Lo scopo di questa esperienza di laboratorio è la realizzazione del burro di cacao utilizzando il metodo IBL (Inquiry Based Learning) che prevede il confronto fra i vari soggetti, la realizzazione di diverse prove, l'analisi degli errori, che portano al raggiungimento dell'obiettivo.

MATERIALI E METODI: becher, provette, provette Falcon da 50 ml, pipette Pasteur, piastre Petri, bilancia, cucchiari per pesare, fornello elettrico, vasetti con tappo a vite. Burro di cacao, mix di olii (mandorle, jojoba e ricino in egual misura), cera d'api, essenze profumate, vitamina E. Riflessione sull'origine dei componenti del burro di cacao, collegamenti interdisciplinari (storia, geografia, ecologia..), proprietà del prodotto in rapporto all'utilizzo. Si sono effettuate quattro prove utilizzando gli ingredienti sopra citati con le modalità illustrate in tabella 1. Si sono pesati gli ingredienti solidi sulle capsule Petri e si è misurato il mix di olii con le provette Falcon e si sono posti nei becher. Dopo aver sciolto la cera d'api e il burro di cacao sul fornello, mescolando, si è aggiunto il mix di olii, la vit E e l'essenza profumata. Poi il composto è stato versato nei vasetti e lasciati raffreddare.



RISULTATI: il gruppo A ha realizzato il prodotto atteso, con consistenza, proprietà emollienti e lucidanti adeguate. Il gruppo B ha ottenuto un prodotto liquido non utilizzabile. Il gruppo C ha ottenuto un composto secco, privo di proprietà emollienti. Il gruppo D ha ottenuto un composto non spalmabile.

CONCLUSIONI: l'utilizzo del metodo IBL ha permesso il coinvolgimento partecipato di tutti gli autori che sono stati fortemente motivati alla riflessione, alla ricerca etimologica e alla collaborazione che hanno consentito una visione globale superando i limiti dei vari saperi disciplinari.

La ricerca attraverso l'uso di internet ha focalizzato l'attenzione sulle proprietà del prodotto cosmetico, il cui compito è evitare la disidratazione della pelle delle labbra, lenire irritazioni, proteggere dall'aggressione degli agenti atmosferici, ecc. L'analisi metacognitiva dei procedimenti effettuati e l'analisi accurata degli errori commessi ha permesso di chiarire l'importanza degli ingredienti utilizzati e la corretta procedura per la realizzazione del burro di cacao.

Appendix 3

UNA NUOVA FORMULAZIONE PER UNA OTTIMALE PROTEZIONE E IDRATAZIONE DELLE LABBRA.

OBIETTIVO DELLA RICERCA: definire la composizione di un “burro cacao” con spiccate proprietà idratanti e protettive, su incarico di GolinelliPharm.

KEY WORDS: labbra, burro cacao, protezione, idratazione, cera d’api

MATERIALI E METODI

Attrezzature e strumenti:	Sostanze:
<ul style="list-style-type: none">– becher da 100 mL– provetta Falcon– pipetta di Pasteur– spatola in acciaio– piastra riscaldante– bilancia (portata 100 g; sensibilità 0,01 g)– capsule Petri	<ul style="list-style-type: none">– burro di Cacao (<i>Theobroma spp.</i>)– cera d’api– mix di oli vegetali olio di mandorle (<i>Prunus dulcis</i>), olio di ricino (<i>Ricinus communis</i>), olio di jojoba (<i>Simmondsia chinensis</i>) in pari proporzioni.– Essenza di bergamotto ed essenza di muschio– Tocoferolo (vit. E) in soluzione oleosa al 3% V/V
Metodi La metodologia adottata prevedeva un approccio sperimentale per individuare la formulazione ottimale in termini di protezione, idratazione, emolienza, lucentezza, consistenza, spalmabilità, gradevolezza della profumazione e di potenziale commerciabilità.	

PROCEDIMENTO:

Quattro gruppi di ricercatori hanno mescolato le sostanze nelle combinazioni e nelle quantità riportate in tabella, realizzando quattro diversi prodotti.

Per miscelare opportunamente le sostanze, i grassi saturi sono stati preventivamente scaldati e fusi ponendoli all’interno del becher sulla piastra riscaldante. Solo dopo la fusione sono state aggiunte le sostanze liquide.

Sostanze	Quantità	Gruppo A	Gruppo B	Gruppo C	Gruppo D
Burro di cacao	1,00 g	X	X	X	
Mix olii	5,00 mL	X	X		X
Cera d’api	1,00 g	X		X	X

RISULTATI:

Le differenti miscele sono state poste in quattro capsule Petri e sono state testate da volontari qualificati all’interno del gruppo di ricerca, per valutarne e confrontarne le caratteristiche.

CONCLUSIONI

La formulazione più rispondente al prodotto richiesto è unanimamente risultata quella realizzata dal gruppo A. A questa sono state aggiunte rispettivamente due e tre gocce di essenze profumate e di tocoferolo.

Appendix 4

BALSAMO PER LABBRA = BURRO CACAO

Creiamo un burro cacao?

MATERIALI E METODI

Con questi ingredienti:

- Burro di cacao (1 g)
- Mix di oli (5 ml)
- Cera d'api (1 g)
- abbiamo sperimentato diverse combinazioni .
- 1)Abbiamo pesato 1g di burro di cacao e 1 g di c'era d'api, li abbiamo messi nel beker e fatti fondere sul fornello elettrico. Abbiamo aggiunto 5 ml di mix di oli prendendoli con la pipetta e misurandoli con una provetta graduata . Dopo aver mescolato velocemente, abbiamo versato il tutto in un contenitore.
- 2)Abbiamo pesato 1 g di burro di cacao, fatto fondere e aggiunto 5 ml di mix di oli.
- 3)Abbiamo pesato 1 g di burro di cacao e 1 g di cera d'api e fatti fondere.
- 4)Abbiamo pesato 1 g di cera d'api e fatta fondere e aggiunto 5 ml di oli.



RISULTATI

Dalle prove effettuate abbiamo ottenuto:

- 1)Composto omogeneo, di consistenza solida; al tatto diventa untuoso e morbido, facilmente spalmabile.
- 2)Composto liquido di consistenza oleosa.
- 3)Composto molto compatto e duro; al tatto non si scioglie.
- 4)Composto omogeneo, di consistenza solida e compatta, difficilmente spalmabile.



CONCLUSIONI

Abbiamo capito che:

la migliore formula è la prima, cioè quella completa di tutti gli ingredienti utili per ottenere un composto emolliente, ammorbidente, lucidante, protettivo, consistente ma spalmabile.

Il composto n° 2 ci ha fatto capire che la cera d'api dà compattezza.

Il composto n° 3 ci ha fatto capire che gli oli danno morbidezza e lucentezza.

Il composto n° 4 infine ci ha permesso di capire che il burro di cacao dà maggiore compattezza.



Appendix 5



LA CHIMICA DELLA BELLEZZA PREPARAZIONE GALENICA DI UN BURRO CACAO



Realizzare un burro cacao con sostanze naturali, facilmente reperibili e utilizzando strumenti di uso quotidiano come un antico speziale in un laboratorio galenico

Materiali

Burro di cacao, Burro di karité, cera d'api, olio di jojoba, olio di ricino e olio di mandorle, olio essenziale di limone



Metodo

In un contenitore introdurre 1 g di burro cacao con 1 g di cera d'api e 1 g di burro di karité, e, dopo averlo posto su una fiamma, lasciare che fondano, prestando attenzione che non raggiungano la temperatura di ebollizione. Una volta fusa la componente solida, aggiungere 5 ml di una miscela dei tre oli, poi mescolare in modo da rendere omogeneo il miscuglio. Aggiungere 2 gocce di olio essenziale e versare in un contenitore apposito dotato di tappo a vite.



Risultati

Si ottiene un prodotto solido grazie alla cera d'api ma facilmente spalmabile per la presenza degli oli che rendono il prodotto emolliente, antimicotico e lucidante; il burro di cacao e karité conferiscono proprietà emollienti.

Modificando le proporzioni dei vari componenti si può ottenere un burro cacao di differente consistenza.



Conclusioni

Se si volesse ottenere un prodotto colorato oltre che aromatizzato e che si conservi a lungo si possono aggiungere coloranti alimentari che non interagiscano con gli oli essenziali e il tocoferolo (vitamina E) come conservante.

Appendix 6

9
caf

Relazione di scienze.
Il galleggiamento.

Problema:
Il galleggiamento di un oggetto da quali fattori dipende e ne viene influenzato?

Ipotesi: secondo me in base alle considerazioni fatte in classe ...
il galleggiamento di un oggetto dipende e viene influenzato dal tipo di materiale di cui composto, dalla presenza di cavità, dal peso, dal volume e dalla forma.

Materiali:

- 3 cilindri graduati: il primo con una portata di 500 ml e una sensibilità di 5 ml, il secondo con una portata di 250 ml e una sensibilità di 2 ml e il terzo con una portata di 50 ml e una sensibilità di 0,5 ml
- un contenitore di vetro
- 2 sassi
- 2 palline
- un tappo di sughero
- una matita
- una bilancia con una portata di 1000 g e una sensibilità di 1 g

Fasi di lavoro e osservazioni:
abbiamo stabilito il peso di ogni oggetto pesandoli sulla bilancia, in seguito abbiamo riempito i cilindri d' acqua e, osservando di quanti ml si alzava il livello, ne abbiamo determinato il volume (gli oggetti che non andavano a fondo li abbiamo spinti giù con una matita).
In fine li abbiamo messi dentro un contenitore di vetro pieno d' acqua per vedere se galleggiassero o meno. I dati ricavati da questi esperimenti li abbiamo sintetizzati nella tabella sottostante:

Oggetto	Cavità	Forma	Materiale	Peso (g)	Volume (ml)	Galleggia ?	Quanto Emerge? (cm)	Quanto Affonda? (cm)
PALLINA	NO	sferica	plastica	17	12	NO	0	TUTTA
PIETRA	NO	ovale	minerale	8	3	NO	0	TUTTA
PALLINA2	SI	sferica	plastica	2,5	25	SI	2,2	1
TAPPO DI SUGHERO	NO	?	sughero	9	26	SI	1,2	1,2
SASSO	NO	sferica	minerale	5	25	NO	0	TUTTO

Conclusioni: Osservando la tabella abbiamo notato che il galleggiamento di un oggetto dipende e viene influenzato dalla presenza di cavità, ~~della forma~~, dal materiale di cui è costituito e dalla relazione tra il peso e il volume: se il peso in g è minore del volume.

Appendix 7

901

LA CONDUCIBILITA' TERMICA

MATERIALI:

- 2 piastre elettriche.
- Contenitore di metallo pieno d'acqua con due manici su i due lati corti con 4 bastoncini su uno dei due lati lunghi.
- 4 bastoncini: 1 di vetro e gli altri 3 di diversi tipi di metallo.
- 8 puntine da incollare con la cera sui 4 bastoncini su ognuna delle due estremità.

Procedimento e osservazioni:

L' esperimento è iniziato alle ore 9.16. Inizialmente abbiamo messo il contenitore di metallo sulla piastra elettrica aspettando che le puntine cadessero. Caduta la prima puntina del bastoncino di metallo abbiamo registrato il tempo che ha impiegato per cadere. A questo punto abbiamo osservato che la cera si è sciolta permettendo alla puntina di cadere. Dopodichè abbiamo registrato i dati nella tabella sottostante:

Tempo di caduta	MATERIALI			
	1	2	3	4
Prima puntina	14 minuti	24 ^m 40 ^s	32 ^m 20 ^s	
seconda puntina	20 ^m	29 ^m		



↔ Piastra elettrica



↔ Contenitore di metallo

Conclusioni:

Con questo esperimento siamo giunti alla conclusione che il tipo di metallo che noi abbiamo chiamato 1 è un buon conduttore di calore rispetto agli altri due metalli e al vetro. La puntina del vetro che non abbiamo potuto vedere quando sarebbe caduta ci ha fatto capire che esso non è un buon conduttore di calore ma un isolante.

Inferno abbiamo confrontato i nostri risultati con i valori di conducibilità termica del libro di scienze, scoprendo che corrispondono perfettamente.

Infine abbiamo indagato su quali fossero i materiali. Ricordi come?

Appendix 8

Bugiardino Lactiv

Il Lactiv è una medicina, che serve a far star bene l'intestino. Dentro alla medicina ci sono i fermenti lattici e la vitamina B. Il Lactiv è molto bravo a dare benessere all'intestino. Per prendere questa medicina bisogna scioglierla nell'acqua, la dose è di due bustine al mattino. Bisogna inoltre prenderla a stomaco vuoto (con la pancia vuota), per mantenerlo è consigliato tenerlo al fresco, all'asciutto e al buio. Per vedere se la medicina non serve più bisogna leggere la scadenza sulla scatola.



Appendix 9

IL BUGIARDINO

CLENIL PER AEROSOL

1) Cos'è: Medicina per far diminuire l'asma attraverso l'aerosol.

2) A che cosa serve: Evita che peggiori e cura l'asma e la costrizione dei bronchi; cura raffreddore allergico e del tratto naso-bocca.

3) Indicazioni: Non prendere quando ci sono virus attivi o che sono presenti ma non attivi; non devono prenderlo le persone che sono allergiche ai contenuti del medicinale; non prendere quando si è incinta e in allattamento.

4) Effetti indesiderati: Dopo aver preso la medicina attraverso l'aerosol può comparire un'infezione alla bocca o alla gola, più facilmente nelle persone che ne hanno già avute. La possibilità di ammalarsi di candida sembra che dipenda dalla dose presa; la malattia si può curare senza smettere di prendere l'aerosol. A persone con vie aeree che si irritano facilmente potrebbe provocare tosse e irritazione alla gola.

Appendix 10

RELAZIONE

OSSERVAZIONE MICROSCOPICA A FRESCO DI BATTERI PRESENTI IN UN CAMPIONE DI YOGURT

Nicola Sarvelli, Federica Curaro, Marco Carngnelli, Taqua Bessioud
Classe I C Scuola Secondaria di I Grado "E. Fermi" dell'I.C. Binasco (MI)
16 Febbraio 2018

OBIETTIVO

Osservare tramite microscopio i batteri presenti in un campione di yogurt

INTRODUZIONE

Il **microscopio** è uno strumento che consente di risolvere e ingrandire oggetti di piccole dimensioni per permetterne l'osservazione diretta, o indiretta tramite fotografia e sistemi elettronici. Può essere ottico, e quindi basato sull'osservazione nell'ambito dello spettro elettromagnetico della luce in senso lato, elettronico, basato sull'osservazione tramite fasci di elettroni, a scansione di sonda, basato sull'esplorazione della superficie del campione con una sonda materiale, o di altro tipo.

Le **cellule procariote** (*pro*: prima e *kàryon*: nucleo) caratterizzano il controverso, per l'eterogeneità dei suoi rappresentanti, e obsoleto, raggruppamento sistematico dei *prokaryota*. Si definiscono, piuttosto che per le caratterizzazioni specifiche a livello biochimico e biomolecolare, principalmente per le loro mancanze a fronte del paragone con le cellule eucariote.

IL TERMOMETRO A ESPANSIONE

Facchini, Torletti

In classe abbiamo costruito un termometro ad espansione. Abbiamo preso del ghiaccio fondente d' acqua pura, mischiato l' alcol con acqua e colorante blu nella beuta. Infilato il capillare di vetro nella beuta, abbiamo messo tutto questo in una ciotola col ghiaccio fondente d' acqua pura e il liquido ha raggiunto l'equilibrio termico. Poi abbiamo segnato il punto preciso e abbiamo messo la beuta con il capillare nell'acqua pura bollente aspettando l'equilibrio termico per poi segnare il punto preciso. Successivamente abbiamo creato la scala graduata e per questo abbiamo concluso il termometro.

MATERIALI UTILIZZATI

- Beuta con un tappo (bulbo)*
- Capillare di vetro trasparente*
- Liquido termometrico*
- Colorante blu*
- Nastro adesivo bianco*
- Striscia di cartoncino bianco*
- Bacinella con ghiaccio fondente*
- Bacinella con acqua bollente*
- Pennarello a punta fine.*



Questo è il termometro di Galileo Galilei ed è stato il primo termometro al mondo.



Termometro concluso con la scala graduata

Costruzione di un termometro

- Col ghiaccio fondente di acqua pura le particelle si contraggono e invece con l'acqua bollente si dilatano, così le particelle aumentano il loro movimento e volume.

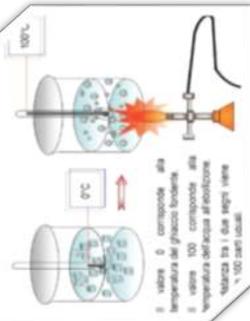


- Per l'esperimento servono:
- 2 vaschette per il ghiaccio
- 2 pentolini per l'acqua bollente
- Ghiaccio in freezer bollitore
- 2 bulbi con capillare di vetro
- Una bottiglia con alcol etilico
- Colorante alimentare
- 2 strisce di cartoncino
- Righello
- Pennarelli per il vetro
- Matite a punta fine



Col ghiaccio fondente di acqua pura le particelle si contraggono

Si prende il bulbo di vetro si miscuglia acqua e Alcol'etilico, si aggiunge colorante alimentare si immerge nella vaschetta piena di ghiaccio
 Fontente aspettiamo che il liquido termometrico si metta in equilibrio Termico. Appena il liquido si ferma e Segniamo dove si ferma, poi il immergiamo in un pentolino pieno di Acqua bollente, appena il liquido si mette in equilibrio termico col l'acqua bollente si segna dove è arrivato. E il termometro è concluso.



Dilatazione e contrazione delle particelle

Appendix 12

Appendices 13 and 14

INTRODUZIONE

Il giorno 26 Febbraio 2018, la classe 2B del plesso di scuola media dell'Istituto Comprensivo "Mario Lodi" di Roma, accompagnata dai docenti Celletti (italiano) e Ciotti (scienze) si è recata nel laboratorio scientifico per procedere ad un'attività sperimentale di compresenza dedicata a lavori di gruppo, nello stile dell'apprendimento cooperativo, finalizzata ad eseguire alcuni esperimenti che ci permettono di dare soluzione ai problemi posti dal caso. Insomma, facciamo scienza direttamente approfondendo così lo studio degli alimenti e dei nutrienti.

I ESPERIMENTO

IL COMPORTAMENTO DELL'AMIDO (I gruppo - 12 studenti divisi in due sottogruppi da 6)

MATERIALI E METODI:

Qualche goccia di lugol, 1 patata, 1 forno a microonde, 1 piastra a induzione, 1 contagocce, 1 pentola, 1 coltello, 1 piatto, ½ litro d'acqua, 1 cucchiaino di amido puro, 1 setaccio.

SVOLGIMENTO sottogruppo 1:

Prendiamo una patata, la tagliamo in due parti uguali e mettiamo la prima nel forno a microonde per 3 minuti, mettiamo la seconda nella pentola a cuocere per 3 minuti in ½ litro d'acqua. In seguito togliamo le parti della patata dai diversi ambienti di cottura, le disponiamo in un piatto e tagliamo in due ogni metà, in modo da avere la patata sezionata in 4 parti. In seguito, prendiamo qualche goccia di lugol, e ne versiamo una sulla parte cruda e un'altra sulla parte cotta.

SVOLGIMENTO sottogruppo 2:

Prendiamo un cucchiaino di amido puro e lo mettiamo a cuocere in ½ litro d'acqua, in una pentola. In seguito recuperiamo l'amido dall'acqua e lo appoggiamo in un piatto.

RISULTATI sottogruppo 1:

Confrontando le due parti, quella cotta a pentola risulta cotta, scura e appiccicosa fuori e cruda e chiara dentro, mentre quella cotta a microonde risulta cotta dentro e cruda fuori; da ciò si deduce che il microonde utilizza un particolare metodo di cottura: le microonde cuociono dall'interno per poi spandersi all'esterno.

Sulla parte cruda il lugol rimane chiaro, mentre sulla parte cotta il lugol scurisce subito. Ciò dimostra che, nella cottura l'amido viene modificato e leggermente scomposto chimicamente.

RISULTATI sottogruppo 2:

Durante la cottura, l'amido puro da polvere si trasforma in gelatina, legandosi chimicamente con l'acqua.

CONCLUSIONE:

Il calore è favorevole alla digestione, infatti facilita la scomposizione dell'amido.

2° ESPERIMENTO

IL COMPORTAMENTO DELLA VITAMINAC (Il gruppo – 10 studenti)

MATERIALI E METODI:

2 broccoli, 2 bastoncini, 3 baker, 1 piastra a induzione, 1 pentola, 1 setaccio, ¼ di litro d'acqua-acqua di cottura, soluzione (amido, lugol, vitamina C), 1 contagocce.

SVOLGIMENTO:

Formiamo la soluzione mescolando lugol, amido, e una compressa di vitamina C. Cuociamo un broccolo per 3 minuti, in ¼ di litro d'acqua e ne ricaviamo l'acqua di cottura. In seguito inseriamo i tre ingredienti (broccolo cotto, broccolo crudo, acqua di cottura) in tre baker. In seguito sminuzziamo i broccoli fino a farli diventare una polpa. Infine versiamo e contiamo le gocce della soluzione nei diversi baker.

OSSERVAZIONI:

Versando le gocce della soluzione di vitamina C nei diversi baker, si deduce che, durante la cottura, i broccoli perdono vitamina C, infatti ci vogliono molte più gocce di soluzione affinché il broccolo cotto diventi saturo di vitamina C.

CONCLUSIONE: Il calore è dannoso per la digestione, infatti diminuisce i

valori di vitamina C.

OBIETTIVI RAGGIUNTI

SCIENZE: abbiamo riconosciuto materiali, la loro composizione, l'interazione con elementi chimici e ambientali, il procedimento scientifico.

ITALIANO: abbiamo osservato, conosciuto e descritto, abbiamo cercato di utilizzare un linguaggio appropriato e pertinente

TRASVERSALI: tutti hanno partecipato, a tutti è stato permesso di parlare e rivolgersi ai compagni per chiedere aiuto o informazioni raggiungendo un accordo.

Appendix 15



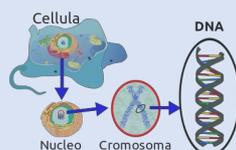
NOI SIAMO ...GENI !



ISTITUTO COMPRENSIVO "VIA ROMA - SPIRITO SANTO" - COSENZA
Plesso G.B. Vico - Classe III G - A.S. 2017/2018

INTRODUZIONE

Quello che siamo è scritto in una molecola presente nel nucleo delle cellule del nostro corpo: il DNA (Acido Desossiribonucleico). Il percorso di apprendimento di Scienze, «Noi siamo...geni!», ha avuto come obiettivo conoscere la struttura e la funzione del DNA e si è concluso con l'esperimento della sua estrazione da cellule vegetali.



Il DNA spiralizzato si presenta sotto forma di strutture chiamate **cromosomi** che sono in un numero definito per ogni specie. Negli esseri umani il numero diploide $2n$ è 46, presente nelle cellule somatiche, mentre il numero aploide n è 23, presente nelle cellule riproduttive (gameti).

I cromosomi, formati da parti di DNA dette **geni** , si possono osservare al momento della divisione cellulare e si presentano a forma di X in cui si possono distinguere i due **cromatidi** e un punto di incrocio, il **centromero** .

Il DNA è costituito da il ripetersi di un'unità fondamentale, il **nucleotide** .

Ogni nucleotide è formato da :

- Una molecola di acido fosforico
- Una molecola di zucchero desossiribosio
- Una base azotata che può essere di quattro tipi: Adenina, Citosina, Guanina e Timina

La molecola del DNA è formata da due filamenti complementari, avvolti a doppia elica, costituiti da milioni di nucleotidi.

I pioli della scala sono formati da due basi azotate legate fra di loro secondo la legge della complementarità delle basi; l'Adenina si lega sempre con la Timina e la Guanina sempre con la Citosina.

Le corde della scala sono costituite dalle molecole di acido fosforico e di zucchero.

Anche se le basi azotate sono quattro la sequenza delle combinazioni è enorme. Il **codice genetico** è scritto proprio nella sequenza delle basi.



Schema Sintesi proteica



Schema dei nucleotidi e delle basi complementari

Il DNA ha due funzioni:

- Trasmettere i caratteri ereditari da una generazione all'altra.

- Controllo dei caratteri (fenotipo di un individuo) attraverso la sintesi delle proteine che avviene in due fasi:

1. **Trascrizione:** avviene nel nucleo cellulare. La doppia catena del DNA si apre e si forma una molecola di RNA, o Acido Ribonucleico, identico al DNA tranne per il fatto di essere costituito da una sola catena in cui lo zucchero è il ribosio e la base Timina è sostituita da un'altra base, l'Uracile. L'RNA messaggero (RNAm) esce dai pori della membrana nucleare e si dirige nel citoplasma.

2. **Traduzione:** avviene nel citoplasma, nei ribosomi. L'RNAm si localizza fra le due subunità ribosomiali, qui giungono gli aminoacidi trasportati da molecole di RNA trasportatore, RNAt. Il passaggio dalla sequenza di nucleotidi del RNAm, alla sequenza di aminoacidi delle proteine avviene attraverso il codice genetico che è organizzato in triplette di basi azotate, il **codon** . L'RNA transfert, si lega all'RNAm con l' **anticodon** , tripletta complementare al codon. La lettura del messaggio genetico porta alla sintesi della proteina formata da diversi aminoacidi.

MATERIALI E METODI

- | | |
|---------------------|------------------------|
| ✓ Sale da cucina | ✓ Imbuto |
| ✓ Detersivo liquido | ✓ Carta da filtro |
| ✓ Acqua | ✓ Provettone |
| ✓ Kiwi | ✓ Alcool |
| ✓ Becher | ✓ Bacchetta |
| ✓ Pestello | ✓ Vetrino portaoggetti |



Si sbuccia un kiwi, si fa a pezzi e in un becher si schiaccia per disgregare i tessuti e rendere fragili le membrane cellulari.

Si prepara la soluzione di estrazione con 3 g di sale, 50 ml di detersivo liquido per piatti e 50 ml di acqua, si aggiunge nel becher e si pestano i pezzi di kiwi con il pestello.

Utilizzando un imbuto con inserita la carta da filtro, si filtra la soluzione ottenuta. Si recupera il filtrato in un provettone e inclinandolo si aggiunge una quantità di alcool uguale al filtrato.



RISULTATI

L'alcool resta sopra il filtrato e il DNA precipita formando dei filamenti bianchi che risalgono lentamente in superficie. I filamenti di DNA che hanno un aspetto viscoso si raccolgono con una bacchetta di vetro e si depositano su un vetrino portaoggetti.



CONCLUSIONI

Il DNA è contenuto nelle cellule e precisamente nel nucleo cellulare. Utilizzando la soluzione di estrazione e il pestello si provoca la lisi cellulare e si estrae il DNA.

Il detersivo permette la dissoluzione delle membrane cellulari e l'eliminazione di una parte di proteine legate al DNA.

Il sale permette la neutralizzazione delle cariche negative, presenti sui gruppi fosfati, eliminando le molecole di acqua che circondano la doppia elica. Ciò permette la precipitazione del DNA nell'alcool e la visualizzazione sotto forma di filamenti viscosi.

Appendix 16



DNA E CARATTERI EREDITARI



ISTITUTO COMPRENSIVO " VIA ROMA – SPIRITO SANTO "
Plesso G.B. Vico - Classe III G A.S. 2017/2018
Cosenza

Introduzione

Le caratteristiche di ogni individuo dipendono dal suo patrimonio genetico o **genoma** localizzato in una molecola presente nel nucleo delle cellule: il **DNA o acido desossiribonucleico**.

Le informazioni contenute nel DNA vengono trasmesse dai genitori ai figli attraverso un meccanismo detto **ereditarietà dei caratteri**.



Il DNA, molecola scoperta da Watson e Crick nel 1953, è presente nel nucleo delle cellule di ogni essere vivente ed è costituito da due filamenti avvolti a spirale, così da formare una doppia elica.

Ogni filamento è formato da più unità strutturali chiamate **nucleotidi**.

Il nucleotide è costituito da :

- Una molecola di acido fosforico
 - Una molecola di zucchero , il desossiribosio
 - Una base azotata (Guanina ,Citosina, Adenina, Timina)
- Le basi si fronteggiano nei due filamenti in modo complementare.
Adenina ↔ Timina Citosina ↔ Guanina



Il DNA al momento della divisione cellulare si presenta sotto forma di **cromosomi** costituiti da due bastoncini, i **cromatidi**. L'insieme dei cromosomi è detto **cariotipo**, formato da un numero definito di coppie di cromosomi omologhi. Nel cariotipo umano (23 coppie di cromosomi) ventidue coppie determinano le caratteristiche del corpo, mentre una coppia determina il sesso, XX femminili, XY maschile.



Mitosi

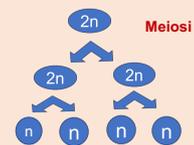
Il DNA è capace di duplicarsi , cioè è capace di produrre una molecola uguale a sé stessa.

La duplicazione del DNA avviene durante la riproduzione cellulare.

I meccanismi che regolano e mantengono costante il patrimonio genetico nelle cellule sono due: la mitosi e la meiosi.

La mitosi è il processo di riproduzione delle cellule somatiche; da una cellula madre si formano due cellule figlie in cui il numero cromosomico della specie (diploide) si mantiene inalterato. Nel corpo umano 46 cromosomi.

La meiosi è il processo di riproduzione delle cellule riproduttive, i gameti; da una cellula madre, con corredo cromosomico completo, si formano quattro cellule figlie con corredo cromosomico dimezzato (aploide). Nei gameti del corpo umano 23 cromosomi.



Meiosi



I Legge della dominanza



II Legge della segregazione



III Legge dell'indipendenza

Gregor Mendel nel 1865 dimostrò che la trasmissione dei caratteri da genitori a figli è governata da regole ben precise che permettono di prevedere il risultato degli incroci.

Mendel usò per i suoi esperimenti le piante di pisello odoroso; esse presentavano caratteri ben evidenziabili e due varietà molto diverse fra di loro e facilmente identificabili.

Inoltre, utilizzò una tecnica di fecondazione che si può controllare artificialmente: **l'impollinazione incrociata** che si ottiene trasportando manualmente il polline da una pianta all'altra.

Le scoperte di Mendel vennero comprese nei primi del '900, egli fu il promotore della Genetica. I fattori ipotizzati da Mendel sono oggi identificati nei **geni**, cioè in parti di DNA che attraverso la sintesi delle proteine determinano la comparsa dei diversi caratteri in un individuo. Ogni cromosoma è formato da numerosi geni e ogni gene è presente in entrambi i cromosomi omologhi in due forme, chiamate **alleli**. Gli alleli possono essere **dominanti** o **recessivi**. Se gli alleli sono uguali sui cromosomi omologhi l'individuo è **omozigote** per quel determinato carattere, se sono diversi è **eterozigote**.

In genetica la manifestazione visibile dei caratteri si chiama **fenotipo**, mentre l'insieme degli alleli presenti sui cromosomi si chiama **genotipo**.

Materiali e Metodi

- ✓ Coltello
- ✓ Becher
- ✓ Kiwi
- ✓ Pestello
- ✓ Detersivo liquido
- ✓ Sale
- ✓ Acqua
- ✓ Imbuto
- ✓ Carta da filtro
- ✓ Provetta
- ✓ Alcool
- ✓ Bacchetta
- ✓ Vetrino

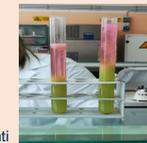


Si sbuccia e taglia un kiwi, in un becher si riduce in poltiglia con il pestello. Si aggiunge il detersivo (che ha la funzione di demolire le membrane cellulari e nucleari delle cellule), il sale (che favorisce l'eliminazione dell'acqua intorno al DNA) e l'acqua. Si mescola bene e poi si filtra, usando la carta da filtro, in una provetta; si aggiunge l'alcool facendolo scendere lungo le pareti della provetta (il DNA non è solubile nell'alcool e quindi si rende visibile).



Risultati

Nella provetta appaiono filamenti bianchi: è il DNA che sale verso l'alto.



Conclusioni



Il DNA è contenuto nelle cellule del kiwi. Con una bacchetta si possono raccogliere i filamenti e depositarli su un vetrino portaoggetti osservando, così, la loro consistenza viscosa.

Il DNA non è visibile con un microscopio ottico. Un team di ricercatori ha ideato un metodo che permette di distendere filamenti di DNA in tutta la loro struttura a doppia elica, senza danneggiarli, sopra una particolare superficie di silicio, e di acquisirne l'immagine attraverso un **microscopio elettronico a trasmissione**.

Appendix 17



LA SCENA DEL CRIMINE



ISTITUTO COMPRENSIVO " VIA ROMA - SPIRITO SANTO "
Cosenza
Plesso G.B. Vico - Classe III G
A. S. 2017/2018

INTRODUZIONE

Nel laboratorio di **Biologia Molecolare** dell' ITAS Nitti un'esperienza scientifica eccezionale:

La scena del crimine e la tipizzazione del DNA.

Quando due persone entrano in contatto, ognuno lascia sull'altro qualcosa di sé; quindi un individuo che commette un crimine lascia qualcosa di sé sul luogo in cui è stato commesso un reato.

La scena del crimine è di fondamentale importanza ed è lì che si nascondono i dettagli più significativi per scoprire l'autore del reato.

Il **Genetista forense** è colui che si occupa delle analisi delle tracce biologiche rinvenute sulla scena del crimine; deve capire che tipologia di traccia si ha davanti (ad esempio se si tratta o meno di sangue) e stabilire le caratteristiche genetiche presenti nella traccia ritrovata, le quali verranno poi confrontate con il DNA dei soggetti sospettati. Si possono raccogliere referti biologici, come capelli, cellule provenienti dalla pelle o sangue, che possono portare alla scoperta del colpevole.

Si analizzano i campioni prelevati e dalle cellule si estrae il DNA, o acido desossiribonucleico.

Il DNA, molecola presente nel nucleo cellulare, è unico per ogni individuo, è la sua carta di identità.

Il test del DNA gioca un ruolo importante per scoprire il colpevole di un reato.



MATERIALI E METODI

- campioni biologici
- primer
- gel di agarosio
- tampone
- coloranti
- standard di DNA

Il **test di tipizzazione genetica** di un individuo (DNA profiling) si basa sulla possibilità di analizzare regioni del genoma umano e consiste nella evidenziazione di una serie di **marcatori genetici** che consentono di definire "l'impronta digitale genetica" che è unica per ciascun individuo. Queste parti del genoma, i marcatori, vengono amplificati mediante PCR ed analizzati mediante elettroforesi



Dai campioni biologici prelevati viene estratto il DNA e si effettua una **centrifugazione** per ottenere un concentrato.



Viene poi applicata la tecnica della **PCR**, utilizzando coppie di **primer** specifiche.

La reazione a catena della polimerasi (in inglese: Polymerase Chain Reaction), comunemente nota con l'acronimo PCR, è una tecnica di biologia molecolare che consente la moltiplicazione (amplificazione) di frammenti di acidi nucleici. L'amplificazione mediante PCR consente di ottenere in vitro, molto rapidamente, la quantità di materiale genetico necessaria per le successive applicazioni. Il primer riconosce la sequenza di DNA che si vuole amplificare e permette la replicazione solo di queste parti di DNA.

Tale metodica fu ideata da **Kary Mullis** il quale ottenne, per questo, il premio Nobel per la chimica nel 1993.



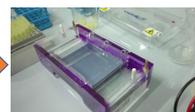
Dopo aver effettuato la PCR si preleva il sovrannatante e si deposita su **gel di agarosio**. L'agarosio è uno zucchero solubile in acqua alla temperatura di ebollizione, mentre diventa solido man mano che si raffredda.

Si utilizza un pozzetto del gel per ogni campione e si effettua l'elettroforesi. Nel primo pozzetto si inserisce uno **standard** con le sequenze di nucleotidi che si vogliono evidenziare nell'indagine genetica.

L'**elettroforesi** su gel di agarosio è una tecnica utilizzata per analizzare e separare frammenti di acidi nucleici. Questa tecnica sfrutta le cariche presenti nelle molecole di DNA per farle migrare, in un campo elettrico, attraverso un gel di agarosio.

Il gel, costituito da una rete di pori, consente lungo la piastrina di separare le molecole in base alla loro grandezza: quelle più piccole attraversano più velocemente i pori rispetto a quelle più grandi, quindi si avrà una separazione in funzione della velocità.

I campioni da analizzare vanno depositati, con una micropipetta, in apposite fenditure verticali, dette "pozzetti". Essendo il DNA un polianione i frammenti migreranno verso il polo positivo.



RISULTATI



Per consentire la visualizzazione delle parti di acidi nucleici migrati si possono utilizzare diversi tipi di coloranti. Queste molecole si intercalano tra le basi dell'acido nucleico, ed emettono luce fluorescente quando la piastra di agarosio viene irradiata con luce ultravioletta. Si documenta il risultato facendo una foto al gel che va osservata attentamente per stabilire quale indiziato ha lo stesso profilo del DNA di quello prelevato dalla scena del crimine. Per avere la certezza è necessario che le bande dell'indiziato coincidano tutte perfettamente con quelle del campione trovato, ossia presentino lo stesso profilo di DNA.



CONCLUSIONI

La tipizzazione del DNA è un'analisi utile alle indagini criminologiche. Le applicazioni della tipizzazione del DNA sono, però, molteplici e altrettanto interessanti. I test di paternità e il rilevamento di alcune patologie legate alla presenza di particolari geni sono effettuati attraverso questa metodologia.

L'IMPRONTA ECOLOGICA

L'impronta ecologica misura l'area di mare e di terra necessaria per rigenerare le risorse e assorbire i rifiuti prodotti.

Per calcolare l'impronta ecologica si mette in relazione la quantità di ogni bene consumato con una costante di rendimento. Il risultato è una superficie chiamata ettaro globale.

Biodiversità



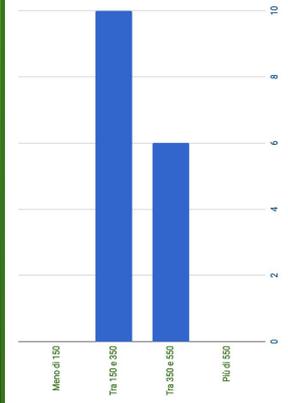
Orientare

COSA POSSIAMO FARE NOI?

Per fortuna anche noi, nel nostro piccolo, possiamo contribuire ad abbassare la nostra impronta ecologica. Come?

Per esempio, scegliendo, quando possibile, di spostarci in bicicletta o con mezzi pubblici, piuttosto che farci scarozzare in auto; o mangiando frutta e verdura di stagione, che non debbano aver compiuto centinaia di chilometri.

Per finire nel nostro piatto; ancora ricordandoci di spegnere la luce quando usciamo da una stanza e di non lasciare PC o TV in stand-by quando non li stiamo usando.



Income Level	Ecological Footprint (approx.)
Meno di 150	9.5
Tra 150 e 250	6.5
Tra 350 e 550	3.5
Più di 550	1.5

L'impronta ecologica delle nostre famiglie

Pietro
Mistretta, Nadia
Sciortino,
Cristian Bruno
M P

Questionnaire - Sample

- 1) Nella Sua scuola, sono previste ore di compresenza con docenti di altre materie? Se sì, quali?
- 2) È al corrente dell'esistenza di progetti di didattica trasversale nella Sua scuola?
- 3) Come pensa che le Indicazioni Nazionali per il curriculum trattino l'argomento dei linguaggi settoriali e della varietà linguistica in generale?
- 4) Ritiene esperienze di compresenza e didattica multidisciplinare utili per l'alunno?
- 5) I testi scolastici che utilizza [di scienze o di italiano] forniscono mai momenti di riflessione sulla lingua [se di scienze]/sull'applicabilità scientifica/funzionale della lingua [se di italiano]?
- 6) Lavora mai dividendo gli studenti in gruppi? Per spiegare quali argomenti?
- 7) [Per insegnante di italiano] Considerando anche passate esperienze, quanto tempo, in media, dedica alla riflessione su come scrivere un testo? Qual è la metodologia che è risultata più efficace?
- 8) [Per insegnante di italiano] Considerando anche passate esperienze, quanto tempo, in media, dedica alla riflessione sui linguaggi disciplinari, la lingua delle scienze, della medicina, ecc.? Ha mai applicato questo argomento a quello della stesura dei testi?
- 9) [Per l'insegnante di scienze] Ha mai pensato al fatto che i suoi allievi possano non comprendere una lezione di scienze per problemi di natura linguistica? Se sì, ha provato ad risolvere/arginare il problema?
- 10) Nei corsi di aggiornamento che Lei segue, si fa mai menzione degli usi della lingua nelle materie scientifiche[se di italiano] / dell'importanza della lingua nelle materie scientifiche [se di scienze]? Se sì, come?

Questionnaire - Case 1

- 1) No
- 2) Sì.
- 3) Ne sono al corrente, ma, in tutta onestà, è difficile seguire le indicazioni nazionali per filo e per segno.
- 4) Assolutamente sì.
- 5) Non quelli che ho utilizzato fino ad ora.
- 6) Sì, ritengo le attività di gruppo stimolanti e utili per l'apprendimento di alcuni argomenti di scienza.
- 7) N/A
- 8) N/A
- 9) Non ho mai pensato di mettere in atto attività didattiche particolari, destinate allo scopo di spiegare la scienza tramite l'utilizzo delle sue parole o della sua lingua. Ho notato, d'altra parte, che spesso gli allievi hanno difficoltà a capire le consegne.
- 10) No

Questionnaire - Case 2

- 1) No, purtroppo non sono previste, anche se sarebbero efficaci per gli alunni ed interessanti per noi docenti.
- 2) Sì: il progetto musicale, la continuità con le scuole elementari e alcuni progetti con le scuole superiori.
- 3) In modo troppo superficiale.
- 4) Sì. È utile per gli alunni confrontare i linguaggi ed il modo di ragionare mentre si affronta un argomento ed è importante che gli alunni, attraverso la compresenza, percepiscano che per loro lavora un gruppo unito di insegnanti.
- 5) In un libro di scienze, i chiarimenti sul diverso uso che si fa di un termine nel linguaggio corrente e nel linguaggio scientifico, sono del tutto assenti o limitati a pochissimi termini. Questo è un lavoro che spetta all'insegnante.
- 6) Sì, utilizzo il lavoro di gruppo, sia in matematica che in scienze, in un anno scolastico due o al massimo tre volte. Lo utilizzo formando una volta gruppi eterogenei ed una volta gruppi omogenei per capacità logica e per capacità di concentrazione.

In matematica:

- se vi sono le ore disponibili, utilizzo il lavoro di gruppo per il recupero in itinere e per risolvere quiz di logica.

- normalmente utilizzo il lavoro di gruppo per la spiegazione del massimo comune divisore.

Divido gli alunni in piccoli gruppi, consegno ad ogni gruppo 4 pacchetti di fiches, ogni pacchetto con un certo numero e colore di fiches. I gruppi devono, per ogni pacchetto, trovare il massimo numero di mazzetti tutti uguali di fiches, che si possono preparare in modo che non rimangano fiches. Dopo averli fatti ragionare, ciò che prende, tutto compreso, un'ora circa, spiego il massimo comune divisore. Dopo la spiegazione i gruppi si scambiano i pacchetti e rifanno il conto del massimo numero di mazzetti che si possono fare.

In scienze: divido gli alunni in gruppi per fare gli esperimenti sulla densità e sulla costruzione di un termometro.

- 7) Spiego agli alunni come impostare una scaletta e spiego il genere da manipolare e le sue caratteristiche e ritengo efficace tale metodologia.
- 8) In realtà non ne parliamo molto se non in rare lezioni di grammatica all'inizio della prima media
- 9) Sì. Concetti semplici o intuitivi possono non essere compresi da alunni normodotati a causa del linguaggio settoriale. La prima cosa che faccio in una lezione è di chiarire quale significato dò ai termini che uso e, se gli stessi sono usati in modo anche solo leggermente diverso nel linguaggio comune, lo chiarisco. Se detto delle definizioni in cui si usano termini settoriali, faccio scrivere in parentesi un termine del linguaggio comune a cui associare il significato. Se un termine settoriale ha un sinonimo settoriale lo specifico e lo faccio scrivere. Il lavoro dell'insegnante è quello di accelerare il processo di apprendimento e il maggiore ostacolo all'apprendimento sono i linguaggi settoriali.
- 10) Sì, oggi si parla molto dei linguaggi settoriali, e di come questi possano essere di ostacolo all'apprendimento. Fino ad oggi però ne ho sentito parlare in corsi di aggiornamento tenuti da pedagoghi, quindi rivolti a docenti di tutte le discipline. Non si è mai entrati nel merito del linguaggio.

Questionnaire - Case 3

- 1) No
- 2) Purtroppo limitati ai compiti di realtà (o autentici) finalizzati alla valutazione delle competenze europee
- 3) Forniscono direttive generiche e comunque afferenti alla raccomandazione (condivisibile ma parziale) di valorizzare in senso sociale le appartenenze linguistiche
- 4) La compresenza non esiste più neanche nella scuola elementare e comunque essa necessita di programmazione da parte dei docenti e non di approssimazione come spesso accade. Diversa la situazione per la didattica multidisciplinare, che invece potrebbe rappresentare, se svolta in ambienti di apprendimento adeguati (laboratori e aule specifiche) un modo intelligente per sottrarre i ragazzi alla noia
- 5) La riflessione sulla lingua italiana è incentivata, non quella sull'uso dell'italiano in ambito scientifico
- 6) Senza grandi pretese, utilizzo la metodologia dell'apprendimento cooperativo (cooperative learning) quasi quotidianamente e con risultati soddisfacenti per tutti.
- 7) Amo il tema libero ma le recenti innovazioni in tema di esame di stato mi hanno costretto quest'anno a dedicare maggiore tempo (2 ore settimanali) ai testi descrittivi e argomentativi. Per raggiungere gli obiettivi utilizzo brani scelti, articoli di giornali o riviste, a volte risorse telematiche.
- 8) Onestamente no. Però mi soffermo molto sulla scrittura di Galileo e, negli anni di insegnamento al liceo, su Lucrezio
- 9) N/A
- 10) No, tranne una volta in cui il relatore, per inciso, fece cenno ai foglietti illustrative dei medicinali e alla loro astrusità

Questionnaire - Case 4

- 1) No.
- 2) Sì, nello scorso anno scolastico, all'interno delle aree di apprendimento, Area Linguistico - Espressiva e Area Scientifico - Tecnologica, sono stati progettati e sviluppati percorsi di apprendimento trasversali e per classi parallele.
- 3) Le Indicazioni Nazionali costituiscono il riferimento per la progettazione curricolare che deve mirare allo sviluppo delle competenze chiave europee, alle competenze del profilo dello studente e ai traguardi per lo sviluppo delle competenze disciplinari. Quindi, in questa ottica, noi docenti effettuiamo scelte didattiche significative con attenzione allo sviluppo di competenze trasversali. Attraverso la trasversalità pedagogica è sottinteso che anche i linguaggi specifici disciplinari dovrebbero integrarsi e dare l'opportunità di ampliare la conoscenza linguistica in generale. Ritengo, però, che nelle Indicazioni Nazionali il linguaggio settoriale e la varietà linguistica non siano messi in notevole evidenza come obiettivo a cui tendere.
- 4) Sì, ritengo che l'alunno possa trarre da una didattica multidisciplinare e da esperienze di compresenza dei docenti una migliore integrazione dei diversi saperi disciplinari.
- 5) I testi scolastici che utilizzo nella scuola secondaria di primo grado di scienze usano un buon linguaggio specifico, stimolano ad un uso adeguato del linguaggio scientifico, ma momenti effettivi di riflessione sulla lingua, a parte il significato etimologico di alcune parole, sono pochi.
- 6) Molto spesso gli alunni lavorano in gruppo per applicare o elaborare l'argomento trattato e ciò può portare da parte mia a consolidare un contenuto o a potenziarlo in alcuni gruppi, attraverso ulteriori spiegazioni. Quindi non vi è un argomento particolare per cui si lavora in gruppo, è una situazione che avviene spesso durante le lezioni.
- 7) N/A
- 8) N/A
- 9) Mi è capitato spesso di pensarlo, soprattutto in contesti scolastici disagiati dove l'uso dell'italiano era già un problema. In questi casi ho cercato di arginare il problema rendendo le spiegazioni il più semplice possibile, usando comunque termini specifici, soffermandomi sulla loro spiegazione e sulla necessità di utilizzarli. In contesti scolastici in cui, invece, l'uso della lingua non pone problemi importanti, mi è capitato di avere questa sensazione raramente e ho risolto ascoltando le loro discussioni e stimolandoli all'uso del linguaggio scientifico.
- 10) No, non mi è mai capitato di seguire un corso di aggiornamento inerente all'importanza della lingua nelle materie scientifiche, né in quelli seguiti ho sentito particolarmente questo argomento.

Questionnaire - Case 5

- 1) No, se non con gli insegnanti di sostegno
- 2) Sì, certo.
- 3) Per ogni disciplina, è chiaramente espresso che il profilo di competenza dell'alunno in quell'ambito si definisce anche per l'uso dei linguaggi specifici, ma non è dedicata sufficiente attenzione alla didattica per l'apprendimento di tali linguaggi, cioè ai percorsi e alle dinamiche utili all'apprendimento e all'uso consapevole, da parte degli alunni, dei lessici specialistici non solo come "bagaglio aggiuntivo", ma come forma ulteriore di organizzazione delle conoscenze e delle procedure delle discipline, in particolare di quelle scientifico-tecnologiche.
- 4) Sicuramente sì.
- 5) No, se non in forme molto marginali rispetto ai percorsi di attività "tradizionali".
- 6) Il lavoro in piccolo gruppo (4-5) o a coppie viene da noi spesso adottato non per "spiegare", ma per consolidare un percorso di apprendimento attraverso un assetto cooperativo con divisione dei compiti e la realizzazione di un prodotto unitario. Tale assetto può essere attuato per tutti gli "argomenti", perché in realtà ciò che lo rende utile non è l'argomento trattato, ma il bisogno formativo che la classe manifesta, per cui la cooperazione e la produzione comune consentono ai singoli di mettere in atto le competenze migliori e recuperare quelle più fragili.
- 7) Il percorso per la scrittura espositiva e argomentativa è da me messo in atto soprattutto a partire dalla seconda classe, ma risulta centrale per la terza classe. La metodologia che seguo, solitamente, parte dalla lettura e dall'esame di testi espositivi scritti da altri, per individuarne le caratteristiche compositive e sviluppare una metodologia per la risoluzione autonoma delle difficoltà di comprensione di singoli termini od espressioni strettamente connesse con l'argomento esposto. Per raggiungere questo sviluppo esercizi sulla composizione delle parole e sul rapporto tra termine e contesto. Si passa poi all'elaborazione di una macrostruttura generale in cui vanno organizzate e distribuite le informazioni da esporre, che si realizza sia in un organizzatore grafico sia in una scaletta di passaggi da sviluppare, per dare la possibilità a tutti gli alunni di scegliere l'assetto compositivo che più si confà allo stile di apprendimento individuale. Passo poi all'esercizio di scrittura vero e proprio, che si sviluppa in attività individuali, in una prima fase, che vengono commentate collettivamente in classe, evidenziando le piste di miglioramento per ciascuno. In una seconda fase, si propongono attività in assetto collaborativo, generalmente su temi che riguardano civiltà e società contemporanea, la cui parte centrale è costituita da un testo espositivo con esplicita finalità e destinatario.
- 8) Sì, come scritto sopra. I linguaggi specialistici sono particolarmente importanti quando si affrontano argomenti connessi con il contemporaneo (qualche esempio: le dipendenze, in cui i dati e i termini scientifici sono essenziali per comprendere il fenomeno; o l'ecologia, tema scelto per l'attività proposta).
- 9) Sì, succede. In quel caso, spiego io il significato o chiedo agli alunni di cercarlo sul dizionario.
- 10) No