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International doctoral students' socialization into English academic writing proficiency

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ABSTRACT

International doctoral students from non-native English-speaking (NNES) backgrounds often encounter challenges in writing their publications and doctoral dissertations. Drawing upon the language socialization theory (LST) of Duff, this study investigates how novice scholars integrate into their academic communities as they develop their English academic writing (EAW) abilities. Eighteen doctoral students representing diverse first-language backgrounds participated in semi-structured interviews on their lived experiences. They felt inadequately prepared for EAW requirements upon entering their PhD programs. Over the years, they developed their research dissemination skills by reading the works of leading scholars in their respective fields (e.g., computational biology, sociology, philosophy, phonology, immunology), writing persistently, while acknowledging the poor quality of their drafts, and actively seeking feedback from academics and peers in their communities. These findings underscore the need to provide targeted support for novice academic writers to foster their growth as proficient and confident authors to contribute to the global academic discourse. Duff's LST provides a comprehensive lens for exploring the journey through which NNES novice writers develop their EAW abilities and become valuable members of their communities.

1. Introduction

In international English-medium (EMI) doctoral programs, where academic activities are conducted in English, the ability to write proficiently in academic English is pivotal for the successful completion of a doctoral degree. Even for students whose native language is English, writing scholarly papers may pose challenges (Hyland, 2016). English academic writing (EAW) requires a high level of genre knowledge and academic expertise to address the needs of target audiences (Hyland, 2018). Non-native English-speaking (NNES) doctoral students often find it challenging to meet

academic requirements including writing their dissertations and fulfilling publication criteria (Calle-Arango & Ávila Reyes, 2023; Ma, 2021) in appropriate English for research publication purposes (ERPP) (Flowerdew, 2022).

EAW is a social construct, as authors must address the needs and expectations of a discipline-specific audience (Hyland, 2018; Swales, 2011). Therefore, academic writers need to actively socialize into their respective disciplines and immerse themselves in the practices, values, and communication norms of these communities, where proficiency in EAW is essential. Studies have explored various aspects of the socialization process, such as the role of feedback (e.g., Anderson, 2021; Spies et al., 2021), participation in oral academic discourse (e.g., Hadizadeh & Vefalı, 2021), the support provided by academic communities (e.g., Faber et al., 2021), and the importance of authors' well-being while coping with EAW demands (e.g., Almasri et al., 2022). However, there is a research gap regarding NNES international doctoral students' lived experiences from the perspective of language socialization theory (LST, Duff, 2007, 2010). This study aims to bridge this gap by connecting aspects of EAW socialization into a cohesive understanding of how NNES doctoral students develop their academic writing skills in their respective EMI doctoral programs. The literature on EAW emphasizes that academic writing abilities develop through social interaction and require a deep understanding of disciplinary discussions, as academics share common goals, practices, and ways of communicating among members of specific communities (Hyland, 2004, 2008, 2009; Swales, 2004, 2011). This study aims to explore how NNES students from diverse research fields are socialized into EAW practices and develop their abilities using LST (Duff, 2007, 2010) in a range of doctoral programs in Hungary.

2. An overview of previous literature

Research underscores that not all doctoral students enter their programs equipped with the necessary skills and abilities to perform their tasks (Calle-Arango & Ávila Reyes, 2023; Odena & Burgess, 2017). For NNES novice researchers, the challenges are compounded as they must simultaneously develop their academic skills while adhering to program requirements (Khudhair, 2020; McAlpine et al., 2009). Effective research communication is essential in an internationally acceptable academic manner. In EMI doctoral programs, English is used as the medium of research dissemination and NNES students may encounter difficulties in writing research proposals, grant applications, progress reports, course assignments, publications, and dissertations (Kašpárková & Etchegoyen Rosolova, 2020; Khudhair, 2020).

Novice authors often encounter initial challenges when EAW plays a vital role in presenting their research effectively to an international audience (Odena & Burgess, 2017). Writing research papers in an academically concise manner is a crucial skill, as students are responsible for all the claims in their texts. Achieving clarity and precision is essential to meet academic standards and it requires a deep understanding of disciplinary-specific terminology, syntactic structures, and rhetorical strategies (Ciampa & Wolfe, 2019). Novice authors often struggle to meet linguistic and disciplinary expectations in academic writing, hindering their ability to disseminate research and fulfill publication requirements (Paltridge & Starfield, 2023).

Language socialization theory (Duff, 2007) offers a valuable framework to examine how international doctoral students develop their EAW abilities during their doctoral journey. Language socialization encompasses the process through which individuals learn and internalize the norms, values, and practices of a specific language community (Duff, 2007, 2019; Duff et al., 2019; Wong et al., 2001; Zappa-Hollman & Duff, 2015). LST underscores the significance of sociocultural interactions, mentorship, and immersion in academic discourse communities as essential facets of students' language and academic development (Okuda & Anderson, 2018). Ultimately, this theory emphasizes that the journey leading to EAW proficiency is a dynamic and contextually embedded process, highlighting the pivotal role of language socialization in shaping novice scholars into accomplished writers and researchers in their academic domain (Duff, 2007, 2010; Friedman, 2023; Rabbi, 2021).

Previous studies indicate that LST (Duff, 2007) can offer new insights into how individuals develop academic language skills within specific social contexts. Anderson (2021) explored four doctoral students' socialization processes in Canada, shedding light on the dynamics of written feedback. Bronson's (2004) research examined four ESL graduate students' academic literacy socialization in the US, focusing on their practice of writing academic passages. Kim's work (2018) enriched the field by analyzing feedback networks in four doctoral students' communities in the US. Ortaçtepe's (2013) case study analyzed a Turkish doctoral student's experiences in the US, whereas Soltani et al. (2022) explored the intricate relationship between language socialization and identities in a Vietnamese student's case study. While these studies examined different aspects of language socialization in academic settings, such as feedback provision, academic literacy development, LST (Duff, 2007) offers a unifying perspective that connects these elements by focusing on the social processes enabling EAW skill development and identity construction.

Previous studies did not investigate how academic language socialization, as conceptualized by Duff (2007, 2010), shapes doctoral students' EAW development in international PhD programs where English is used as a lingua franca for both faculty and students. 'Socialization studies' (Duff, 2017, p. 269) should cover 'a wider range of geographical contexts and types of institutions' (Kobayashi et al., 2017, p. 250); they should not only focus on the challenges encountered but also shed light on the strategies and successes students experience as they navigate the complex academic writing landscape. Following these recommendations, the present study involved 18 students from 18 countries, all using different mother tongues, and researching 18 fields. Academic writing at the doctoral level involves immersion in respective academic cultures and communities (Hyland, 2004, 2008, 2009; Swales, 2004, 2011). Novice researchers need to learn disciplinary discourse conventions, receive and use feedback, and negotiate their identities as emerging scholars within their academic communities. LST (Duff, 2010) offers a lens for exploring this academic socialization process allowing us to investigate not only the challenges and successes participants experienced as they integrated into their respective communities, but also their advice for newcomers in similar contexts. The inquiry is innovative, as no such study has been conducted in EMI doctoral education contexts in Hungary.

3. Methodology

3.1. Research design

The qualitative study is part of a larger research project using an explanatory sequential mixed-method design following Creswell's (2014) guidelines. It involved 255 international doctoral students from 49 countries, representing 48 first languages, studying in 65 programs in Hungary. Most participants were not confident about their EAW abilities (e.g., paraphrase texts, communicate their ideas coherently, write a critical literature review) upon entry to their respective PhD programs. However, most felt that they developed over the years (Phyo et al., 2022a, 2022b, 2023b, 2024a), which was also reflected in their personal metaphors conceptualizing their EAW experiences (Phyo et al., 2023a) and in a needs analysis of their EAW support (Phyo et al., 2024b). The previous phases documented that students became successful members of their academic communities. In this study, we explore the role of socialization in their successful integration into their respective discourse communities by finding answers to four open questions that are drawn from key elements of Duff's LST (2007).

(1) What were participants' lived experiences like during their initial socialization into their respective academic communities?
(2) What roles did thesis advisors, peers and reviewers play during their socialization process?
(3) What reasons did students attribute to their successful integration into their academic communities?
(4) What specific strategies did they use to overcome the challenges they encountered during their doctoral journey?

3.2. Participants

We invited participants in the large-scale study to a follow-up interview; 18 international doctoral students (5 females and 13 males) volunteered to do so. All were NNES students pursuing their PhD education in Hungary at ten doctoral institutions. Their countries of origin, first languages, and research fields are presented in Table 1. They were distributed across various stages of their doctoral studies: recent graduate ($N = 1$), 5th-year ($N = 7$), 4th-year ($N = 6$), 3rd-year ($N = 3$), 2nd-year ($N = 1$).

3.3. Data collection instrument and procedure

First, we got ethical approval for the research project from the IRB (Reference number: 7/2021). Then, data were collected via semi-structured interviews following Creswell's (2014) guidelines. The interviews focused on the students' experiences related to academic writing, including challenges and successes. They were invited to explain how they coped with problems and how they maintained their motivation (see Appendix A). The interviewer, the first author of the manuscript, was an international PhD student in Hungary. She was not known to the participants, but they knew she was their peer with a similar background. Her role was principal investigator, working on a research project on ERPP.

Table 1. Country, mother tongue, and field of study of 18 students.

Participants' code	Country of origin	Mother tongue	Research fields	Years of PhD studies
01	Brazil	Portuguese	Sociology and Communication Science	5
02	Indonesia	Bahasa	Assessment in Science Education	5
03	Azerbaijan	Azerbaijani	Modern Software Development Architectures	5
04	India	Malayalam	Philosophy	4
05	Russia	Russian	Teacher Education and Higher Education	5
06	Myanmar	Myanmar	Lifelong Learning	4
07	Yemen	Yemeni Arabic	Language Assessment Literacy	4
08	Turkey	Turkish	History	4
09	Vietnam	Vietnamese	Digital Literacy	5
10	Laos	Lao	Learning Motivation	3
11	Jordan	Jordani Arabic	Immunology	3
12	Bangladesh	Bangla	Renewable Energy Auction Modeling	4
13	Kazakhstan	Kazakh	Assessment of Reading Skill and Literacy	Recent graduate
14	China	Chinese	Critical Thinking in Higher Education	4
15	Ghana	Kusaal	Phonology	2
16	Morocco	Amazigh	Teaching English as A Foreign Language	5
17	Kenya	Kikuyu	Lichen chemistry	5
18	Albania	Albanian	Computational Biology and Cancer Genomics	3

3.4. Data analysis

First, all participants were anonymized (P01–P18) to protect their privacy in accordance with the guidelines of the American Psychological Association (2002). We analyzed their responses to capture both the content and nuances in the dataset, aligning with established practices in qualitative data analysis (Saldaña, 2009). Subsequently, the dataset was systematically deconstructed to identify distinct themes, following a multi-stage process recommended by Saldaña (2009). Two methodological features essential to language socialization research were used: a design that allows for examining changes in the students' language socialization over time and a theoretically informed ethnographic perspective (Garrett, 2017; Sperry et al., 2015). Both deductive and inductive coding were used, as we looked for themes found in the literature as well as additional emerging themes in the dataset. All responses were analyzed in their original form along key themes in LST (familiarizing with conventions; interaction with community members, integrating into the community, and dealing with challenges). Authentic verbatim excerpts are presented in quote marks.

4. Findings

4.1. Doctoral students' initial language socialization experiences into their respective academic communities

Most respondents gave an account of a pronounced discrepancy between their initial expectations and the actual challenges posed by academic writing requirements in their programs. This misalignment was vividly illustrated in students' narratives. As P01 recounted, even with English proficiency gained through professional and daily interactions in English-speaking countries, the transition to academic writing presented significant difficulties.

> The head of the department asked me to explain in an email beyond the project that I had submitted the main ideas of my research. So, that was the first academic writing. It was like summarizing my research project in an email and a few points. And after that, I also had to submit academic reports and like assignments to my professors and those were a little bit of longer pieces, like five to ten pages assignments entirely in English and using the academic language. And I remember that it was quite difficult.

Furthermore, participants emphasized the gap between the expected qualities of doctoral students and their actual readiness. P05 captured this sentiment by stating, 'You are a doctoral student; you're supposed to already know a lot of things and be ready to do that and be professional.' However, many students did not feel well-equipped to start English academic writing at the doctoral level immediately. Both P06 and P14 described difficulties not only in academic writing but also in research methodology, illustrating the formidable challenges they faced in the early stages of their doctoral journey. P06 elaborated, 'At the beginning, not only the difficulties in English academic writing, I also had some difficulties in research methodology. So, to speak generally, I had two big problems.' P14 acknowledged, 'it is challenging for me to meet the demands and the expectations to meet in order to graduate.' These challenges had a significant impact on students' confidence, leading them to question their goals. P06 reflected, 'I really deserve to get a PhD degree?' P15 expressed concerns about the time pressure: 'Will I meet the requirements in time?'

Another critical revelation concerned respondents' limited experiences with academic writing in English. Only one student, P12, had prior experience publishing research articles in English-medium international journals. All others, including P01, whose English exposure was significant due to living in the United States, the transition to writing discipline-specific scholarly texts was a daunting challenge. P03 highlighted the disparity between general English proficiency and the specialized demands of academic writing, 'For the beginning, it was really hard for me because I knew how to write an essay and other stuff in English, but academic writing is a completely different thing.' Others' experiences echoed this, underscoring the lack of practice in EAW.

In sum, the respondents' experiences during the initial phase of their socialization into their respective academic communities were characterized by substantial gaps between their expectations and the challenges posed by tasks in academic writing and research methodology. These challenges often led to doubts about their readiness to pursue a graduate degree. The transition from general English proficiency to mastering the intricacies of EAW and research methods was seen as a hurdle by most respondents.

4.2. Advisors', peers', and reviewers' roles in doctoral students' integration into their academic communities

The findings revealed that thesis advisors, peers, and reviewers played important roles in the participants' language socialization process. A central component concerned the invaluable role of feedback in enhancing the quality of students' texts. Respondents emphasized that feedback from various sources, especially from their supervisors, played an instrumental role in their development as academic writers.

For instance, P01 shared how their thesis advisor's focus on the flow of ideas scaffolded their writing ability: 'My supervisor also offered me a bit of training and

feedback whenever I wrote, she would review everything very thoroughly, like very care-fully and offer me suggestions on how to improve the text. Whenever there was a kind of lack of connection between ideas when I had two ideas that were kind of loose, not tran-sitioning very well, she would point that out and help me improve.'

A slightly different feedback approach outlined by P08 underscored the indispensable role of their thesis advisor in revising their academic papers, 'Well, my first experience was … It wasn't like, that much enough to pursue the PhD education, especially when you needed to write articles or book reviews. Most of the time, my supervisor corrects the papers.'

Beyond feedback from supervisors, students also acknowledged the significance of external feedback sources, such as proofreaders and journal reviewers. As P02 noted, 'I got feedback from the proofreaders; so, I learned mistakes in my writing, and I tried to fix them. Reviewers from the journals also gave me feedback, and it helped me improve my writing skills.'

Moreover, students actively sought assistance from experienced PhD students, aligning with Duff's (2010) claim that language development occurs through social interaction within a discourse community. This interaction fostered learning and growth, as expressed by P03: 'I had other PhD students, friends who were older than me and more experienced. I asked for help from them.' P10 also highlighted the importance of learning from experi-ences and seeking feedback from others: 'I tried to fill my knowledge gap with insights from my previous experiences and feedback from commentators or reviewers' (P10).

Therefore, thesis advisors, peers, and reviewers all played pivotal roles in participants' language socialization into their academic communities by helping them with critical feedback. Asking for and getting feedback from various stakeholders emerged as helpful ways of developing participants' ERPP and facilitating their integration into their academic communities.

4.3. Students' successful integration into their academic communities

Most respondents attributed their successful integration into the academic community to three themes: 'reading to write', 'writing instruction', and 'the need to keep writing'. These themes, as expressed by the participants, played vital roles in their doctoral journey.

4.3.1. Reading to write

All participants emphasized the pivotal role of reading as a foundational strategy to address the challenges in academic writing. They recognized that reading not only expanded their domain-specific knowledge but also fine-tuned their EAW skills. It served as the primary source of developing their academic vocabulary and gaining insights into the syntactical, and rhetorical nuances of ERPP. Reading enabled them to understand how seasoned authors crafted their papers, ultimately aiding them in developing their unique academic voices. Different strategies of 'reading for writing' emerged as important ways to write better, as illustrated by the participants' experiences. Some students focused only on content: 'I read. If I do not understand an article, I look for a similar or related article and read it, and then go back to the first article' (P15). Others combined a dual focus on content and form, working top down, for example P02 and P03:

> What I did is I, I read a lot of articles from very prestigious journals. I just want to know how the best professors in the field write their research. So, I read research articles related to my field, mostly in Q1 or D1 journals, I download them, I read … . How they make an introduction, how they make, like … method section and result. So, I not only read what their research is, what the results of the research are, but I also try to learn how they write in a paragraph … in a sentence. That's what I did. (P02)

> Sometimes, … copied their structure, how or in which logic they write a paper, and slowly I developed my own logic and structure for academic papers. (P03)

Other students gave accounts of small steps they applied to improve their EAW, as they used a bottom-up approach.

> For example, if I like one sentence in one of the articles, I underline the sentence and I copy it into my document, and then I try to relate it to my research topic and write my sentence. In this way, I practice improving my academic writing. (P06)

4.3.2. Writing instruction

Formal academic writing instruction was mentioned in two ways: either as an opportunity students took and benefited from, or as something they wished they had had access to. P01, who seemed to be a successful student, mentioned enrolling in multiple academic writing courses. They provided comprehensive training in various aspects of academic writing, from abstract composition to paper organization. As P01 explained,

> At the university I studied, I had subjects that were connected to academic writing. I took two or three academic writing courses that helped me understand how to write an abstract, craft an introduction, structure a paper, and establish connections between ideas.

While formal instruction played an essential role in this respondent's EAW development, most students had no access to such courses and relied on alternative resources to navigate academic writing challenges. As P09, for instance, explained, 'From the doctoral courses I joined, … uhm … we didn't have any subject that teaches how to write academic writing. So, I just wrote everything from my own skill and also searched from the internet … not much experience in the beginning.' In P15's case, they received writing instruction; however, it did not meet their needs: 'more structured training' was necessary.

4.3.3. The need to keep writing

The participants consistently stressed the importance of continuous writing practice in developing their EAW skills. They emphasized that regardless of their current writing ability, consistent practice was the most effective way of improvement. For example, P01 adopted a strategy of continuous writing and editing, following models of publications:

> The strategy was writing and editing my content, because the first draft was always very poor. And then, I would like to start to compare that with what other people had written, especially the authors that I was reading, and I would try to edit it to the best of my capacity to make it as close as possible to the style of the language that other people were using.

The students' reflections underscore the notion that persistent, conscious, and focused practice and self-improvement are integral to development. As P02 put it,

I just try to write it down my own manuscript, my own proposal. And the first time when I finished one manuscript is not that good as now. But, over time, I, in the four-year experiences writing. … you know, like the accumulation of experiences. … . It helps me to improve my writing skills.

This commitment to continuous writing practice and the conscious effort to align their writing style with the texts of established authors highlighted the proactive approach these students took to improving their EAW skills.

In summary, participants managed to socialize into their academic community by using three conscious strategies: they read both extensively and intensively to improve their writing, took opportunities to participate in writing instruction if available, and they realized that more writing was an essential part of their journey toward publishing. These strategies indicating self-efficacy played critical roles in their academic integration.

4.4. Strategies students employed to overcome challenges

4.4.1. Overcoming writers' block

Respondents mentioned a variety of strategies they used to cope with challenges they encountered. Two main themes emerged from their accounts: how they managed to overcome writer's blocks and used a step-by-step approach to academic writing.

When students felt at a loss, they used specific strategies to rekindle their writing inspiration and to cope with anxiety. P02, for instance, believed in the power of mental detachment to regain self-confidence: 'I will put everything behind till my mind gets clear and is able to do the academic writing.' This strategy underscores the significance of taking a break so that one can achieve excellence later.

In contrast, P05 described a unique writing strategy: 'try to write something that you have just in your head. Just to take it out what you have in your head.' This way of keeping busy writing without pressure, no matter how fragmented, is a means to free themselves from mental stagnation. P05 further elaborated on the incremental benefits of this self-encouraging strategy: 'if I do at least one paragraph, still, it's much better than zero. And it also helps. One by one, it's already two by two days. So, okay. And it gives kind of like, it helps to keep going.'

P11 applied a different strategy by using physical disconnection as a remedy for their writer's block: 'Just move away. Do whatever, something else. And, once you feel that you want to and you can write, you just go back to writing.' Stepping away from the daunting writing task and engaging in alternative activities allowed them to reset their mental state, paving the way for a return to productive writing.

P15 highlighted the importance of recognizing one's mental roadblocks. Their strategy involved temporarily shelving the writing task when confronted with a creative impasse: 'Well, I'll get to a point where I am stuck. So, when that happens, I just put it down. Forget about it for some time and go back. Then I'll be able to move on.' This strategy also emphasized the value of taking a break and returning later with a fresh mind.

P16 took a holistic approach to combatting writer's blocks, acknowledging the intricate link between mental and physical well-being. They emphasized self-care as a crucial aspect of their strategy:

> Well, I am a person. If I feel tired, … I stop. I give myself time. I try to take care of myself. I cook healthy food. Work out, do sport, go with friends outside, it helps me when I feel I am down.

Engaging in activities that nurtured both body and mind, and sharing with others, offered opportunities for being part of the community.

These students' diverse approaches to overcoming writer's blocks underscore the dynamic nature of creativity, productivity, and general wellbeing. Their strategies to avoid a potential productivity paradox highlight the importance of adaptability and self-awareness in navigating the challenges of academic writing. Whether through mental detachment, active writing, physical disconnection, temporary shelving, or holistic self-care, these students exemplified the versatility required to conquer writer's blocks and benefit from sharing with peers.

4.4.2. Step-by-step approach

Another emerging theme in the students' lived experiences is the idea of progressing through small steps. P01 emphasized the importance of breaking down the daunting task of writing a thesis into manageable steps:

> I try to focus on minor tasks … for instance, if we look at the PhD monograph, it can be a little bit daunting and overwhelming. So, I try to go for small steps. I think that's one of the ways. And then when you complete a small step, you can move to the next one and you can see that you are actually progressing, even if it's a little bit far to reach the final goal, but you are progressing.

Such strategies allow students to create a schedule of doable tasks to maintain a sense of accomplishment and steady progress.

P05 highlighted the significance of focusing one's attention on one thing at a time:

> Connect your academic writing directly with your research topic. So, later on, at the end of your PhD, you will have a lot of drafts, some written materials which you actually can use for your dissertation. This is how we are going, article by article, that's already like half of your dissertation, which results you can use and that's how you can build your work.

This approach involved generating drafts on their research topic systematically, ultimately leading to their goal.

These insights highlight the effectiveness of approaching academic writing through incremental steps. By dividing the writing process into manageable components and working on them consistently, students maintain a sense of progress. Whether through structured schedules or a focus on research topics, these project-oriented strategies offer valuable guidance for navigating the challenges of EAW and making steady advancements toward students' goals.

5. Discussion

Writing at the doctoral level involves engaging with complex disciplinary discourses, methodologies, and research practices, as students have to participate in discussions, engage with community members, and develop a deep understanding of the norms and values of their academic disciplines (Hyland, 2004, 2009; Johns & Swales, 2002; Swales, 2004, 2011). Language socialization theory provides a comprehensive lens

allowing us to interpret the experiences of NNES student-scholars during their initial integration into their respective academic communities (Duff, 2007, 2010). LST explains how newcomers to a discourse community learn the necessary language and literacy practices and develop the competence required to participate effectively within that community. In the context of academic writing, this involves understanding and adapting the linguistic and rhetorical conventions of the academic community, ultimately facilitating successful integration (Duff, 2003, 2007, 2017; Kim, 2015, 2018).

The findings show the language socialization processes that interviewees experienced as they coped with the challenges of ERPP in their program, as evidenced in previous studies (Anderson, 2021; Bankier, 2022; Duff, 2017; Duff & Anderson, 2015; Kim, 2015). These experiences revealed a marked discrepancy between initial expectations and the practical challenges posed by EAW in line with the literature (Bankier, 2022; Duff et al., 2019; Giridharan & Robson, 2011; Kim & Duff, 2012; Sterponi, 2012). The students' narratives echoed the 'misalignment' between their initial practices and their communities' expectations. For instance, P01's initial struggle to translate research into academic English and P05's and P06's doubts about their preparedness for the rigors of a doctoral program underscore the initial gaps between their existing language practices and the expected academic writing norms in their respective communities.

Thesis advisors, peers, and reviewers, as shown in the findings, played pivotal roles in the participans' language socialization. They served as interlocutors who provided guidance and constructive feedback (Duff & Anderson, 2015; Sung, 2023). Their feedback, often beyond language correction, included guidance on the development of ideas and coherence in texts, in line with Duff's (2010) argument that interlocutors play a crucial role in language socialization by providing opportunities for novices to engage with more proficient members of the community. Feedback from peers and tutors was central to developing participants' EAW competence. All stakeholders actively engaged in shaping the students' texts by reviewing and offering feedback and encouragement (Calle-Arango & Ávila Reyes, 2023). External sources (proofreaders and journal reviewers) served as additional interlocutors, providing valuable input for enhancing EAW.

Students actively sought assistance and feedback from peers and experienced PhD students, documenting how language socialization occurs through social interaction within a discourse community (Duff, 2010; Farnese et al., 2022; Friedman, 2023; Khalid et al., 2023; Kobayashi et al., 2017). Such interactions fostered learning and growth, illustrating the social nature of language development (Duff & Anderson, 2015; Soler & Flor, 2008).

Three key themes emerged as to what participants attributed to their successful integration into their academic community: the need (1) to read more to write better, (2) for formal writing instruction, and (3) continuous writing practice. These are in line with Duff's (2010) principles stressing the role of mentorship and guidance within the community and the emphasis on language and literacy practices as integral components of socialization (Duff & Anderson, 2015).

Formal writing instruction, although not always available, played a significant role for some participants. LST underscores the importance of instruction as a means of transmitting community norms and expectations. Formal instruction in EAW equips students with the necessary competences to engage effectively within their academic communities and is part of guided participation and structured learning within the community (Duff, 2010, 2017; Zappa-Hollman & Duff, 2015).

The practice effect, as stressed by the students, is also aligned with Duff's (2010) ideas concerning ongoing language socialization, as it is a continuous and evolving process. Students' commitment to continuous writing practice and the conscious effort to align their writing style with established rules in their respective fields emphasize the proactive approach they took to integrate into their academic community.

In addition to these themes, strategies to overcome writer's blocks are also part of language socialization. They reflect the adaptability and self-awareness that language learners need to navigate to participate in their discourse community effectively. They highlighted and exemplified the importance of agency and self-regulation in language socialization (Duff & Doherty, 2015).

The step-by-step approach to breaking down the complex task of writing into manageable portions is also reflective of language socialization. It underscores the role of scaffolded learning in a community (Duff, 2010; Farnese et al., 2022; Friedman, 2023; Khalid et al., 2023; Kobayashi et al., 2017): students built their skills and knowledge over time, as they moved with others' help tuned to their needs towards the ultimate goal of becoming proficient academic writers.

In summary, the findings framed along language socialization theory provide a rich understanding of the 18 participants' lived experiences as they worked towards integration into their respective academic communities. LST offered a meaningful framework for comprehending the emerging themes on how they developed the necessary practices required for ERPP as they became bona fide members of their academic communities. These findings contribute not only to the field of language socialization, but they also provide practical insights for educators and institutions aiming to support doctoral students on their academic writing journey.

6. Conclusion

Findings of this study revealed the challenges students faced at the beginning of their doctoral journey, and how they impacted their academic abilities, strategies, and self-concept as scholars. We discussed the roles of thesis advisors, peers, and reviewers in facilitating language socialization, as they provided feedback and mentorship in line with Duff's (2007) ideas. We identified three key themes to which participants attributed their successful integration: 'reading to write', 'writing instruction', and 'the need to keep writing'. These strategies mirror Duff's emphasis on mentorship, language practices, and ongoing socialization. Furthermore, the range of strategies participants applied to overcome writer's blocks and the step-by-step approach highlighted the adaptability, self-awareness, and autonomy crucial for navigating academic discourse communities. Findings deepened our understanding of international students' lived experiences while offering practical insights for institutions to better support students and recognize their active role in shaping their path to becoming proficient academic writers and community members.

7. Implications

The findings hold several implications for educational institutions and faculty involved in supporting doctoral students in their academic integration. First, acknowledging the

challenges during the initial phase, stakeholders offer orientation programs and resources dedicated to EAW. This could include tailored writing courses, workshops, or resources aimed at addressing language and disciplinary challenges. Second, institutions should facilitate language socialization by encouraging regular peer interactions, creating mentorship programs, and promoting a supportive academic community. Third, this study highlights the vital role of thesis advisors, peers, and reviewers in shaping students' language socialization. Faculty members should be encouraged to offer detailed feedback on students' texts to help them bridge the gap between their current EAW abilities and expectations. Fourth, mentorship programs or peer-assisted learning initiatives could facilitate peer-to-peer support in discourse communities. Fifth, for students themselves, this study underscores the importance of proactive engagement in language socialization. Finally, most probably, many of the findings are relevant to native speakers of English and challenges are not narrowly focused on English, but additional issues related to EAW, as one of our reviewers kindly pointed out.

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