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Chasing butterflies? Experiences and challenges of being and becoming a TELL researcher against the digital applied linguistic context

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Abstract

To burgeon in academia, early-career researchers face many challenges related to teaching, research, and career development. This paper seeks to explore these challenges through the lens of Bronfenbrenner's (1979) ecological systems theory, highlighting the lived experiences of two TELL (Technology-enhanced language learning) researchers. By revisiting Bourdieu's (1986) theory of capital, we analyzed how various forms of capital emerge from their experiences. We also referred to Davin and Norton's (2015) model of investment for understanding TELL identities and investment. The findings reveal significant insights into the broader social issue of inequity, offering valuable perspectives on how these challenges can impact academic progression and success as a "TELLer." Through this exploration, we aim to shed light on the systemic barriers early-career TELL researchers face and suggest pathways for addressing these inequalities within the TELL academic landscape.

Keywords: early-career researchers; challenges; ecosystem; capital; inequity

Mobile learning was so ten years ago... Now is AI, AR, VR, and MR... However, what is the next best thing?

Introduction

When we first embarked on our academic journeys as researchers in technology-enhanced language learning (TELL), we were filled with promise and enthusiasm. However, we now face significant challenges, particularly the necessity to familiarize ourselves with emerging technologies like generative artificial intelligence and the Metaverse technology, especially with little prior technical knowledge in this area. The rapid advancements in technology have reshaped communication and enabled new labor forms, while neoliberal policies of privatization and deregulation have pushed individuals into more isolated spaces (Neubauer, 2011). As the logic of a free-market obscures mechanisms of power, individualization of labor and precarious employment has intensified exploitation and inequity (Crompton, 2008). Technology connects us, yet simultaneously separates us due to unequal power and resources. As we navigate this evolving landscape, we must redefine our professional identities, confronting feelings of insecurity and self-doubt as we adapt to new technologies and pedagogical approaches in a field we once passionately pursued.

The rapid pace of innovation and development within our field has profound implications for all stakeholders involved, including students, researchers, practitioners, and educators. As new technologies emerge, they not only reshape our research methodologies but also transform the ways in which language is taught and learned. Furthermore, the theoretical frameworks that underpin our work are continuously evolving, necessitating our adaptation and responsiveness to these changes. This environment of constant evolution not only requires us to remain agile but also plays a crucial role in our identity development and construction as a TELL researcher and educator. As we seek out opportunities for professional development and collaboration, we actively engage in community practices that shape our academic identities (Teng, 2020, 2024). Embracing new tools and theories allows us to redefine our roles and expand our competencies, fostering a sense of belonging within the evolving landscape of our field. This ongoing adaptation not only enhances our understanding but also influences how we perceive ourselves and our contributions to the academic community, ultimately facilitating a dynamic and multifaceted identity that reflects our growth and responsiveness to change (Chen, 2024).

In respond to the need of digital applied linguistics, we aim to outline various challenges that early-year researchers in TELL are going through. It is our hope to tease out what we have experienced during the last years of teaching, publishing, journal editing, manuscript reviewing, and conference organizing as well as what we will have to encounter and overcome in the future. Apart from our personal experiences, we discuss the issues of concern with other colleagues and journal editors who generously shared their stories and thoughts. To further systematically reflect on the experiences and challenges of being early-career researchers, we follow De Costa's (2018) call for an ecological examination of "the lived realities of individuals to come up with a course of action that can make real differences in people's lives" (p. 303). We hence draw upon Bronfenbrenner's (1979) ecosystem model by offering a retrospection of our lived experiences from the microsystems, mesosystems, and exosystems levels, which enables us to examine our underlying beliefs, past and current experiences, and broader sociocultural influences. Theoretically, we adopt Bourdieu's (1986) three forms of capital to analyze these experiences and challenges, striving to offer some theoretical insights into this issue. We also analyzed Davin and Norton's (2015) model of investment to understand identities and investment as a TELL researcher. In the end, the paper appeals for further discussion and collaboration to create a more equal, inclusive, and supportive teaching and research community for digital applied linguistics.

Understanding Digital Applied Linguistics

The proliferation of digital technologies has expanded and changed how we read, write, and communicate across time and space. Digital tools and media allow language learners to collaboratively generate content, participate in online discussions, and use various video and text message platforms. As a result, digital technologies have increased the availability of digital literacies, accelerated digital literacy engagement, and added complexity to meaning-making in digital environments (Mills, 2010). Digital literacies encompass the skills and competencies necessary for effectively navigating today's fragmented and complex information landscape (Bawden, 2008). In the era of computer assisted language learning, Hafner et al. (2015) outlined five dimensions of digital literacies, including Doing, Meaning, Relating, Thinking, and Being. Now with the wide adoption of emerging technologies such as artificial intelligence, Pegrum et al. (2022) proposed that new types of literacies are necessary, such as communicating (e.g., multimodal literacy), informing (e.g., information literacy), networking (e.g., participatory literacy), and (re)designing (e.g., remix literacy). Also, with the popularization of immersive technologies, educators have started to explore the immersive literacy especially from the perspective of language education (e.g., Wu & Lee, in press). Based on a perusal of literature understanding, we propose a conceptualization of digital applied linguistics from the following key points:

- Expanding and changing communication practices: Digital technologies have enabled language learners to engage in new modes of reading, writing, and communicating across time and space.
- Increased availability of digital literacies: The proliferation of digital technologies has expanded the kinds of digital literacies available and accessible to language learners.
- Accelerated digital literacy engagement: The increased availability of digital literacies has led to faster digital literacy engagement and integration into language learning.
- Complexity and multiplicity of meaning-making: The use of digital technologies in language learning has added complexity and multiplicity to the processes of meaning-making within digital environments.

Hence, digital applied linguistics can be defined as the study and application of linguistic principles and practices in the context of digital technologies and environments. This field explores how digital tools and platforms transform communication practices, enabling language learners to engage in innovative reading, writing, and interaction modes across diverse temporal and spatial contexts. It emphasizes collaborative and participatory learning, where language users can co-create content, engage in online discussions, and utilize various multimedia communication channels. Furthermore, digital applied linguistics addresses the increasing availability of digital literacies, which expands access to diverse linguistic resources and skills essential for effective communication in a digital age. The rapid evolution of these literacies accelerates their integration into language learning, fostering deeper engagement, and facilitating the development of complex meaning-making processes.

Understanding Identity

The rapid advancements in technology have profoundly reshaped the landscape of labor and productivity. Alongside the neoliberal policies of privatization and deregulation, this shifting

work environment has ushered individuals into more private and isolated spaces. As the logic of a free market remains the driving force behind corporate decisions, the mechanisms of power have become increasingly obscured from view. The individualization of labor and the proliferation of precarious employment have exacerbated exploitation and inequity (Crompton, 2008). The recent release of ChatGPT on November 30, 2022, has starkly demonstrated the polarization inherent in this reality. These technological and sociopolitical transformations have led to significant changes in the valuing of languages, consequently reshaping ideologies that not only influence policy but also inform the dynamics of identity construction for teachers and researchers (Teng, 2023).

The theoretical framework established by Norton (2013) conceptualizes identity as complex, multifaceted, and in a constant state of flux, shaped by various contexts over time. Identity emerges from a dynamic interplay of habitus and desire, along with conflicting ideologies and aspirational identities. Individuals navigate their identities within different environments, influenced by diverse ideological frameworks and varying degrees of capital. This positioning reflects an individual's self-perception and involves awareness of others' positions, creating a relational context. The connections formed—whether through attraction, aversion, or social ties—are deeply rooted in these interactions and serve as the foundation for lasting relationships and alliances, as articulated by Bourdieu (1987).

In this context, identity encompasses individuals' perceptions of “who we are” (Kanno, 2003, p. 3) and “who others are” (Jenkins, 1996, p. 5), as well as the reciprocal understanding that others have of themselves and us (Teng & Wang, 2020). Socially, identity functions as a category that dictates inclusion or exclusion based on adherence to specific norms or labels assigned by others (Stewart, 2010). On a personal level, identity encompasses the attributes that individuals take pride in, which differentiate them from others (Teng et al., 2024). Identity is shaped through individual agency within specific social, economic, political, and cultural environments (Teng, 2019), making it inherently fluid, complex, and a site of ongoing negotiation (Norton, 2000, 2013). According to identity theory, individuals' self-concept can shift based on their perceptions of group affiliations (Burke & Stets, 2009). With technological advancements, individuals often find themselves navigating multiple identities, where changes in identity are influenced by the surrounding social context (Frey & Tropp, 2006).

Bronfenbrenner's (1979) Ecosystem Model

Bronfenbrenner's (1979) ecological systems theory is a comprehensive framework that describes the multiple levels of influence on an individual's development. In education, the microsystem is the most immediate environment where a student directly interacts with various elements. This includes the classroom, with the teacher being a crucial figure. Specifically, teachers' teaching styles, instructional materials, and feedback mechanisms could shape the student's learning experience (Awidi & Paynter, 2019; Felder & Henriques, 1995). Peers also play a significant role in the microsystem. Interactions with peers can influence students' social skills, self-esteem, and academic performance (Wentzel & Muenks, 2016). Positive peer relationships could encourage collaborative learning and a sense of belonging, while negative interactions may lead to stress and reduced academic achievement (Van Ryzin & Roseth, 2018; Wentzel & Watkins, 2002). The family environment is another crucial aspect of the microsystem. Parental support, educational expectations, and the home learning environment could also profoundly impact a student's educational progress (Yamamoto & Holloway, 2010).

The mesosystem focuses on the interactions between different microsystems. This could be the connection between home and school. For example, when parents are involved in school activities and communicate regularly with teachers, it creates a more cohesive support system

for students. This interaction can help address students' issues or challenges in different learning environments (Leenders et al., 2019). Besides, the relationship between schools' extracurricular activities and the academic curriculum is also part of the mesosystem. For instance, if extracurricular activities are designed to complement and reinforce academic learning, they can enhance the overall educational experience (Buckley & Lee, 2021).

The exosystem comprises external environments that indirectly affect the individual. In education, government policies and funding decisions are significant exosystem factors. Adequate funding for schools can ensure the availability of quality resources, such as textbooks, technology, and well-trained teachers (Baker, 2021). Government policies on curriculum standards and assessment methods could also shape the educational landscape. For example, the University of Florida has integrated AI across the curriculum and developed opportunities for student engagement in AI-assisted learning contexts, making AI education a cornerstone for all university students (Southworth et al., 2023). Apart from that, the local community also plays a role in the exosystem. Community resources such as libraries, museums, and after-school programs could provide additional educational opportunities for students. A community that supports education may offer scholarships, tutoring programs, or volunteer opportunities that enrich students' learning experiences (Olson et al., 2021).

Bourdieu's (1986) Three Forms of Capital

Bourdieu's (1986) three forms of capital are essential concepts in understanding educational opportunities and outcomes. Economic capital refers to the financial resources available to individuals or institutions. For example, families with higher economic capital can afford to send their children to better schools, provide additional educational resources such as tutoring or private lessons, and support their children's extracurricular activities (Lynch & Moran, 2006). At the institutional level, schools with more economic capital can invest in better facilities, updated technology, and teacher professional development (Martorell et al., 2016), which could enhance the quality of education provided and attract more students.

The embodied state of cultural capital involves the knowledge, skills, and values that individuals acquire through socialization and education. This capital could include students' language proficiency, cultural awareness, and critical thinking skills. The objectified state of cultural capital refers to the material objects and resources representing cultural knowledge, including books, artwork, and educational tools. The institutionalized state of cultural capital relates to academic qualifications and credentials. Students who graduate from prestigious institutions or hold advanced degrees are often perceived as having higher cultural capital, which could contribute to better job opportunities and further educational pursuits (Gale & Parker, 2017).

Social capital emphasizes the relationships and networks that individuals have. In education, students who have strong social capital may have more opportunities for collaboration, mentorship, and support. Teachers also rely on social capital. Teachers with a wide network of professional colleagues can exchange teaching ideas, access resources, and stay updated on the latest educational trends (Baker-Doyle, 2011). At the institutional level, schools with good relationships with other schools, communities, organizations, and businesses can create more opportunities for students' development (Honig et al., 2001).

Davin and Norton's (2015) Model of Investment

Davin and Norton (2015) introduced a model of investment that seeks to revitalize the transformative potential of foundational poststructuralist theories (Kramsch, 2013). This model aims to uncover aspects of power dynamics that have become increasingly obscured in

contemporary discourse. To achieve this, their approach emphasizes the necessity of not only honing in on the micro-level power dynamics present in specific communicative interactions but also broadening our analytical focus to include the systemic patterns of control that these interactions symbolize.

By adopting this dual perspective, we can establish connections between the situated contexts of individual events and the recursive processes that shape communicative practices over time. This lens allows us to explore how discrete interactions evolve into broader behavior and communication patterns within various social settings. We reveal critical inquiry spaces that challenge existing assumptions and practices by illuminating the constructed nature of what is deemed normative in these contexts.

We argue that key concepts essential for this exploration, alongside identity, include ideology and capital. Despite being a highly contested term in recent scholarly debates, ideology provides a vital framework for examining how power is manifested materially in various environments, including classrooms, workplaces, and communities. A close interrogation of ideology allows us to analyze the positioning of interlocutors and the structuring of habitus—essentially how individuals are shaped by and contribute to their social contexts. This examination reveals not only the overt power structures but also the subtle ways in which ideology influences behavior and interaction.

In contrast, a more fluid conception of capital recognizes that its value is not static but shifts across different contexts and circumstances. This understanding is crucial for comprehending how learners navigate power relations in their increasingly mobile lives. For instance, the capital that an individual possesses—whether social, cultural, or economic—can significantly influence their opportunities and experiences in diverse settings. As learners move between environments, they may gain or lose power based on how their capital is perceived and valued in each context.

Ultimately, the interplay between ideology, capital, and identity within this model of investment provides a comprehensive framework for understanding the complexities of power dynamics

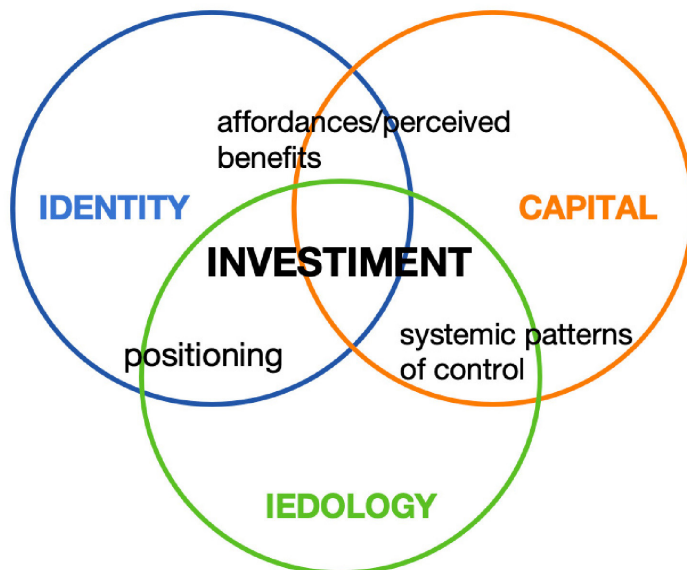


Figure 1 Davin and Norton (2015) identity and investment model.

in communication. By examining how these constructs interact, we can better understand the nuances of individual agency and the systemic factors that shape communicative practices. This holistic approach not only enhances our theoretical understanding but also has practical implications for educators, policymakers, and researchers seeking to foster more equitable and inclusive environments in which diverse voices and experiences can thrive.

A Reflection of Our Lived Challenges and Experiences from Bronfenbrenner's (1979) Ecosystem Model

Table 1 summarizes the challenges we experienced and observed in our short years of being TELLers. In Microsystems, four challenges from teachers' and PhD students' perspectives are noted. From the teacher's perspective, we found understanding students' various attitudes toward technology use difficult since we taught large classes. From the doctoral students' standpoint, the current demand for publications and future job requirements have posed significant challenges for TELLers and all researchers. Among the others, publishing in English has been argued as a thorny task for EFL authors (research students and supervisors) across different disciplines. This issue is silent in humanities and social sciences (Flowerdew & Li, 2009) and STEM education (Li et al., 2020). According to Li (2016), who reported an interesting case study of a biochemistry professor and his doctoral students in a prestigious Chinese university, he and his students encountered language difficulties in publishing papers in SCI journals. Little language support was offered because it was unclear who (e.g., subject or language teachers) would be responsible for, and able to, provide such help. Meanwhile, partly because of their different national and writing cultures (Wu 2018), anti-plagiarism seems to be another cultural obstacle for ESL/EFL authors from non-Anglophone regions. Teng (2020) showcased the challenges in being and becoming a researcher and a teacher educator for a doctoral student in Hong Kong. Challenges included negotiation of competence, identities, and power relations to become a legitimate old-timer in an academic community. All in all, without enough and proper research and language training, publishing, especially in top-tier journals, does not seem to be easy (Challenge 13).

In Mesosystems, we specifically focus on four challenges within the university context. Several questions are enlightening:

1. Does the school culture support our research interests?
2. Has the school provided enough pedagogical and technical support for teachers at different age groups and across the disciplines to use the 'normalized'¹ technologies?
3. Have researchers and teachers had sufficient financial (e.g., purchasing new software) and research (e.g., accessing academic journals and books) support to improve their teaching and research abilities?
4. How does the promotion policy affect our teaching and the choice of publication venues for a manuscript?

We take the teacher-education university in China where the lead author initially worked as an example. It is a university with traditional administrative culture, and the use of technology has usually been supported as teaching projects rather than research projects. The Foreign Languages School has a well-equipped teaching lab, but unfortunately, not many teachers

¹ Normalization means the use of a technology becomes unmarked and has been truly integrated into learning, just like water to human beings.

understand the operation of technological tools, as no training has been provided. As is often the case, the lab is used as a traditional classroom, with the only provision being *PowerPoint*. The same issue was noticed at City University of Hong Kong, where some teachers have little knowledge of how to use *Canvas*, so it primarily functions as a cloud for storing course materials. In terms of the promotion policy, partly because not many teachers have published in international journals, this teaching-education university did not have clear guidelines for recognizing English publications. As a teacher in this university kindly shared, she has to give up her promotion to full professorship, as her English publications were not counted towards the research achievements.

In Exosystems, seven challenges relating to government, business, and academia are identified. Firstly, Chinese universities have taken corresponding actions in recruiting, rewarding, and sometimes punishing researchers to answer the government’s call to build world-class universities (De Costa 2018). Secondly, given the gap between the industry and academia, the TELLers who have access to and the ability to operate the latest technologies may outweigh their counterparts who face the challenges of the digital divide. Thirdly, as we have discussed above, TELLers, especially those who are practitioners without a research degree, may be at a disadvantage when asked for high-quality publications. This issue also relates to researchers’ ability to recognize predatory journals. Besides, we also hold some hypotheses, such as the extent to which the Sino-US political and economic tensions may influence academia, which could be further examined in the future.

Regarding Table 1, it is essential to note that although some listed challenges are more applicable to TELL (e.g., the rapid innovation of technology compared with Shakespeare studies) and/or our specific teaching and researching context (e.g., the publication environment in China), we assume that there are still many challenges that could resonate with people in other disciplines (e.g., Challenges 1, 2, 3, 5, 7, 12, 15). We will further analyze these challenges in the next section to contribute more generalizable insights to the entire education field.

Table 1 Summary of challenges and experiences

Systems	Challenges	Examples
Microsystems	Learners	1. Students’ perceptions and attitudes regarding the affordances and constraints of technology in learning have a huge impact on a teacher’s pedagogical design.
	PhD students	2. (1) English is still the dominant language in today’s publishing industry, but it remains an obstacle for many ESL/EFL researchers. (2) As we focus our attention on reading and writing papers in English, it is an intra-cultural shock and challenge when we come across Chinese research papers because of their different writing styles. 3. Building academic connections is of prime importance.
		(1) From our teaching experiences, some students were much more enthusiastic about using technology in their learning than others. This individual difference sometimes stopped us from integrating technological elements into the course design. (1) An SSCI journal editor candidly expressed that the manuscripts from some Asian contributors are likely to be desk-rejected for their poor use of English. Also, publishing in English is often a cultural practice (e.g., plagiarism) that differs from the traditions in other countries. (2) The lead author has difficulties in writing academically in Chinese when composing a Chinese paper. (1) Without enough financial support, it is hard for researchers to attend overseas conferences. (2) Privileged universities and/or departments have enough funding to invite experts to deliver talks.

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Systems	Challenges	Examples
Mesosystems	University	4. As Chinese universities are adopting the three-year contract policy with strict criteria in publication, novice teachers must focus exclusively on research and publishing papers. TELL is practice-oriented and calls for attention/efforts to put theories into practice. Besides, ethnographic studies usually take a long time to collect data.
		5. Despite advanced technologies, financial and pedagogical support to teachers and students in effectively utilizing technologies has always been an issue. It is unclear as to what extent teachers have sufficiently exploited advanced technologies like generative AI.
		6. Top-down administrative culture influences teachers' research paths and teaching practices. The lead author was supportive of integrating mobile technologies and emerging technologies (e.g., AR, VR, AI) into his teaching, but the school he worked for decided to ban the use of smartphones in classrooms.
		7. Different research teams, disciplines, and schools have uneven access to financial and research resources access cutting-edge technologies. (1) Compared with well-resourced universities, some universities are not funded sufficiently to purchase new technological tools. Even in the two so-called privileged universities the authors studied before, less financial support is given to the department compared with what is given to STEM disciplines. (2) Many researchers also do not have the privilege of reading the state-of-the-art research articles. Although our universities strive to provide us with the latest research papers (e.g., <i>Teaching in Higher Education</i>), some journals are still not accessible, particularly in some marginalized disciplines.
Exosystems	Government	8. Most of the Chinese universities do not recognize Scopus indexing as a well-respected indexing system. The chief editor of a Scopus journal invited presenters in a major TELL conference to publish a special issue, but the editor got some negative replies because not many Chinese universities treat Scopus publications seriously.
		9. China aims to develop world-class universities within the next decades and has allocated a large sum of financial capital to universities. One of the important indicators of top universities is the number of SCI and SSCI publications. The lead author's previous workplace offers a reward of USD 1,400 to 2,100 for publishing one paper in an SSCI journal.
	Business	10. The Sino-US economic tensions may have negative impacts on the financial and research support for higher education. We assume it might become a challenge in visa application and online communications for researchers. 11. The products developed and launched by EdTech companies usually adopt the most advanced technologies (such as AI, AR, VR, etc.). However, there is a disparity between the educational objectives and the functions of these EdTech products. Some educational EdTech companies develop language learning apps. These apps may utilize advanced AI technology to provide personalized language learning plans. However, the educational objective might be to help users master a language comprehensively, including speaking, listening, reading, and writing. But the app's function might be more focused on vocabulary learning and grammar exercises, leaving a gap between the overall educational objective and the specific functions provided by the product.

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Systems	Challenges	Examples
Academia	12. Researchers' ability to distinguish predatory journals and conferences needs to be developed.	We receive emails from predatory journals on a weekly basis. Sometimes it is not easy to identify a predatory journal.
	13. Many of the TELLers who are practitioners without a doctoral degree may encounter problems in disseminating their works in academic journals.	The lead author is co-editing a TELL book of Asian case studies, but in his process of locating TELLers, it is sometimes difficult to find suitable researchers from some Asian countries with strong research and academic writing abilities.
	14. Studies of new technologies are easier to get published.	Papers regarding new technologies such as AI and VR are much easier to get into SSCI journals.
	15. Do race, gender, physical appearance, nationality and sexuality matter in academia?	We question to what extent these factors play a role in our professional development. The lead author wrote a book review for <i>English Language Ideologies in Korea: Interpreting the Past and Present</i> (Cho 2017), and there is a chapter about the 'goddess of English' in South Korea.

Three Forms of Capital (Bourdieu 1986): Understanding the Experiences and Challenges Across the Three Systems

In the twenty-first century, inequity is one of the most urgent challenges we face in all walks of society (Shay 2015). It seems that inequity concerning the distribution of financial, cultural, and social resources results in these challenges. To better understand these challenges, we introduce and conceptualize capital (Bourdieu, 1986) in this section.

Capital is typically defined in the economic field and is associated with terms such as ‘monetary exchange’ and ‘economic sphere’. Pierre Bourdieu, a French social theorist, broke out of these bounds and extended this term to a broader sociocultural context. In the view of Bourdieu (1986), we adopt three capital forms (economic, cultural, and social capital; see Figure 1) to better understand the challenges, corroborate our arguments, and provide some thought-provoking insights. The three capitals are not isolated but closely related (see Figure 1). Given the intricate relationship between capitals, we strive to dig into the three capitals to crystallize the listed challenges.

Economic capital, the fundamental capital, impacts people’s possessions and the development of other capitals. For example, as Challenge 7 suggests, the financial and research resources that different research teams, disciplines, and schools occupy are largely uneven, which profoundly impacts an individual’s needs, understanding, acquisition, and use of resources (e.g., Challenges 5, 11). No matter at what levels (e.g., individual, school, regional, and national), those with better economic capital are often in a dominant role in the community. That has been described as the Matthew Effect in economics, referring to the increasing gap between the rich and the poor. One example of our challenges is that some disciplines, like the Department of English, are still under funding scarcity to encourage researchers to keep up with the rapid development of technology (Challenges 7).

Cultural capital is defined as something that people acquire to equip themselves (Bourdieu 1986). There are three forms of cultural capital: (1) the embodied state, (2) the objectified state, and (3) the institutionalized state. The embodied state links to the long-lasting dispositions of the human mind and body impacted by cultivation and education (Harrison & Waller,

2010). For instance, linguistic capital, a manifestation of the embodied state, is acquired from school education and communication. In this globalized world, English, as a lingua franca, is associated with the dominant cultural capital that can give people advantages - even priorities - in academia. As Challenge 2 explains, due to different writing styles, ESL/EFL researchers are sometimes stuck ‘in the middle’, encountering difficulties in reading and writing because of cultural shock. Linguistic capital is inherited and obtained over time and is affected by the surrounding sociocultural environment within which individuals are situated. For example, a researcher growing up in a well-educated family could be assumed to have more and better linguistic exposure.

The objectified state refers to material objects and media that connect cultural capital and the embodied form (e.g., knowledge using the most advanced technologies in EdTech companies in Challenge 11). Being featured transmissible in its materiality, cultural capital in goods (e.g., cutting-edge technologies) can be materially associated with economic capital (e.g., research funds) and symbolically related to cultural capital (e.g., university rankings). The institutionalized state particularly relates to academic qualifications that legally demonstrate the cultural competence of its holder (e.g., obtaining a research degree with qualified publishing abilities in Challenge 13). As cultural capital can be domestically transmitted (Bourdieu 1986), the cultural capital people have can contribute to their academic achievements and upward social mobility, which we define as ‘academic capital’. Challenges 12 points to the deficiency of academic capital among some researchers in discerning predatory journals and conferences.

Recently, the concept of cultural capital has been extended to include an ‘aesthetic capital’. It refers to the aesthetic and objectifying evaluations of people and the relationship between beauty and distinction (Kuiper 2015). Challenge 15 is in line with a recent doctoral study from South Korea that the new market demand drives people (especially women) to develop “an aesthetically acceptable working body” (Cho 2017, p. 166) to become more valuable and fit into and thrive within the community. This example also deals with social capital, which points to the importance of being a member.

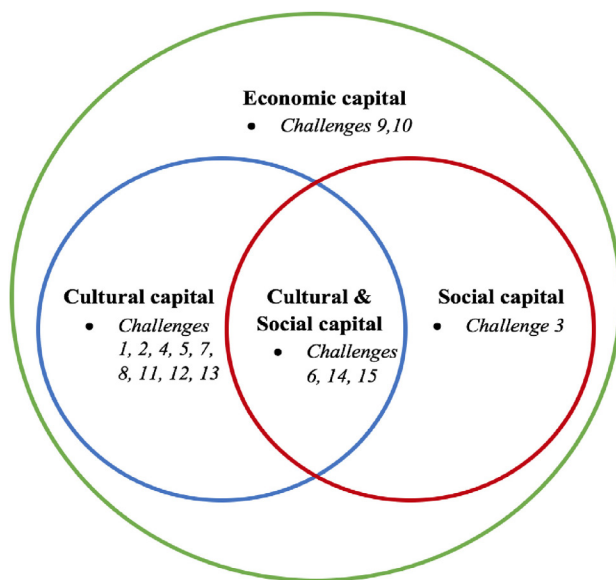


Figure 2 Taxonomy of the capitals and challenges based on Bourdieu (1986).

Social capital, emphasizing the membership in groups and the institutionalized relationship of mutual acquaintance and recognition, is maintained by material or symbolic exchange. The scale of networking connections dominates how people process social capital; it is also vital in possessing other forms of capital. For example, being a successful academic means something other than sitting in our offices and writing papers day and night. We need to extend our research networks, especially when collaborative work has become a norm. Attending conferences is one of the most common activities for each researcher, and it requires financial and time investment. Without abundant financial support, overseas conferences may not be possible for many researchers. Besides, living in metropolitan cities like London and Hong Kong probably means more chances to participate in academic events without traveling afar, in other words, saving time capital for researchers.

In brief, Bourdieu (1986) informs us that our current challenges are not simply ‘facts’. These challenges are largely attributed to the uneven distribution of economic, cultural, and social capital across different systems. Though some are invisible, these challenges intricately impact the development of a researcher, a school, and a country.

Understanding TELL Identity from Davin and Norton’s (2015) Model

In Davin and Norton’s (2015) model, identity within the context of Technology-Enhanced Language Learning (TELL) can be portrayed as a dynamic construct influenced by a confluence of personal aspirations, socio-cultural environments, and institutional frameworks. The present study underscores that the identities of TELL practitioners, or “TELLers,” are in a state of constant evolution, shaped by various forms of capital.

Economic capital is identified as a pivotal factor in the formation of TELLers’ identities. The study highlights that engaging in cutting-edge research areas such as Artificial Intelligence (AI), Virtual Reality (VR), and Augmented Reality (AR) often demands substantial financial investment. Researchers affiliated with well-funded institutions are generally better positioned to cultivate their academic identities. This is because they have access to advanced technologies, resources, and opportunities that facilitate innovative research. In contrast, we, who are from underfunded schools and universities, face significant challenges. The disparity in financial resources not only exacerbates inequalities in research opportunities but also perpetuates educational inequities among students across different institutions. These financial constraints can hinder the ability of underfunded researchers to participate in high-impact research, attend conferences, and publish in prestigious journals, further widening the gap in academic recognition and career advancement.

Cultural capital significantly influences a TELLer’s identity, particularly through academic language proficiency and familiarity with scholarly publishing. The study reveals that early-career researchers, especially those whose first language is not English, may encounter linguistic barriers that impede their ability to fully engage with the academic community. These barriers can foster feelings of inferiority and inadequacy, affecting their confidence and willingness to participate in academic discourse. The paper emphasizes that linguistic capabilities can either facilitate or hinder the development of a comprehensive TELLer identity, thereby contributing to inequities within the academic landscape. Overcoming these challenges often requires additional support, such as language training and mentorship, to ensure that non-native speakers can effectively contribute to and benefit from the global academic dialogue.

Social capital, represented by collaborative opportunities, access to resources, and mentorship, plays a crucial role in determining a TELLer’s visibility and identity in academia. The study highlights that a lack of social capital can significantly hinder TELLers in defining and asserting their identities. Conversely, supportive communities and networks provide essential platforms

for early-career researchers to foster a sense of belonging within the TELL community. These networks offer opportunities for collaboration, sharing of resources, and mentorship, which are vital for professional growth and development. The presence of a strong support system can enhance a TELLer's ability to navigate the complexities of academic life, gain recognition, and contribute meaningfully to the field.

Based on Darvin and Norton's (2015) model, the identity of TELL practitioners is understood as a multifaceted and evolving construct shaped by economic, cultural, and social capital. This model provides a comprehensive framework for exploring the dynamic nature of identity formation in TELL. It posits that identity is not static but is continuously constructed through interactions with various forms of capital. Economic capital plays a crucial role in determining a TELLer's opportunities and access to innovative research, with well-funded institutions offering greater resources for engaging in high-impact research and career advancement. This financial disparity exacerbates inequalities between institutions, affecting both researchers and the broader academic community. Cultural capital, particularly linguistic proficiency, significantly influences a TELLer's identity. Language barriers can hinder non-native English speakers from fully participating in the academic community, while proficiency and familiarity with scholarly publishing can enhance their contributions. Addressing these linguistic challenges requires targeted support to foster inclusivity and equity. Social capital, through networks and mentorship, is vital for a TELLer's visibility and identity formation. Supportive communities provide essential platforms for collaboration and professional growth, fostering a sense of belonging and enabling TELL researchers to contribute meaningfully to the field.

Coda

In this paper, we examined some of the significant challenges faced by novice researchers, recognizing that these issues merely scratch the surface of a much larger landscape. The concept of capital—encompassing economic, cultural, and social resources—plays a pivotal role in determining one's success within academia. Those who possess greater capital often find themselves better equipped to navigate the complexities of academic life, metaphorically able to “chase and catch butterflies” with relative ease. This observation underscores the urgent need for a broader discussion on academic (in)equality, particularly as we contemplate the systemic barriers that prevent many aspiring scholars from accessing the same opportunities.

Drawing on ecosystem theory, we can better understand how various elements within the academic landscape interact to shape individual experiences and identities (Teng, 2024). Ecosystem theory posits that individuals operate within a network of interconnected systems that influence their development and outcomes. In academia, this means that a novice researcher's identity is not solely a product of their personal efforts and attributes but is also significantly affected by the resources and support systems available to them—from mentorship opportunities to institutional funding and networking channels.

Moreover, the interplay between identity and capital emerges as a crucial point of discussion (Norton, 2013). Identity in academia is often tied to one's perceived value and legitimacy as a researcher, which can be heavily influenced by the amount of capital one possesses. Scholars with strong networks, financial backing, and cultural capital—such as familiarity with academic norms and practices—tend to have a competitive advantage. This creates a cycle where those with more resources continue to gain access to further opportunities, while those with less find themselves marginalized, struggling to establish their identities and contributions within the scholarly community.

Investment in professional development is essential for novice researchers, as it enhances their ability to build the necessary capital to thrive in academia. However, systemic inequalities

in access to these resources create significant barriers. For instance, early-career researchers from underrepresented backgrounds may lack financial support and the social networks that facilitate collaborations and mentorship, which are critical for career advancement.

While we have touched upon these pressing issues in this paper, it is clear that they deserve further exploration and discourse. We encourage readers to reflect on the collective responsibility of academics in addressing these challenges in the TELL community. What proactive measures can we adopt to level the playing field and create a more equitable academic environment? By engaging in this dialogue, we can work towards fostering an inclusive ecosystem that values diverse identities and investments in knowledge production. Such efforts are vital for ensuring that all scholars, regardless of their background or resources, can contribute meaningfully to the academic community, particularly within the evolving landscape of digital applied linguistics.

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