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Empowering early career academics to overcome low confidence

Emma Dore and Adair Richards 

Department of Chemistry, University of Warwick, Coventry, UK

ABSTRACT

How can academic developers support Early Career Academics (ECAs) to increase in confidence as they step into their new responsibilities? Previous work has demonstrated the negative impacts of ECAs' low self-efficacy, focusing recommendations on the need for systemic changes. Going further than previous academic development work to apply social cognitive theories of personality, we explore how ECAs can be equipped to understand, reflect on and increase their own confidence. We point to evidence-based approaches and recommend practical steps that can be taken to implement this approach in increasing the confidence of ECAs.

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Introduction

From small groups of scientists in the Russian Arctic Circle to online cohorts from the US Ivy League, from the west coast of Chile to the east coast of China, our long experience of training researchers across the world has given us the opportunity to listen to thousands of Early Career Academics (ECAs). We have heard and seen that many of the brightest minds can be held back by a lack of belief in themselves, particularly at the beginning of their careers. Whether training on networking, collaboration, or writing literature reviews, we have been confronted with the same refrain: 'I just can't do it'.

As we have listened to ECAs' expressions of low confidence, we have come to realise the deep relevance of Bandura's self-efficacy concept, and its potential for equipping people to grow in the skills they need for a successful academic career. From the social cognitive school of thought, self-efficacy is an individual's judgement of their capability to organise and execute courses of action required to attain designated types of performance (Bandura, 1986). In the academic development literature, the term has been used alongside and interchangeably with the more commonly used language of 'confidence' (e.g. Hemmings, 2012, p. 171).

There has been a relatively small amount of research into self-efficacy among ECAs (e.g. Hemmings & Kay, 2010) but confidence has also been noted as an important theme by others who have a broader research focus (e.g. Hollywood et al., 2020; Sadler, 2013). To date, self-efficacy research has focused on specific areas of the ECAs' job roles. However, in our training experience we have seen low confidence manifest across

CONTACT Adair Richards  Adair.Richards@warwick.ac.uk

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multiple areas of academic life for individuals at the start of their academic career, and therefore see the need to think more broadly about this issue and ‘recognise (sic) the person who is the academic, beyond their disciplinary identity’ (Sugrue et al., 2018, p. 8).

Previous studies into ECAs’ self-efficacy have predominately made recommendations for faculty and academic development staff to make changes to the context that ECAs operate in. We go further than the existing academic development literature in adopting Bandura’s broader socio-cognitive approach, suggesting that a large proportion of the change needed can be affected by the individual themselves. Therefore, we introduce a variety of approaches from multiple disciplines that put ECAs themselves at the centre of addressing the ubiquitous problem of under-confidence. The role of academic developers is to support ECAs and the faculty staff around them to understand and access these tools.

In the first half of this article, we briefly outline the evidence on ECAs’ confidence and the impact it can have. The second half of the article offers a focus on equipping individuals with tools to reflect on, recognise and respond to their own experiences of low confidence. Bandura’s tripartite reciprocal model of personality and the four main factors he identifies as influencing self-efficacy are used as a framework.

Understanding ECAs’ confidence

Confidence

How we understand confidence – or lack of it – is critical to how we respond to it. A strong argument has been made by Oney and Oksuzoglu-Guven (2015) for the need to separate the construct of self-confidence into its general and specific domains in order to respond helpfully. General self-confidence is more usefully conceptualised as related to self-esteem, a global sense of how you feel about and evaluate yourself. Some researchers have similarly conceptualized a generalized sense of self-efficacy, relating to a broad belief in one’s ability to cope in a range of demanding situations (e.g. Skinner et al., 1988 cited Scholz et al., 2002). According to Matthews et al. (2009), an individual’s general self-confidence becomes a part of personality and does not change unless major events are experienced. The current article does not speak to this level of deep-rooted self-esteem. Instead, we focus on specific self-confidence, which is a temporary personality state (Demo, 1992). Specific self-confidence is related to a person’s beliefs about their abilities to complete a particular task. Bandura (1997), the father of self-efficacy theory, conceptualized self-efficacy as a situation-specific self-belief (Bandura, 1997), asking ‘can I execute *this* behaviour effectively’ (Matthews et al., 2009, p. 242). However, even for specific confidence, we must exercise some caution. The assumption that permanent, positive changes in an individual’s self-efficacy can be established for every task may be both incorrect and harmful (Gist & Mitchell, 1992).

ECAs’ confidence

ECAs have long been understood as facing multiple challenges. High workloads (e.g. Austin et al., 2007, as cited in Hollywood et al., 2020), working long hours and experiencing stress and anxiety in a highly supervised culture (Acker & Webber, 2017) are

consistently highlighted in the literature. ECAs often feel ‘undervalued and marginalised’ (Monk & McKay, 2017, p. 228), which can have an impact on their development of an academic identity and a sense of agency within their role.

Given this context, it is not surprising that confidence levels amongst ECAs can be low. Sadler (2013) found that low confidence emerged as one of the dominant themes for ECAs. In a longitudinal study investigating the wider influences upon the development of ECAs in teaching in the United Kingdom, content knowledge and teaching skills were thematically identified as related to feelings of self-confidence, with experience being a key factor. Losing confidence was also a theme identified in the Hollywood et al. (2020) study examining ECAs’ career development, job satisfaction and well-being.

Self-efficacy has been established as a universally applicable construct (Scholz et al., 2002) and has been evidenced as a concern for academics across the globe, not only those operating in the western world. For example, Amirian and Tavakoli (2016) have investigated self-efficacy for academic oral presentations in the Iranian context. They find English as a foreign language training to have less impact on confidence than opportunities to practice presentation skills. Aithal and Kumar (2018) strongly advocate from an Indian perspective for confidence building to be integrated into postgraduate study programmes. Although lacking in clear methodology, they point to multiple different approaches that might be taken to increasing confidence in the academic context. They neatly summarise ‘the application of knowledge requires skills, and [the] application of skills require[s] confidence’ (p. 65).

One well-studied factor that may have a causal link to low self-efficacy is imposter syndrome, defined as a collection of feelings of inadequacy that persist despite evident success (Bravata et al., 2020). This is a frequent phenomenon, with some studies suggesting that 70% of people will experience at least one episode in their life (Gravois, 2007). A full discussion of imposter syndrome is beyond the scope of this article, but we would encourage interested readers to look at the excellent analysis of imposter traits and antecedents in Sakulku and Alexander (2011), and the more recent systematic literature review by Bravata et al. (2020).

Impacts of low self-efficacy in ECAs

Low self-efficacy has been evidenced as having negative implications for aspects of job role performance. Hemmings and Kay (2010) established a clear relationship between research self-efficacy and the publication output of the ECAs group specifically. Through surveying staff at two Australian Universities ($N = 343$), they found that the more self-efficacious in terms of research, the more likely ECAs would be to produce refereed publications.

In Sadler’s (2013) qualitative study, higher education teachers in the United Kingdom with less than two years’ experience described using more student-centered approaches to teaching as their feelings of self-confidence increased. Indeed, Sadler suggests that the level of confidence held ‘may override the [ECAs’] conception of teaching in determining the approach to teaching taken in a particular instance’ (p. 164). This underlines just how pivotal confidence can be in ECAs’ development as teachers. The quantitative study delivered by Zhang et al. (2019) surveying staff ($N = 232$) from 13 Chinese higher education institutions supports this

evidence. They found that self-efficacy, notably both teaching and research efficacy, mediates the relationship between lecturer emotions and teaching style. They conclude, ‘success in innovative teaching requires emotional support and it calls for boosting of academic self-efficacy’ (p. 389).

Interventions to increase ECAs’ self-efficacy

Given low self-efficacy experienced by many ECAs and, crucially, the impact on their work, how are academic developers to respond? Various systemic adaptations have been put forward as supportive of ECAs’ self-efficacy. Sadler (2013) calls for time-tabling to be re-thought by managers such that, where possible, new staff have the opportunity to teach in their specialist area of study and be provided with a stable physical environment in which to do so. Zhang et al. (2019) suggest that emotions and confidence may be boosted ‘by fostering and maintaining a fair reward system that recognizes good performance in a timely manner’ (p. 390). Providing more opportunities for networking is another form of support that has been reported as a useful strategy. Debowski (2006, as cited in Hemmings, 2012) argues that building networks helps ECAs to enhance their credibility and therefore also increase their confidence. The use of mentor programmes has been widely investigated (e.g. LaRocco & Bruns, 2006) with many benefits being identified. However they are not currently available in all localities, and there are challenges in delivering mentor programmes to meet the needs of ECAs, not least the time commitment required by both parties (McKay & Monk, 2017). Finally, development training sessions have also been identified as potentially helpful in increasing ECAs’ self-efficacy for specific areas of work. Major and Dolly (2003) note that formal preparation through workshops and training sessions can increase self-efficacy for teaching and service tasks.

Hemmings and Kay (2010) add detail to the above understandings by developing self-efficacy subscales for research and service tasks. Their findings rank the items in terms of their discriminative capacity and, as a result, they suggest that the rankings could be used as the basis for prioritising researcher development interventions. Their research also makes a significant contribution to academic development by calling for development interventions to be aligned with Bandura’s theory of self-efficacy: modelling, feedback systems, and opportunities for mastery experiences.

The need to equip ECAs

The above research provides clear evidence to support systemic level approaches addressing specific spheres of ECAs’ workloads. We would wholeheartedly agree that it is important for such initiatives to be invested in and implemented. However, these interventions require decision making and resource allocation, and unfortunately in resource-stretched contexts ‘softer’ concerns such as confidence rarely take priority. Given the wide range of pressures they can face, many ECAs experience under-confidence not just in one area, but in several elements of their work. Therefore, alongside academic developers and faculty managers taking responsibility for the interventions noted above, an approach is needed that will equip and empower individuals to understand and respond to their own self-efficacy challenges.

Viewing ECAs through the lens of social cognitive theory (Bandura, 1999), we urge academic developers to look at promoting individual agency in the face of low self-confidence.

Few scholars in the academic development field have given attention to the benefits of equipping individuals with skills and understanding so that they can work to address their own confidence issues. However, some studies have recently offered recommendations that hint towards this such as Zhang et al. (2019) which suggests that improvement in self-efficacy can somewhat lie with individuals, 'being aware of their [own] efficacy beliefs and finding ways of gaining confidence about their own teaching and research' (p. 389). Self-awareness and self-regulation are two of the main facets of emotional intelligence and there may be additional benefits in promoting this approach. For example, Marembo et al. (2018) find higher levels of emotional intelligence 'to significantly, positively influence the ECA's job, interpersonal, non-organisational and hierarchical success' (p. 407).

Approaches to promoting ECAs' confidence

The following section uses Bandura's triadic reciprocal model of the construction of self-efficacy to identify approaches that may be taken to address low confidence. It then looks at the four factors that Bandura identifies as shaping our self-efficacy. Focusing on equipping ECAs themselves to understand and respond to lack of confidence, we point to approaches that may be drawn on to promote increased self-efficacy.

Triadic reciprocal causation model

Bandura's (1999) social cognitive theory of personality breaks the 'person' down into internal personal elements (P) and behaviour (B), hypothesising that these both relate reciprocally to the environment (E). This model can help ECAs assess and understand their experiences, and provide insight to their self-efficacy.

Internal personal elements

Internal personal elements (P), are thoughts, beliefs, and feelings about yourself. Bandura asserts that these are shaped by feedback from behaviours (B) and the external environment (E).

Confidence as cognitive. Individuals experience confidence (or lack of it) as an emotion: commonly using the deceptive linguistic form 'I feel confident'. Feelings are important – they impact our motivation, experience, even our performance. However, it is important to understand confidence as an emotion that stems from a cognitive belief. That feelings are rooted in thoughts is the basic premise of Cognitive Behavioural Therapy (CBT), a widely-used, evidence-based psychological intervention for mild to moderate experiences of illnesses such as anxiety and depression (Hofmann et al., 2012). It has been shown to be effective in a high proportion of people, reducing symptoms, building skills and solving problems in current life (Young et al., 2003).

Two of the main aspects of CBT are reflection and re-scripting self-talk. Franken (1994) states, 'Through self-reflection, people often come to view themselves in a new, more powerful way, and it is through this new, more powerful way of viewing the self that people can develop possible selves' (p. 443). Reflection is increasingly understood as an important learning tool in the wider context of academic development (e.g. Veine et al., 2020). However, it cannot be assumed that all ECAs have reflective skills available to them. Encouraging or facilitating ECAs to take time to reflect sits as the foundation for many of the tools that we point to. McKay and Monk (2017) emphasize the importance of ECAs' peer interactions in reflection, rather than solely as an individual pursuit. For example, at the University of Birmingham we have embedded structured written reflective exercises and peer reflective discussions within academic development online and face-to-face courses. Without proper reflection, ECAs will not be able to understand where their lack of confidence is coming from, and therefore will not be able to decide what they need to do to move on. Indeed, using the three points of Bandura's triad may be one helpful framework for reflection exercises.

A key aspect of CBT is learning to 'catch' unrealistic or unhelpful thoughts to challenge and positively reframe them. CBT offers ways to notice thought patterns and suggests questions to interrogate them: accessible and adaptable resources listing these are available on the internet (e.g. www.cci.health.wa.gov.au, www.moodcafe.co.uk). We used re-scripting exercises with groups of ECAs at the University of Kent which provided qualitative evidence that if ECAs understood the theoretical underpinning of re-scripting, were shown how to apply this technique, and practice it regularly, it can lead to significant improvements in confidence.

Reasonable and realistic expectations. Situated within 'P' would also fall the expectations we have of ourselves. Perfectionism in academia is rampant, with many ECAs prone to setting unrelenting standards for themselves (Moate et al., 2019). However, schema therapy provides the insight that when these incredibly high expectations are not met, feelings of failure can occur, and thereby undermine our confidence (Young et al., 2003). To increase confidence, schema therapy suggests a person needs to loosen their grip on any unrelenting standards, instead trying to be reasonable and realistic. Young et al. (2003) suggest that in doing this the following questions can be helpful: how would others rate your efforts? Can you accept that 'good enough' rather than perfect is okay sometimes? In Ukraine and Peru we have used adaptations of the questions above and found them to be effective in structured small group and one-to-one ECAs coaching settings. These approaches could also be successfully adopted by mentors or supervisors.

Behaviour

The second part of Bandura's triad is Behaviour (B): what a person does and how they do it. Importantly, this includes previous experiences as well as current actions. Bandura emphasises the reciprocal relationship between B and P. Most obviously, a person's feelings, intentions and beliefs influence their behaviour. Levels of confidence influence how behaviours play out and, indeed, can dictate what someone does (e.g. Anderson, 1983). However, the model also asserts that behaviour impacts what is going on for us internally. The pertinent point that Bandura developed is that previous experiences of actions (B) influence how confident a person feels about doing them again (P). If

someone has had a bad experience of doing something, it can reduce their self-efficacy for doing that thing again. The implications of this for academic development are explored below as ‘mastery experiences’.

Little’s (1983) personal project approach to the study of personality provides a framework consistent with emotionally intelligent, reflective practice. Intrapersonal personal projects have been shown to be effective as an approach to changing behaviour patterns (B), as long as they are instigated by the individual rather than forced or coerced (Little, 2017). Little argues that by focusing on what you do, rather than who you are, an individual can experience situations that encourage them to act in ways that do not come naturally to them. By practicing behaving as, for example, a confident networker in order to achieve the focus of a personal project to improve networking skills, the behaviour may grow to become a part of an individual’s personality. This approach may be utilised by ECAs in their personal journey towards greater self-efficacy.

External environment

The third and final element of the triad is the external environment (E), which includes the resources available. For Bandura, this also encompasses fewer tangible determinants such as effort and skill. Bandura asserts that the external environment interacts reciprocally with both internal thoughts and overt behaviours. This is borne out, for example, in Sadler (2013) who finds that consistent teaching environments promote confidence for ECAs. Concomitantly, through our actions we can change the environment around us. Confidence is also impacted by how much control we feel we have over elements of E. Can it be changed easily (highly variable) or would it take a lot of work (less variable)? Does it rest on you (internal) or on others (external) (Gist & Mitchell, 1992)? Under experimental conditions, the greatest amount of positive change in confidence, effort, and persistence occurs when people believe that their failures are due to lack of effort or ineffective task strategies. These are factors that people feel they have a lot of control over. People are more discouraged by failure when they believe that the causes of performance cannot be easily or quickly changed, for example by character and ability (Anderson, 1983). Therefore, reflection and discussion on improving ECAs’ confidence can helpfully include an assessment of the work environment and resources at someone’s disposal. This could be, for example, through mentors or supervisors encouraging consideration of the question, ‘How can I commandeer control over the resources or environment that have an impact on my confidence?’

Sometimes low confidence is due to a genuine lack of skill or knowledge, as key resources that impact self-efficacy. This is where the traditional body of work of academic development departments can step in, through providing appropriate training programmes. Through qualitative research ($N = 16$), Major and Dolly (2003) found that formal training courses can be effective in increasing confidence for teaching and service tasks.

Factors influencing self-efficacy

As well as providing us with the triadic reciprocal causation model of personality, Bandura (1997) identifies four principal factors that shape self-efficacy specifically: enactive mastery, vicarious experiences, verbal persuasion, and emotional and physiological states. These factors directly point to additional strategies that increase confidence.

Enactive mastery

Bandura points to previous successes and failure experiences of the activity concerned, termed enactive mastery, as a key source of confidence. Naturally, if a negative memory of previous performance is retained as a person's last experience, it shapes their confidence for the same task in the future. Conversely, when someone does well at something, they have higher confidence for repeating that task. Reflecting on previous experiences, as well as seeking out opportunities to gain more experience can build a sense of mastery over a task (Senko et al., 2011).

Once someone has an experience of something not going as they would have hoped, there can be a temptation to avoid repeating the experience. In doing so they deprive themselves of the opportunity to do it better and build enactive mastery. Some have argued that humans are evolutionarily primed to want to succeed and avoid threats (Welford, 2012), and doing something that they don't feel confident about involves taking risks. Others, however, suggest that experiential avoidance is actually a frequent reason for psychological suffering. This rationale forms the basis for Acceptance and Commitment Therapy (Larmer et al., 2014), which encourages people to notice and accept difficult feelings but move beyond them through identifying and acting on them. Addressing avoidant behaviour, then, is a key element of building confidence, including teaching ECAs to look for safe spaces in which to gain mastery experiences. For example, at the University of Warwick we have provided intensive supportive experiential training focussing on ensuring each participant has a positive experience of producing and delivering video or audio interviews for a media audience. The resultant material, combined with the supportive environment in which it was achieved, gives the individual a positive mastery experience. Activities that could lead to similar benefits include delivering lectures in pairs with a more experienced colleague or jointly working on a funding application with skilled grant writers.

Where it is not possible to gain real-world experiences to increase enactive mastery, rehearsal can be helpful. ECAs can be encouraged to grow their confidence by rehearsing in a safe environment and getting feedback from trusted colleagues (see below). Mental rehearsal may also be valuable: visualization has been shown to be a highly effective tool for building confidence (Maddux, 2013). Academic developers may wish to explore the value of rehearsal and visualization with ECAs who need to increase their task-specific confidence. For example, we have used mental visualization exercises with ECAs at UCL in the context of preparing to give academic conference presentations, with some participants reporting a decrease in nerves and increase in confidence following the exercises.

Enactive mastery is normally understood in relation to significant aspects of ECAs' roles, such as teaching or research. However, encouraging ECAs to think about breaking down the task into constituent parts can be a helpful step towards increasing self-efficacy. Studies have shown that confidence will be higher in the face of multiple smaller tasks than one large one (Cervone & Peake, 1986). In addition, levels of confidence are likely to be less prone to over- or under-confidence when thinking about several simple tasks rather than when considering more complex ones (Wood & Locke, 1987). Unsurprisingly, there is evidence that when people are asked to focus on formidable aspects of the task, their confidence is lowered. Confidence is increased by focusing on

aspects of a task that you already perceive as manageable (Cervone & Peake, 1986). For example, ECAs may begin revising a manuscript by identifying and completing the easier revisions, thus increasing their self-efficacy for the more challenging revisions.

Vicarious experience

It is not just one's own experiences that can shape mastery, but witnessing your peers succeed can also impact confidence through vicarious experience (e.g. Adams, 2004). Modelling appears to be a particularly effective means of providing information on effective performance strategies – how you get to doing the thing well (Buckingham, 2005). Modelling can also be useful for less concrete tasks, such as seeing someone model positive self-talk or other psychological strategies (Coleman, 2018). There are many ways that this can be applied in the academic development context, such as witnessing peers succeed in academic presentations, teaching circles or observations (Major & Dolly, 2003).

Verbal persuasion

Bandura identified persuasion – what people say to us about our capability – as a significant source of self-efficacy (Bandura, 1997). If ECAs are to build confidence and improve what they can do, constructive feedback on the discrepancy between performance and the desired standard or goal is essential. To be helpful for building confidence, the credibility, expertise, trustworthiness, and prestige of the person doing the persuading are of critical importance (Bandura, 1977). Regular, timely feedback is particularly impactful (e.g. Schunk, 1983). In addition to feedback on performance, emotional or cognitive appeals of encouragement from friends or colleagues can have a valuable effect as verbal persuasion, although appeals have less impact than specific feedback (Schunk, 1983).

Physical and emotional status

Levels of confidence can be influenced by how positively aroused (i.e. excited, enthusiastic) or negatively aroused (i.e. fearful, anxious) a person feels when confronted with a particular task (Wolfe and Grosch, 1990). External variables such as distractions and risk, alongside your physical condition (e.g. illness, tiredness) and mood can all impact confidence for a task. Kavanagh and Bower (1985) demonstrated that mood manipulation resulted in higher self-efficacy scores for a positive state and lower self-efficacy scores for a negative state. For example, in our ECAs' development training we insist on a one-hour lunchbreak and encourage participants to use some of the time to take a walk outside. Departments and leaders could seek to embed similar principles in their culture.

Opportunity for change

Since confidence is partly based on past experiences, it is not stable but updated after each new experience as we appraise and integrate new experiences into our self-understanding (Demo, 1992). Indeed, a meta-analysis of the subject concludes that self-efficacy is a product of past performance rather than a static determinant of future performance (Sitzmann & Yeo, 2013). Gist and Mitchell (1992) note that confidence can even change during the performance of a task. Rather than feeling stuck with their current level of

confidence, or thinking that some lucky people are just born confident, ECAs can be encouraged to re-appraise the nature of self-confidence as dynamic, influenceable, and changing over time (Guennif, 2002).

Conclusions and recommendations

ECAs can face multiple challenges as they take on new responsibilities, often in highly pressurised faculty environments. Unsurprisingly, this can result in low confidence, which has been shown to negatively impact several areas of ECAs' workload, as well as overall wellbeing. To date there has been little written considering how academic developers might support ECAs to address low confidence within themselves, empowering them to grow across multiple or all areas of their role. Using Bandura's tripartite reciprocal model of personality and the four main factors he identifies as influencing self-efficacy we have suggested some of the ways in which ECAs may be encouraged to understand and respond constructively to their own low confidence. Viewing ECAs as agents of their own change, we point to ways that they can be equipped by increasing self-awareness and self-regulation. We point to reflection as a key skill and draw on insights from evidenced therapy approaches including Cognitive Behavioural Therapy and Acceptance and Commitment Therapy. There are many instances where these can be accessed and applied, by ECAs or academic developers, either through self-directed resources or with low levels of guidance. A combination of these approaches, and others, can be drawn on to empower ECAs with tools to increase self-confidence across their roles.

Addressing self-efficacy concerns of ECAs should be integral to academic development programmes, through both systemic and targeted interventions. This article hopes to prompt academic developers to draw on research and resources from outside the immediate field. We encourage colleagues to consider the place of robust, evidence-based training on confidence building specifically for the academic context. Training and resources may be targeted at those with supervisory responsibility, as well as for ECAs themselves. Further research into the impact of implementing the suggested approaches in a variety of contexts would be welcomed.

Through the implementation of these interventions, alongside systemic measures, we hope that it will be possible for many ECAs to significantly raise their own confidence levels, resulting in higher levels of performance and wellbeing.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Emma Dore is a consultant researcher, specialising in qualitative approaches in the areas of academic development and housing for vulnerable groups.

Adair Richards is an international academic development consultant, trainer, and researcher. He is managing director of Adair Richards Associates Ltd and an Honorary Associate Professor at the University of Warwick.

ORCID

Adair Richards  <http://orcid.org/0000-0002-7963-465X>

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