"Mind the Gap" – Early Academics' Experiences of the Transition From Research Studies to Research Careers

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In recent decades, doctoral education in Sweden has become more formalized, shifting supervision responsibilities to higher education institutions (HEIs) and introducing challenges for early-career academics, including competition, precarious employment, and demands for grants and publications. This study explores the experiences of 24 associate senior lecturers and postdoctoral fellows transitioning from doctoral studies to independent research careers at five Swedish HEIs. Using reflexive thematic analysis of semi-structured interviews, three themes emerged: research, teaching, and career support. Research support is often inadequate, with limited guidance, funding difficulties, and heavy teaching loads. Teaching support is lacking, leaving participants unprepared for teaching responsibilities. Career support is a critical gap, with many experiencing uncertainty and isolation post-PhD due to insufficient mentorship and structure. The findings highlight the need for tailored support, including mentorship, training, and institutional resources, to bridge gaps during this vulnerable phase. HEIs should enhance professional development through formal mentorship, targeted training, and structured systems to support early-career academics' career progression.

Keywords: academic support, career transition, doctoral education, early-career academics, mentorship

INTRODUCTION

Over the past decades, doctoral education has undergone significant changes as it has been increasingly formalized in Sweden and internationally (Olson & Clark, 2009; Clegg et al., 2024). In the transition from doctoral scholarship to doctoral positions, Swedish universities are now required to provide doctoral students with secure financial resources and better support throughout their studies (SOU 1998:128). Other factors that have contributed to the standardization of doctoral education include the Bologna Process, new quality assurance practices, the formalization of ethical guidelines and application processes that demand specific outcomes (Yudkevich et al, 2020; Rudakov & Yudkevich, 2021; Almlöv, 2024). This shift has had

a profound impact on supervision practices (Appel, 2003). The traditional master-apprentice system, in which the supervisor was the sole person responsible for the graduate student's education, has been replaced with a system in which the higher education institution (HEI) takes a broader responsibility for the graduate student (Park, 2007; Haley et al., 2024). Besides affecting supervision practices, academic life today is increasingly structured around audit exercises and new performance measurements (Dahler-Larsen, 2012 & 2014; de Rijcke et al., 2016).

For early academics, the formalization of doctoral education, along with the introduction of new public management and evaluative practices, has added new challenges. For instance, permanent positions have been far less than the increasing number of PhDs, and expectations on grant applications have been raised (Bloch et al., 2014). In Sweden, this has resulted in the extension of postdoctoral research employment in terms of time as well as an accelerating hyper-competition (Benner, 2016; Franssen & de Rijcke, 2019; Fochler et al., 2016; Åström & Hammarfeldt, 2019; Benner & Holmqvist, 2023). Similar patterns have been observed internationally (Acker & Webber, 2017; Bristow et al., 2017; Crick et al., 2021). In the US, for instance, the educational function for a long period has been undermined by the transformation of postdoctoral employment into a "holding pattern" (National Research Council, 2005:4). Likewise, declining career prospects for postdoctoral researchers has been seen in other countries, e.g., Australia (Thompson et al. 2001; Åkerlind, 2005) and the UK (Roberts, 2002).

The growing literature on early academics indicates that they constitute the most vulnerable group in the academic system and that they are the first to suffer from stress in academia (Bozeman & Gaughan, 2011; Cozzens et al. 1990; Hollywood et al, 2020; Laudel & Gläser, 2008 & 2014; Nästesjö, 2024). Defined as occurring after completing doctoral education, the early academic career is considered a status passage where they transfer from dependent to independent research (Laudel & Gläser, 2008). In this status passage, the identity of scholars and the state of their careers are transformed, socialized, and ultimately recognized by a shared community of peers (Glaser & Strauss, 2011; Laudel & Gläser, 2008). At the same time, early academics struggle with issues of identity, worth, and recognition in terms of how they perceive their own worth (Fochler et al., 2016) and how to gain recognition from others (Nästesjö, 2024).

Given its function as a status passage in contemporary academia, in combination with the newly graduated PhDs' vulnerable position and an accelerating hyper-competition, there is a need to further investigate the need for professional development support during the early academic years. In Sweden, it is particularly relevant to investigate early academics after the introduction of the new position of associate senior lecturer, "biträdande lektor" (Utbildningsdepartementet, 2016), the purpose of which is to prepare the early academic for a career in both research and teaching. This study investigates early academics' experiences of the transition from research studies to research careers at five Swedish higher education institutions (HEI:s): Blekinge Institute of Technology, Gothenburg University, Halmstad University, Mid Sweden University and Mälardalen University. We use the term "early academics" to refer to scholars transitioning from newly earned PhDs to senior positions (Haddow & Hammarfelt, 2019). We have limited our study to associate senior lecturers and postdoctoral fellows.

The aim of this study is to gain a deeper understanding of the types and effectiveness of support experienced by early academics during the transition from PhD studies to establishing themselves as independent researchers, to identify actionable recommendations for improving support systems and facilitating more successful academic career progression. To support this aim, we pose the following research questions:

RQ1: What processes and relationships shape early-career academics' transitions to independent researchers?

RQ2: Where do early-career academics perceive critical gaps in the support available during their early career transitions?

RQ3: What role does support play in shaping early-career academics' career trajectories and professional identities?

ACADEMIC SOCIALIZATION – A BALANCING ACT

With few exceptions, the literature on academic socialization tends to focus on undergraduate and graduate studies and supervision practices. Graduate students define a good supervisor as reliable, confident in the student, encouraging, knowledgeable, and willing to share information (Denicolo, 2004). Listening skills, encouragement and debate, continuous feedback and support, enthusiasm, warmth and understanding are also defining ingredients of a good supervisor. Good supervision also includes supportiveness, high levels of communication, accessibility, frequent informal interactions, helping students on time (Lovitts, 2001), and treating the student as a junior colleague (Girves & Wemmerus, 1988; Lee, 2008; Rönkkönen et al, 2024. Satisfactory professional collaboration between graduate students and supervisors as well as feeling part of the research culture is also essential for successful doctoral training (Bastalich, 2017; Zhao et al., 2007; Polkinghorne et al., 2023; Sverdlik et al., 2018; Wisker & Robinson, 2016). Recent studies also emphasize that students have different needs (Parker-Jenkins, 2018) and that doctoral studies have varying stages to which the supervisor must adjust (Lee, 2008; Benmore, 2016). PhD supervision has a central role in the modern doctorate degree, despite the modernization and standardization efforts regarding PhD education offered by HEI (Park, 2007; Reguero et al., 2017). During this critical period of research studies, finding the right research advisor is widely acknowledged to be one of the most impactful factors for students on the path to a PhD (Lee, 2008; Rigler et al., 2017). Other critical factors in developing research skills and identity formation are finding an effective group and forming a supportive network (Feldon et al., 2019; Stachl & Baranger, 2020; Verostek et al., 2024).

In the emerging scholarship around early academics, the same critical factors are emphasized, with one important difference: the discussion on academic socialization shifts to focus on mentoring rather than supervision (Ambler et al, 2016; Denard et al, 2015). Research on mentoring early academics suggests that while some need more support than others and there are disciplinary differences, early academics share a common need for professional development support (Sutherland et al, 2014; Denard et al, 2015; Nästesjö, 2024). Weidman & DeAngelo (2020) emphasize that regardless of disciplinary differences, interaction among students and faculty and collegiality create supportive environments that foster academic and career development. For instance, they highlight the role of faculty mentorship in retention and degree completion Two major factors influence the transition from research studies to research careers: a successful PhD and a research-intensive phase before entering typical academic employment. The most significant barrier to this transition is a lack of time for research (Laudel & Gläser, 2008).

Self-reports from mentoring programs also reveal differences in mentoring preferences that influence program participation, and demographics may have substantial significance. In addressing the process of academic socialization, however, we understand that it is far more complex than simply the internalization of norms and values of a field or a question of supervision and mentoring practices. As shown by Nästesjö, academic socialization is a dynamic process of learning how to perform norms and values that align with institutional demands and definitions of worth, which is in constant interplay with the early academics' interpretations of their experiences (Nästesjö, 2024). It is a pragmatic perspective on academic socialization, emphasizing social orders as negotiated (Strauss, 1978), which require continuous confirmation to be effective and stable (Nästesjö, 2024; Guhin et al., 2021). For early academics, this implies that they must continuously try to decode the environments they are in and the situations they encounter, what Nästesjö (2024) refers to as "a framing challenge". Besides negotiating between organizational structures and socialization processes, early academics are deeply affected by disciplinary cultures and organizational routines, which involves issues such as trying to decide whose judgment to trust when evaluating the quality of one's work and how to balance between more or less contradictory identity positions and institutional career demands with individual aspirations (Nästesjö, 2024).

We argue that early academic socialization is a complex career process, shaped by three interacting trajectories: cognitive, scientific community and organizational careers (Laudel & Gläser, 2014). Misalignment among these careers - such as when a researcher's cognitive progress outpaces their organizational stability or community recognition - often prolongs the transition from dependent to independent research. According to Laudel and Gläser (2014), this critical transition increasingly occurs in

the precarious post-PhD phase before securing a stable academic position, exacerbated by systemic issues like limited protected research time and unstable employment. This misalignment creates a period of uncertainty that can hinder long-term career trajectories and research productivity. To address this misalignment, we propose that the theoretical concept of scaffolding, rooted in Vygotsky's (1978) Zone of Proximal Development (ZPD), offers a structure for supporting early academics. Scaffolding involves tailored, temporary support - such as mentorship, structured training, or institutional resources - that enables researchers to navigate the complexities of their intersecting career trajectories (van de Pol et al., 2010). Just as scaffolding helps learners achieve tasks beyond their current capabilities, it can bridge the gaps created by career misalignment, providing the guidance and stability needed to progress toward independent research during this extended transition phase.

METHOD

In this study, we have interviewed 24 early academics who defended their dissertations relatively recently, the majority between 2-6 years ago (from the time of the interviews), but with one respondent who defended his/her dissertation nine years ago and another respondent one year ago (from the time of the interviews). Although these two respondents were outliers, their experiences were included due to their significant contributions to the study. The interviews followed a semi-structured interview guide of pre-prepared questions around the areas of:
1. Academic background and career path (including questions about educational background and research area, and previous and current academic positions),
2. PhD experience and supervision (including questions about motivation for pursuing a PhD, experiences of supervision in terms of positive/negative, and what characterizes good supervision),
3. The transition from PhD to academic career, i.e. "the gap" (including questions about ambitions and goals after the PhD, experiences of mentoring and support after the public defense, what support has been available and what has been missing), and
4. Need for support and development within academia (including questions about what structures are needed to facilitate the career transition and how institutions can better support young academics).

At the time of the interviews, the participants were affiliated with and/or employed at five different Swedish higher education institutions: Blekinge Institute of Technology (5), University of Gothenburg (5), Halmstad University (6), Mid Sweden University (4) and Mälardalen University (4). Fifteen of the participants are female, and nine are male. Sixteen participants are from Sweden, four are from northern Europe, two are from southern Europe, one is from Asia and one is from South America. The participants' subject areas derive from diverse areas, including engineering, education, sustainability, computer science, health, psychology, social work, informatics, and physics. Interviews were conducted and recorded online via Zoom. In line with ethical guidelines, all participants were informed about the study in writing prior to data collection and provided their informed consent. Furthermore, the participants have been anonymized in the text. The duration of the interviews ranged from 21 to 55 minutes, with an average of 33 minutes.

The focus of the interviews was to investigate both early academics' experiences of supervision during their PhD studies and their experiences of support after their PhD studies. The reason was to see whether there was a resonance between the two. Did their experiences of supervision affect their view on what constitutes good supervision and the support they received after their PhD? Did it affect their motivations, aspirations, and goals after the PhD? The focus, however, was the early academic career after the doctoral defense. What support have they received from the university, their department, and colleagues? What is their professional relationship with their former supervisor? What support, if any, have they been missing, and what type of support would they like to have had? Due to the abundance of material generated by the interviews, we have chosen to focus on the respondents' experiences after their PhD studies in this article, thereby saving our analysis of the early academics' experiences of supervision during their PhD studies for a follow-up article.

Analysis

In the present study, we employed a reflexive thematic analysis approach, as outlined by Braun and Clarke (2020), which aligns with the principles of qualitative research (Bryman, 2016; Braun & Clarke, 2006). This method acknowledges the interpretative role of the researcher and prioritizes subjectivity over interrater reliability as a marker of quality (Bryman, 2016). Chosen for its flexibility, adaptability across various theoretical frameworks, and suitability for analyzing interview data (Braun & Clarke, 2006; Braun et al., 2015), the analysis followed six structured phases (see Table 1). All authors were involved in each phase to promote transparency and rigor.

TABLE 1
SIX PHASES IN THEMATIC ANALYSIS

Phases in thematic analysis	Description of the analysis procedure
Familiarizing with the collected data	Transcribed, read, and reread the data, noting initial ideas.
Generating initial codes	Coded noteworthy details of the data and arranged data relevant to the codes.
Searching for themes	Organized codes into initial themes.
Reviewing themes	Checked if the themes and selected excerpts worked in relation to coded excerpts from phase 1 and the entire data set (phase 2) and generated a thematic mind map of the analysis.
Defining and naming themes	Refined details of the themes and generated clear definitions and names of the themes.
Producing the analysis paper section	Finalized the analysis of selected excerpts by relating them back to the research questions.

(Braun & Clarke, 2006).

Initial Familiarization With the Data

All authors engaged in an inductive exploration of the interview data. This involved thoroughly rereading the transcripts, making preliminary notes, and collaboratively discussing the findings. During our group meetings, we identified initial themes and codes, reflecting the iterative nature of our thematic analysis, which allowed us to revisit earlier phases as new insights developed. This process ensured a comprehensive understanding of the breadth and depth of the content.

Developing Initial Codes

After generating preliminary codes, the authors divided the interview transcripts and independently coded the data. This involved identifying meaningful segments and assigning appropriate labels. The resulting codes were then shared among the group, followed by collaborative meetings to compare individual coding and discuss emerging themes and subthemes.

Identifying, Reviewing, and Defining Themes

During group meetings, while there was a strong level of agreement on the tentative themes, the emphasis remained on maintaining a reflexive approach to thematic analysis grounded in qualitative inquiry. This approach allowed each author the flexibility to develop their own interpretations, free from the constraints of predefined codebooks or rigid frameworks. Throughout this process, themes and

subthemes were revised and refined, with data systematically categorized to reflect the core of participants' experiences. Tentative themes were thoroughly discussed to ensure shared understanding, and illustrative excerpts from the interviews were selected to support each theme. Ongoing dialogue among the authors throughout the analysis process ensured transparency. It allowed for continuous refinement, resulting in clearly defined and accurately labeled themes and subthemes to capture its essence and relevance to the research questions.

Creation of the Report

The final phase involved synthesizing the findings of the thematic analysis into a coherent and cohesive narrative. This process included presenting supporting evidence from the data to substantiate each identified theme and subtheme and articulating their relevance concerning the research questions.

This study's thematic analysis utilized an inductive approach, allowing themes to emerge directly from the data rather than being imposed by existing theories or frameworks (Braun & Clarke, 2006). Reflexivity was maintained throughout the process to ensure the analysis remained grounded in the participants' perspectives and to minimize researcher bias.

RESULTS

The thematic analysis revealed three distinct themes emerging from the data: (the need for) research support, teaching support, and career support. Research support encompasses the resources, time allocation, and institutional policies that enable academics to conduct research effectively. This includes protected research time, opportunities to form research partnerships, and assistance in securing funding, particularly for early-career researchers who may find it challenging to balance research with heavy teaching commitments. Teaching support includes the measures and resources provided by the institution to help academics manage their teaching responsibilities. This may involve balanced teaching assignments, compensation for heavy teaching loads, and strategies to prevent teaching from overwhelming research activities, ensuring that staff can effectively fulfill both roles. Career support encompasses guidance, resources, and structured opportunities that assist academics in advancing their professional journeys.

Research Support

The respondents highlighted several critical challenges related to research support, which significantly impact their ability to conduct effective and meaningful research. These issues, elaborated below, encompass a range of systemic, practical, and professional obstacles that researchers face in academic and institutional settings. We have divided these into the following subthemes: Lack of guidance, Funding challenges, Publishing as a key metric, and Balancing research with other duties, which are presented below.

Lack of Guidance

Respondents highlighted the absence of structured guidance on how to establish themselves as independent researchers after completing their PhD. They often felt lost when navigating funding applications, publishing, and collaborating with senior researchers.

> "Once you've defended your dissertation, you're on your own." (R1)

> "I really needed a mentoring figure… someone who you meet every once in a while to bounce ideas with and get advice. After the defense there are new kinds of questions and decisions you need to make…" (R7)

> "It's really hard to qualify. So you have to really be in a context and you can absolutely do that, if you end up in the right context with the right people then you can get a big boost

because there are big names in the field. But if you don't then you're left to find your own."
(R4)

"I thought I would get more support from colleagues and leaders. There was no dialogue or guidance from the department. The professor or research leader should take that role." (R6)

Funding Challenges

Securing research funding was a common struggle. Many respondents lacked experience writing grant applications and found it challenging to compete with more senior researchers. They emphasised the importance of collaboration and building networks to improve their chances of success.

> *"It's tricky to obtain funding, since you need to demonstrate that you have publications."*
> *(R4)*

> *"Something that influenced my career a lot was the funding situation. That affected my research studies. After my PhD it became even worse. There was a funding gap. I spent a lot of time writing applications…. It was exhausting. Because I spent most of my time teaching and writing funding applications I experienced a gap in my research activities."*
> *(R12)*

> *"From the time I got my PhD, I had no experience in applying for projects and then they more or less told me that now you have to have a project, right away, like. And it was really, really hard, not having any experience…. You didn't know what to ask about, how to collaborate with a company or a partner or someone external, and how it works, and what you can and can't promise, where do you set the boundaries...all that stuff you had no idea about, I had never experienced it...and how does it work with funding, do you get 100 percent, does the university have to pay something, what can you ask for, what is reasonable, you had no idea. So I thought it was really hard." (R24)*

Publishing as a Key Metric

To publish peer-reviewed articles was seen as critical for career progression, but some respondents noted a lack of support in this area. Writing solo articles or unclear research objectives hindered their ability to publish effectively.

> *"Based on my own experience from my PhD studies, the only thing I tell the PhD students I now supervise is to publish—no external or strange extra activities are suggested." (R4)*

> *"We had of course been to conferences, and all of my articles were co-written, but I had not really talked about publication strategies with my supervisors. I was unsure about which journals to opt for and how to be strategic about it." (R14)*

Balancing Research With Other Duties

Respondents often struggled to balance research with teaching or administrative tasks, sometimes delaying their progress in establishing a strong research profile. Several respondents noted that teaching often took precedence over research due to workload demands, which they viewed as detrimental to their long-term academic careers. They expressed a desire for clearer guidance on balancing these responsibilities.

A significant tension exists between teaching and research priorities, with respondents noting that institutional expectations often favor teaching obligations over research productivity. Heavy teaching loads, particularly in institutions with limited resources, leave little time for research, creating a conflict that undermines career advancement. Respondents expressed frustration that research, while critical for

professional growth and institutional prestige, is frequently deprioritized due to immediate teaching demands.

> *"I wish the management understood that if I teach 90 percent of the first year as an assistant lecturer it must be compensated later.... compared with a post doc... their research time is protected. My research time has not been protected at all. I have had to fight for my research time." (R13)*

> *"Compared with the research I did during my doctoral studies… after my defense I had to basically do research in my free time. It took a lot of toll on my family and myself. With two young children I had too little time and not enough energy to boost my research career. It actually took 3-4 years before I could do something substantial. By that time my fellow doctoral students were already established. It was really stressful." (R10).*

> *"I had been trained to become a researcher, not a teacher. All of a sudden I was only a teacher with a license for research. How about that… it caught me by surprise." (R14)*

> *"And then we had a staff shortage among the colleagues, so the first few years after I defended my thesis, I worked overtime every year because I have been easy to use in teaching." (R17)*

> *"Research is what has been my focus and that is what I have wanted to do but it has not been, not so much. Because there is no such time. I have been involved in many different courses at several universities at the same time, which has meant that time has been spent only on keeping teaching afloat. And research has had to take a back seat." (R21)*

To sum up the identified theme of research support, the data reveal systematic and practical barriers that hinder the ability of early academics to conduct research post-PhD. The lack of structured guidance leaves many feeling directionless in navigating funding, publishing, and career decisions, with respondents craving mentorship to bridge this gap. Securing funding is a significant hurdle, compounded by inexperience in grant writing and competition with senior researchers, often leading to research gaps and exhaustion from balancing application efforts with other duties. Publishing, critical for career progression, is hindered by insufficient support, unclear objectives, and the challenges of solo authorship. Networking and collaboration, while essential, are difficult to establish without formal support or strategic guidance, particularly for those less socially inclined or transitioning between institutions.

Teaching Support

The respondents identified various critical challenges in teaching support that profoundly affect their capacity to conduct impactful and efficient teaching. We have divided these into the following subthemes: Limited training for teaching, Time management challenges, and Need for mentorship.

Limited Training for Teaching

Despite taking higher education pedagogy courses, most respondents felt unprepared for teaching responsibilities, a significant part of their roles, due to inadequate training and support. They were left to figure out processes like booking lecture halls or preparing course materials independently, often relying on colleagues for informal advice. This lack of preparation forces them to dedicate substantial time to developing teaching materials and classroom strategies, diverting effort from research. Respondents struggle to deliver effective instruction, which can negatively impact student outcomes and their own professional evaluations, further complicating their ability to prioritize research.

> *"How do you book a lecture hall? Much time is spent figuring things out." (R1)*

"OK, this is your time. This is your course. And then you have to figure it out by yourself or ask your colleagues how it works." (R2)

"I took a pedagogy course before my defense but I needed more... so I studied and I started teaching and that was a struggle. I was so used to just writing... being a researcher. That was my identity and habit. I had been teaching before but not so much. Now it sort of took over and I had no one to ask for advice. I always want to be the best and now I really really struggled.../...So I was wondering, what am I doing here?" (R9)

Time Management Challenges

Teaching was described as time-consuming, especially for early-career academics new to course preparation. Many felt that the allocated time for teaching tasks was insufficient, leading to significant stress. This is particularly the case for associate senior lecturer "biträdande lektor" (Utbildningsdepartementet, 2016), who felt that their research time was not protected in the same way as for post-docs. Effective time management emerged as a persistent challenge, with researchers juggling multiple responsibilities, including research, teaching, and administrative tasks. Respondents highlighted that unpredictable workloads and frequent interruptions make it difficult to allocate consistent time for research. The absence of clear boundaries between roles often leads to overwork and burnout, as researchers struggle to carve out dedicated periods for deep, focused research activities.

"Even though they give you 40 hours for the course, if it's your first time preparing it, you'll definitely use much more than 40 hours." (R2)

"And I've always tried to include research, but it's been very difficult to combine all these things, it's always been that teaching has had to take up a lot of space and then you've struggled a bit with research on the side. So there's been a lot of teaching." (R24)

"I took pedagogy courses during my PhD studies but they did not prepare me for what was to come... even though I had some tools with me and some theoretical understanding, teaching really overwhelmed me, especially with regards to time." (R13)

"It's easy to get completely overwhelmed by teaching, it takes so much time and energy and it often becomes the first priority. Then the research might suffer." (R15).

Need for Mentorship

Respondents suggested that having senior colleagues mentor or co-teach with early-career academics could alleviate the burden and provide valuable learning opportunities. The lack of accessible mentorship was frequently cited as a barrier to research success. Respondents emphasized the need for experienced mentors to guide them through complex research processes, funding applications, and career planning. Without mentorship, academics, especially those early in their careers, feel isolated and uncertain about navigating academic systems, securing resources, or building a sustainable academic portfolio. This gap in support hinders both professional development in teaching and research.

"I think at least one or two people should work together rather than placing a very young researcher to do it all alone." (R2)

"So there were no structures like this or, I don't know, evaluation conversations or quarterly conversations (laughter) with someone or some kind of mentorship taking over." (R20)

"I had no one dedicated to talk to about teaching concerns. How plan this? How plan that? What would you do in this situation? I had a really problematic student who complained about his grades and my grading. That took a lot of toll. I was really stressed out." (R9)

The findings underscore critical challenges in teaching support that significantly hinder academics' ability to deliver effective instruction and maintain robust research productivity. Respondents highlighted limited pedagogical training, time management struggles, competing teaching and research priorities, a lack of mentorship, and the absence of structured support systems as pervasive barriers. These issues not only strain early-career academics but also contribute to professional dissatisfaction and inequities within the academic landscape. The challenges articulated by respondents - limited training for teaching, time management difficulties, competing teaching and research priorities, the need for mentorship, and the absence of structured support systems - highlight deep-rooted issues within the academic research landscape. It also emphasizes teaching as a professional practice that involves experience, socialization, and training, and is an acquired skill learned through practice (Molander, 1996).

Career Support

The respondents identified various critical challenges related to their ability to establish a career in academia. We have divided these into the following subthemes: Uncertainty After PhD Completion, Navigating Independence and Dependence, Career Planning and Goal Setting, Networking and Peer Support, and Structured Support Systems.

Uncertainty After PhD Completion

Respondents described a profound sense of uncertainty and disorientation following the completion of their PhDs. Many described the sudden loss of structure post-PhD, with the clear goals of doctoral study replaced by feelings of emptiness and disorientation. Several respondents noted the absence of a safety net or institutional support, leaving them to navigate the transition on their own, often without clear information about available opportunities or next steps. This period was marked by daily uncertainty, diminished inclusion in research activities, and a struggle to prove themselves in a new and highly competitive environment. The abrupt shift from being a valued member of a research team to feeling excluded and adrift was particularly challenging.

"There was a sudden emptiness…. There was no safety net and I felt alto catch me and I felt as if I crash landed. There were no job offers or inclusion in research projects." (R6)

"When the date for the public defense was set, something happened, it changed, then it was like you had already stopped working there. So the last period then you were no longer a doctoral student, but then you were someone who was competing for funding, and it was like black and white like that, well, have you started clearing out your desk because you're moving soon, those were the kind of comments." (R22)

"I was disappointed that I was no longer invited to meetings and discussions with my former team. Why not? There was no "Project" anymore. But I thought I was the project (pun intended)." (R6)

Navigating Independence and Dependence

Achieving independence emerged as a central theme among respondents, who consistently emphasized its significance in their academic careers. Many highlighted that supervising PhD students marked a pivotal milestone, providing clearer direction and a renewed sense of purpose. However, this journey toward independence was often accompanied by considerable challenges, especially in environments perceived as unsupportive or even toxic. Several participants described a university culture characterized by high expectations for securing research funding and demonstrating project success, yet offering minimal

institutional support. As a result, early-career researchers frequently found themselves navigating substantial pressures on their own. These insights underscore the vital importance of both fostering independence and ensuring robust institutional backing in shaping the experiences and motivations of academic researchers.

> *"You may end up in a good group that might support you, little by little, until you become independent. But if you're in a toxic group, the most important thing is to focus on securing funding. However, it's tricky to obtain funding, as you need to demonstrate that you have publications." (R4)*

> *"Supervising a PhD student provided clearer directions for where to go." (R5)*

> *"I actually achieved independence once I started supervising. That gave me leverage and…it gave me direction and a sense of purpose actually." (R16)*

> *"I think that once you have a doctorate you should be independent." (R22)*

Career Planning and Goal Setting

Respondents consistently reported feeling unprepared and unsupported in career planning and goal setting after their doctoral studies. Many described being left to navigate academic career paths alone, without guidance on key issues like choosing positions, balancing teaching and research, or addressing challenges such as gender bias. The lack of structured discussions about long-term objectives often led to anxiety and a focus on survival rather than success. Despite these challenges, some remained motivated to advance in academia and contribute to their fields, underscoring the need for better support systems to help early-career researchers plan and achieve their professional goals.

> *"I have figured it out myself... how to plan strategically. It is beyond me that this is not talked about more. Why spend 5 years as a doctoral student focusing on research and after the defense... nothing. Ok, you are on your own. How am I supposed to figure everything out at the same time? What is next in terms of research? How should I balance teaching and research? What positions should I opt for? Where are the gender traps? etc." (R8)*

> *"Teaching was a strategic mistake—it limited my progress in research." (R3),*

> *"It was like being thrown from a bird's nest, except I had not learnt to fly. I had only learnt how to technically use my wings but not really how to navigate. I was not sure what my next move would be, really." (R15).*

> *"Sometimes I feel like I'm just trying to survive—it's not about success." (R4)*

Networking and Peer Support

Although formal mentorship was often absent, several respondents found value in informal peer support groups, where sharing experiences and receiving reassurance helped them feel confident about being "on the right path." Networking within their departments and internationally was widely acknowledged as crucial for accessing opportunities and fostering collaborations. However, many interviewees noted that establishing or joining such networks was challenging without structured institutional support. While building relationships with colleagues and senior researchers was seen as essential for career development, it was not always straightforward. Some respondents reported learning through observation or attending conferences, but overall, there was a consensus that more formalized support for networking and mentorship would be highly beneficial.

"How does collaboration with established researchers work? You try to join existing networks at the department." (R1)

"Networks evolve organically so how do I place myself inside that growth? How do you really connect with colleagues and form a team for an article? Since I am not really a social person that was difficult. I can do research but I cannot network, at least not strategically or intentionally if you know what I mean?" (R8)

Structured Support Systems

Some respondents advocated for structured systems or courses that provide practical information about teaching routines, regulations, and best practices. Respondents underscored the absence of structured support systems to streamline research activities and alleviate administrative burdens. They described a need for institutional frameworks that provide clear pathways for accessing funding, collaborating with peers, and managing workloads. The lack of such systems exacerbates inefficiencies, leaving researchers to navigate bureaucratic processes independently. Respondents called for centralized resources, such as research offices or professional development programs, to foster a more supportive research environment.

"There should be a course or lecture where you get information about routines and regulations." (R1)

"A big asset after your PhD if you have your former supervisor as a mentor. Perhaps meet on a regular basis to discuss career choices - new choices need to be made." (R5)

The findings highlight significant gaps in career support for early-career researchers. Respondents reported that the transition after completing their PhDs was marked by uncertainty, lack of direction, and insufficient institutional guidance for career planning and professional development. Many felt ill-equipped to navigate academic career paths, balance competing responsibilities, or establish vital professional networks, often depending on informal peer support in the absence of structured mentorship. Achieving independence was considered essential yet daunting, particularly in settings with high expectations but limited support. Overall, respondents stressed the urgent need for comprehensive institutional frameworks and practical resources to help early-career researchers set clear goals and succeed in academia.

DISCUSSION

Our thematic analysis of early academics' experiences shows the multifaceted challenges faced as they transition from PhD completion to established academics across the three domains of research support, teaching support, and career support.

Challenges Across the Three Domains

The challenges articulated under research support underscore a fragmented academic ecosystem that leaves early academics vulnerable. The absence of structured mentorship post-PhD, as evidenced by respondents feeling "on their own" (R1, R16), resonates with Laudel and Gläser's (2014) argument that a guidance vacuum often marks the transition from doctoral to independent researcher. This lack of direction exacerbates difficulties in securing funding, a process respondents found "exhausting" and competitive (R12, R24). Moreover, the heavy burden of teaching and administrative tasks often overshadows research, with unprotected research time undermining progress, particularly for associate senior lecturers. These findings underscore the need for institutional reforms, including mentorship programs, protected research time, and structured support for funding and networking, to empower early-career researchers to thrive in academic and institutional settings. The tension between independence and dependence, as seen in respondents' reliance on funding or supervisors (R4, R24), aligns with Åkerlind (2005), who notes that achieving research independence is a pivotal yet unsupported milestone. The tension between research and

teaching duties, highlighted by unprotected research time (R13), reflects a broader issue of workload imbalance, as discussed by Kinman and Jones (2008), who link heavy teaching loads to reduced research productivity and burnout.

The challenges in teaching support reveal a systemic undervaluation of teaching as a core academic role. Respondents' difficulties with basic tasks, such as booking lecture halls (R1), and the overwhelming time demands of course preparation (R2, R24) align with Oleson and Hora (2014), who argue that early academics are often thrust into teaching roles without adequate preparation. The prioritization of teaching over research (R3, R21) reflects institutional biases toward immediate teaching responsibilities, as critiqued by Tight (2010), who notes that teaching-intensive roles often marginalize research aspirations. The call for mentorship and co-teaching opportunities (R2, R9) supports Pataraia et al. (2013), who advocate for collaborative teaching models to ease early-career transitions. The lack of structured support systems, such as courses on teaching routines (R1), further compounds these challenges, aligning with Biggs and Tang (2011), who emphasize the need for institutional frameworks to scaffold teaching development. These findings highlight the necessity of scaffolded pedagogical training, balanced workloads, and mentorship to enable early-career academics to excel in both teaching and research.

The career support theme illuminates the profound uncertainty and isolation faced by early academics post-PhD. The abrupt shift from structured doctoral programs to independent career paths often left them grappling with undefined goals and uncertain job prospects, with subthemes of uncertainty, independence struggles, networking challenges, unclear career planning, and limited mentorship. Networking, both locally and internationally, was recognized as essential for accessing opportunities, yet respondents struggled to establish these connections without formal structures. Career planning was hindered by a lack of strategic guidance on balancing research, teaching, and advancement, with many expressing a need for mentorship to clarify objectives and avoid pitfalls. While formal mentorship was often absent, informal peer support provided critical reassurance and a sense of community. The sense of being "on their own" (R1, R6) and the "sudden emptiness" post-PhD (R6, R12) mirror Bazeley's (2003) concept of the "postdoctoral limbo", where the lack of a clear career roadmap hinders professional development. Networking difficulties (R1, R4) and the lack of strategic career planning (R8, R15) underscore the absence of institutional scaffolding, as critiqued by Sutherland (2017) who argues that early-career academics need structured guidance to navigate academic hierarchies. The value of informal peer support (R5) also aligns with McAlpine and Amundsen (2016), who highlight peer networks as critical for resilience in precarious academic environments. These findings suggest that institutions must provide formal mentorship, career planning resources, and networking opportunities to bridge the gap between PhD completion and sustainability.

Processes and Relationships Shaping Early-Career Transitions

The formalization of doctoral education, coupled with new public management practices and hyper-competition, has intensified challenges for early academics, particularly in Sweden, with the introduction of the associate senior lecturer position (Utbildningsdepartementet, 2016). Our results substantiate this, as respondents consistently reported a support gap post-PhD, characterized by a lack of structured mentorship and institutional support (e.g., R1, R6, R16). This resonates with the shift from the traditional master-apprentice model to a more institutionalized responsibility for doctoral training (Park, 2007), which appears to falter in the post-PhD phase. The absence of scaffolding, characterized by contingency, fading, and transfer of responsibility (van de Pol et al., 2010) is evident in struggles with funding applications, publishing strategies, and balancing teaching with research. These findings align with Nästesjö's (2024) depiction of early academic years as a period of uncertainty and identity negotiation, where individuals must decode complex evaluative landscapes without adequate institutional support.

The processes and relationships shaping early-career transitions are heavily influenced by social and institutional contexts, as anticipated in the introduction's discussion of academic socialization as a negotiated order (Nästesjö, 2024; Strauss, 1978). Respondents highlighted the critical role of networking and mentorship in accessing opportunities (R1, R4), yet the lack of formal structures often left them reliant on informal or organic connections, which favored well-connected or extroverted individuals (Sutherland,

2017). This social game, as described by Nästesjö (2024), underscores the introduction's emphasis on the scientific community career as a key trajectory alongside cognitive and organizational careers (Laudel & Gläser, 2014. The misalignment among these trajectories - particularly when heavy teaching loads (R13, R21) impede research progress - prolongs the transition to independence, confirming the introduction's assertion that systemic issues push this critical phase into a precarious post-PhD period.

The critical gaps in research support identified by respondents mirror the scarcity of permanent positions and the pressure of evaluative practices as discussed by Benner (2016) and Fochler et al. (2016). Our call to investigate professional development support is answered by the respondents' pleas for structured mentorship (R7, R8), funding application training (R2, R24), and protected research time (R10, R13). These gaps highlight a failure to provide the scaffolding necessary to bridge the "gap" between research studies and research careers, as posited in the study's title and aim. The concept of scaffolding proves particularly relevant here, as the absence of contingency (tailored support) and fading (gradual withdrawal) leaves early academics feeling "on their own" (R1, R6), unable to fully assume responsibility for their independent roles.

The critical role that support plays in shaping early-career academics' career trajectories and professional identities is addressed through the findings' exploration of how support (or its absence) shapes career trajectories and professional identities. We see academic socialization as a dynamic process involving identity formation and recognition within the scientific community in line with Laudel & Gläser (2008) and Nästesjö (2024). Respondents' experiences of isolation (R6, R12) and the struggle to balance teaching and research (R3, R14) reflect a fractured professional identity, torn between institutional demands and personal aspirations. However, instances of informal peer support (R5) and achieving independence through supervising others (R16) suggest that targeted support can foster resilience and a sense of worth, aligning with the introduction's reference to mentoring as a key socialization mechanism (Ambler et al., 2016; Denard et al., 2015). Effective scaffolding can align cognitive, community, and organizational career trajectories, easing the transition to independent research. As our results show, the transition from dependent to independent researcher increasingly occurs during the period between completing a PhD and obtaining a first academic position, which could be due to universities' inability to provide adequate support, such as protected research time or stable employment. If so, this shift pushes early academics into prolonged uncertainty, moving this critical phase outside traditional career timelines and potentially affecting long-term career trajectories and research productivity. Our findings indicate that this transition is shaped more by the social context of the scientific community than by formal organizational structures, echoing the arguments of Laurel and Gläser (2008). Barriers such as insufficient institutional support, inequitable workloads, and lack of mentorship not only hinder researchers' ability to produce meaningful work but also contribute to professional dissatisfaction and inequity. Addressing these challenges necessitates comprehensive institutional reforms, which include implementing robust mentorship programs, distributing workloads equitably, and establishing centralized support systems. Such measures are essential for empowering early academics, fostering a balanced integration of teaching and research, and promoting a more equitable and sustainable academic environment. Future research should focus on scalable interventions to bridge the gap between PhD completion and independent research careers, ensuring long-term success and well-being for academics.

IMPLICATIONS AND RECOMMENDATIONS

Our findings suggest a need for transitional support for newly graduated PhDs, mentorship, and institutional mechanisms that enable individuals to "tie up loose ends", establish themselves, and develop both their research and teaching profiles for long-term career development. These findings align with and extend existing literature on the precarity of early-career academic roles, highlighting the necessity for institutional reforms to foster sustainable academic careers. The findings reveal a critical need for institutional reforms to address the systemic barriers faced by early academics. Based on the data, we propose the following recommendations:

1. **Structured Mentorship Programs:** Implement formal mentorship schemes pairing early-career academics with senior colleagues to guide research, teaching, and career planning. Regular meetings could address funding applications, publishing strategies, and teaching challenges.
2. **Protected Research Time:** Allocate protected research time for early-career academics to balance teaching demands and foster research productivity. This could involve reduced teaching loads in the first 1–2 years post-PhD.
3. **Pedagogical Training integrated with Support Systems:** Develop pedagogical training programs combined with scaffolding mentorship programs (e.g., teaching handbooks, workshops) to better prepare academics for teaching roles.
4. **Funding Application Training:** Offer workshops on grant writing and funding strategies to enhance competitiveness and reduce the "funding gap" experienced post-PhD.
5. **Networking and Collaboration Platforms:** Create formal networking opportunities, such as research symposia or cross-institutional collaborations to support early academics' need for structured network-building.
6. **Career Development Frameworks:** Establish clear career pathways with milestones for advancement (e.g., publications, funding, teaching evaluations) addressing early academics' need for goal-setting guidance.

In summary, our findings reaffirm the problematization of the early academic career as a vulnerable status transition exacerbated by systemic precarity and insufficient institutional support. This study highlights the need for contingent, diminishing, and responsibility-shifting support to empower early academics. These insights lay the foundation for the recommendations proposed, which aim to address the identified gaps and foster sustainable academic careers, thereby contributing to the broader discourse on academic socialization and institutional reform.

LIMITATIONS

This study has several limitations. First, the sample is drawn from a specific academic context, which may limit generalizability to other institutional or national settings. Second, while the reliance on qualitative data offers rich depth, it may not capture quantitative metrics of workload or funding success. Third, the study focuses on early-career academics, potentially overlooking the perspectives of those in mid- or late-career stages who may face different challenges. Finally, self-selection bias among respondents may skew the findings toward individuals with stronger opinions regarding support deficiencies.

FUTURE RESEARCH DIRECTIONS

Future research should explore the efficacy of proposed interventions, such as mentorship programs or protected research time, through longitudinal studies or randomized trials. Comparative studies across various institutional types (e.g., research-intensive vs. teaching-focused) could clarify contextual influences on early-career challenges. Additionally, quantitative analyses of workload distribution, funding success rates, and publication outputs could complement the qualitative insights provided here. Finally, examining the role of peer support networks could inform the development of scalable, low-cost interventions for career resilience.

CONCLUSION

This study underscores the multifaceted challenges faced by early-career academics in securing research, teaching, and career support. The findings highlight a critical need for institutional reforms to address guidance vacuums, workload imbalances, and career uncertainty. By implementing structured mentorship, protected research time, pedagogical training, and clear career pathways, institutions can empower early-career academics to thrive, contributing to both individual success and the broader academic

enterprise. These insights add to the growing body of literature on academic precarity and provide a roadmap for fostering sustainable academic careers.

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APPENDIX: INTERVIEW OUTLINE

Aim of the Study

The aim is to gain a deeper understanding of early academics' experiences of scaffolding, including supervision and mentoring, in the early stages of their academic careers and to inquire how this scaffolding may be developed further. What scaffolding is needed to fill the gap between research studies and research careers?

Interview Strategy
- Number of respondents: 15, five from each university: BTH, MDU and Halmstad University.
- The respondents should be Ph.D. graduates who graduated within the last three years.
- The interview will be conducted via Zoom/Teams. The choice depends on which platform is best for transcribing the recording.
- The interview will be recorded.
- The interview is expected to take 30-45 minutes. Not longer than 45 minutes.
- The results will be anonymized before publishing.
- The respondents can review the analysis before submitting the manuscript to a journal.

Interview Themes/Questions
1. Who are you?
- Your field of education and research/teaching?
- Your academic education and career so far [what, when, how long] (PhD year?)
- Past and current positions in academia [what, when, how long]

2. The PhD project
- Motivation to do a PhD
- The topic of your research project and the need for supervision
- Outline of your PhD project [what, when, how long]
- Supervision during the PhD project: What are your experiences with your doctoral supervisor(s)? (Positive/negative factors? Anything lacking or especially productive?)
- In your view, what is good supervision? (from a career perspective)

3. After the PhD project - the gap
- Aspirations and goals related to your career after the PhD
- Your academic career after the PhD – what various roles have you had? What has been your primary career focus (teaching, research or management)?
- Your requirements and expectations of support/mentoring/scaffolding after the dissertation by the supervisor and other senior colleagues (formal and informal).
- What support did you receive by your university/department?
- What support was missing?
- What scaffolding is needed to fill the gap between research studies and research careers?

4. Ethical considerations of the study
- Brief study details (aim, methods, anticipated outcomes and benefits).
- Broad ethical code (usually associated with Subject Associations such as AERA).
- Contact details.
- Expected participant contribution.
- The right to withdraw consent.
- Confidentiality and security of the data.

Respondents will be asked to explore their experiences of the gap between PhD studies and their academic career with the researcher. Respondents can contact the researchers anytime if they have further comments or thoughts. A provisional research analysis will be sent to the respondents so they have a further opportunity to contribute to the exploration.