

LANGUAGE TEACHING CHALLENGES THROUGH THE LENS OF CORPUS LINGUISTICS

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Abstract: The present study explored the dominant discourses of language teaching challenges by utilizing methods associated with corpus linguistics and probed for the validity of the applied methodological design. The gleanings were obtained based on a specialized corpus (638,312 tokens) of journal articles pertinent to the designated topic sourced from leading journals in the field. By deploying keywords, collocation and n-grams analyses, substantiated by qualitative interpretation of quantitative data, the study evinced the prevalent themes related to language teaching challenges. The corpus foregrounded the challenges in the areas of teacher education and development, with a special emphasis on the professional initiation phase. Research domains addressing challenges of language learning and proficiency, language teaching methodology, professional and emotional aspects of language teaching were found to be lexically rich. Additionally, heightened research attention was documented for challenges associated with language learners, language policy and sociocultural factors, and the integration of technology in language education. In all, the applied research procedure has proven a sound methodology capable of signposting the salient themes and concepts tackled in academic publications, given the numerous parallels drawn between the results of the present and previous studies.

Keywords: challenges, language, teaching, corpus methods, themes, discourse

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The spread of lingual globalization is fast transfiguring the exigencies of language learners and teachers, posing the latter with a gamut of professional challenges. As a result, a vibrant academic discussion has ensued on multiple issues related to language teaching challenges. Due to the richness of the accumulated academic discourse over the last years, synthesizing typical themes associated with language teaching challenges has become a challenging endeavor, typically requiring theoretical research methods such as literature reviews. Therefore, to approach this task with a more cogent research design, it was predicted that corpus methods could serve such ends (Friginal & Hardy, 2015). By exploiting the potential of a computer to compile and analyze large amounts of textual data, it is possible to unravel the recurrent academic narratives tackling language teaching challenges.

This paper thus aims to analyze the themes and concepts prominently featured in the discussion of language teaching challenges in flagship journals. It also probes for the validity of corpus linguistics methods in like explorations. The analysis is based on a specialized corpus compiled for this study consisting of 638,312 tokens extracted from journal articles on the

outlined problem. The study seeks to answer the following research questions: What are the typical academic discourses addressing language teaching challenges? Can corpus methods provide a valid lens for understanding the recurring themes in the academic discourse? The paper is organized as follows: the discussion commences with locating the study in the appropriate theoretical and methodological framework. Next, the paper outlines the data collection procedure and methodology. Finally, it offers the analysis and discussion of the obtained data.

Unravelling Language Teaching Challenges

The conception of language teaching challenges has been undertaken through cognitive-affective and sociocultural lenses (Amory & Johnson, 2023). In essence, challenges are interpreted as teachers' subjective experiences of the hardships arising from language teaching and learning (Lőrincz, 2022c; Valizadeh, 2021). While extensive research has been conducted to decipher the multifaceted challenges encountered by teachers in general education, there persists a disproportionate focus on L2 (second/foreign) teaching challenges (Lőrincz & Komar, 2023). It is surprising, given the prominent role languages play in today's globalized world, and in particular English (King, 2018), and the significant influence of teacher cognitions on shaping L2 teachers' performance and effectiveness (Blazar & Kraft, 2017; Borg, 2015; Buehl & Beck, 2014).

L2 teachers' understanding of challenges, driven by the interplay of meso-, macro-, and micro-level factors, mold their experiences in profound ways. On the meso-level, the status of English as a lingua franca has intensified the need to prepare learners for global citizenship (Biliková & Seresová, 2021; King, 2018). Recognized as a major staple, EFL proficiency has driven the implementation of corresponding policies at the national level, thus raising the expectations in terms of language learners' and teachers' competence (Lőrincz & Greba, 2022). Issues such as inadequate language policy and societal perceptions of language teaching have contributed to the complexity of language teaching landscape (Akbari, 2015; Lőrincz, 2022b). The profession's low social status, insufficient remuneration, and lack of professional guidance have further impacted teacher motivation, job satisfaction, and overall well-being (Akçor & Savaşçı, 2020; Back & Dean, 2020; Komar et al., 2021; Sulis et al., 2021).

Zooming out to the macro-level, the challenges encountered by L2 teachers are deeply rooted in the sociocultural context of language instruction (Johnson, 2009). A localized perspective on these challenges emphasizes the need to uncover their impact on the cognitive and emotional dimensions of language teaching and learning (Madalińska-Michalak & Bünyamin, 2018; Sadeghi & Richards, 2021; Sulis et al., 2021). Revisited language policies are manifested in standards and other normative documents that specify the necessary professional competencies for teachers and language proficiency benchmarks for learners. The given documents serve as guidelines for educational institutions in organizing language teaching and learning process. In their attempt to align with the established quality standards, universities and schools also pose increasing expectations on the protagonists of the instructional process (Zorba, 2022). Notably, the pressure to adhere to standardized curricula while also promoting innovative teaching methods has created a challenging environment for L2 teachers (Copland et al., 2014; Lőrincz, 2022e). Despite advocating for communicative language teaching in many national

curricula, the proliferation of high-stakes examinations has led to a shift in focus from meaningful communication to the instruction of isolated language items and forms (Copland et al., 2014; Littlewood, 2007; Valizadeh, 2021).

In parallel with the heightened quality standards, L2 lessons demand more than mere manipulation of language forms; they must be infused with meaning and purpose, fostering authentic communication within and beyond the classroom. Consequently, at the micro-level, L2 teachers face dual challenges. Not only must they grapple with their own language proficiency (Richards, 2017), but they are also tasked with developing this proficiency in their students through a variety of contemporary didactic approaches (Lőrincz, 2023). The literature provides compelling evidence that L2 teachers' self-assessment of their proficiency serves as a significant source of stress impacting their overall performance (Behroozi & Amoozegar, 2014; Richards, 2022). Similarly, one of the consistently highlighted challenges faced by L2 teachers is the task of teaching speaking (Copland et al., 2014; Lőrincz, 2022d; Lőrincz & Greba, 2022). Notably, non-native speaker teachers may face the detrimental effects of native-speaker bias, exacerbating their perceptions of the challenges they encounter (Richards, 2022).

The escalation of language proficiency benchmarks has naturally led to increased expectations regarding L2 teachers' didactic competence (Lőrincz, 2022e). As the language education landscape continues to evolve, teachers are required to navigate a diverse range of language teaching approaches, necessitating a deep understanding of theoretical backgrounds, language teaching methods, and techniques that facilitate language acquisition (Kumaravadivelu, 2012; Tarnopolsky, 2018). Adopting an informed language teaching approach sensitized to learners' needs and external expectations has been identified as a serious challenge for L2 teachers (Lőrincz, 2023; Tang et al., 2012; Wesely et al., 2021). Prospective L2 teachers, despite their strong belief in the advantages of communicative language teaching, often struggle to harmonize these beliefs with their actual performance, which often resembles traditional language teaching methods. Despite their conviction in the utility of communicative language teaching, having to implement it in their lessons is a formidable challenge (Lőrincz, 2023).

Additionally, the transformation of the traditional instructional paradigm towards collaborative and transformative educational approach has reshaped the roles of both language teachers and learners. Drawing upon theoretical frameworks such as social constructivism and critical pedagogy, knowledge construction, learner autonomy and motivation gain priority. In this context, L2 teachers are now tasked with adopting new responsibilities, encompassing instructional scaffolding, and promotion of lifelong learning (Crandall & Christison, 2016; Jia & Zhao, 2019; Levrints, 2020).

The impact of challenges on language teaching and learning is multifaceted and far-reaching. L2 teachers' perceptions of these challenges have a profound effect on their performance, communication style, interactions with learners, motivation, well-being, professional identity, and commitment to students (Lőrincz, 2022c). All these call for the enhanced attention towards the hardships experienced by L2 teachers to ensure the delivery of quality language education.

Leveraging Corpus Linguistics to Explore Recurring Academic Discourses

The sphere of application of corpus methods has broadened exponentially over the recent decades. In the period forerunning corpus linguistics, researchers limited their attention to the observation of comparatively small pools of textual data, with findings occasionally falling prey to human arbitrariness. The advent of computerized analytical tools has enhanced the processing of large amounts of linguistic data while reducing the subjectivity inherent in human reasoning and inferencing. One of the fields extensively drawing upon corpus linguistics is discourse interpretation (Baker, 2006; Friginal & Hardy, 2020) and, in particular, the study of academic discourse (Hyland, 2012). A common observation in literature is that the linguistic patterning of texts within a specific communication domain sheds light on the language users' views and experiences in a given field and their interpretation of reality (Brezina et al., 2015; O'Halloran, 2010). Summarizing the benefits of corpus methods, Hyland (2012) points out that they focus "on community practices and the ways members of particular disciplines understand the world and talk about these understandings" (p. 30). Hence, corpus-assisted analysis enables the navigation of large data sets for discourses or themes high on the academic agenda with more precision and rigor.

Delineation of typical themes in an academic discourse is usually the purview of qualitative analysis. As a rule, it is accomplished through literature perusal. Ryan and Bernard (2003) pertinently remark that themes "come from already-agreed-upon professional definitions, from local common-sense constructs, and researchers' values, theoretical orientation, and personal experience with the subject matter" (p. 86). However, qualitative analysis of themes comes with caveats that can be precluded by adding a quantitative dimension to the research paradigm.

In recent years, there has been a notable shift toward a quantitative analyses of research trends across academic domains. Various quantitative techniques have been exploited to extract topics from bibliometric databases, and topic modelling is one such technique. A case in point is the study by Fang et al. (2018), who utilized topic modelling to identify clusters of words that form the basis for delineating research themes. Another method employed in the study of research topics is the identification of lexical noun phrases. This approach, as described by Lei and Liu (2019), focuses on noun phrases rather than word clusters, offering a more straightforward analysis of findings. An extension of this method is the dependency-based approach developed by Lei et al. (2020), which utilizes SpaCy, a natural language processing tool in Python. This method involves extracting noun phrases based on syntactic dependency relation parsing. Its effectiveness was demonstrated in a number of bibliometric explorations of research trends in diverse fields of applied linguistics (e.g., Lei & Liu, 2019; Lin & Lei, 2020; Qin & Lei, 2022). The studies provided quantitative observations of recurrent research topics, showcasing the utility of these approaches in analyzing and understanding research trends.

Simultaneously, the applied research procedure, grounded in a quantitative paradigm, effectively underscores the breadth and rigor of its findings. In contrast, a literature review seeks comprehensive and in-depth analysis, drawing upon accumulated knowledge. To strike a balance between the breadth and depth in research, corpus methods could be invaluable by facilitating both quantitative and qualitative data analyses of recursive themes. With the premise that texts, regardless of their specific discourse, display distinctive lexical and semantic patterns,

delving into their exploration can unveil the inherent organization of pivotal ideas (Brezina et al., 2015; Gabrielatos, 2018; Ryan & Bernard, 2003). Academic texts, in particular, offer a window into research themes within a given discourse. The application of corpus methods makes such observations possible, allowing for the extraction of numeric measurements related to linguistic features. Furthermore, it facilitates their contextualized interpretation through the use of a concordance.

Although the application of corpus methods in the analysis of difficulties experienced in language education is a new terrain and is relatively idiosyncratic, it is the author's ambition to refine the inferences drawn from previous research and provide evidence of the expediency of corpus linguistics in uncovering the recurring discourses in academia. As Ryan and Bernard (2003) argue, social scientists are methodologically creative in deriving and interpreting textual data. Correspondingly, with a creative mind, the extant information coming in the form of textual data on copiously researched and debated issues could be systematized. Since the authors of this paper have extensively read and written about the challenges of language teaching and have a wide range of practical experiences in language teaching and language teacher preparation, the overriding interest was to approach this problem from a novel stance.

METHOD

This paper adopts a corpus-assisted approach to investigate discourses of language teaching challenges in academic texts, relying on the conceptual and methodological framework deployed primarily by corpus linguists. The study proceeds with the assumption that the utilization of corpus methods could enable the attainment of the objectives compatible with an extensive literature review. Moreover, exposure of the linguistic patterns of any given academic narrative could result in a higher level of synthesis and systematicity of research findings. This does not imply that a traditional literature review or a bibliometric method could be supplanted; rather, the given approaches can complement each other, resulting in more reliable research findings.

This study employed a specialized corpus comprising 638,312 tokens, compiled using the LexisNexis digital data aggregator service. The search was narrowed to scientific publications dedicated to exploring challenges in language teaching. The scope of the analyzed literature spanned from 2000 to 2022. Utilizing search terms such as language teaching challenges or language teachers' challenges, the aggregator service specifically gathered titles and excerpts from journal articles addressing the specified issue. The lemma challenge needed to be present either in the manuscript's title or the text for inclusion. The excerpts were thoroughly sifted through before their inclusion in the target corpus. The following inclusion criteria were applied: a) the articles should address challenges related to language education; b) the focus should be on challenges pertinent to language teachers rather than other professionals (e.g., medical language proficiency); c) the challenges discussed should pertain to second/foreign language rather than first language. In total, 1805 article excerpts were selected based on their relevance to the research area.

As displayed in Figure 1, only papers from the top-ranking journals indexed in the Web of Science Core Collection and Scopus were considered.

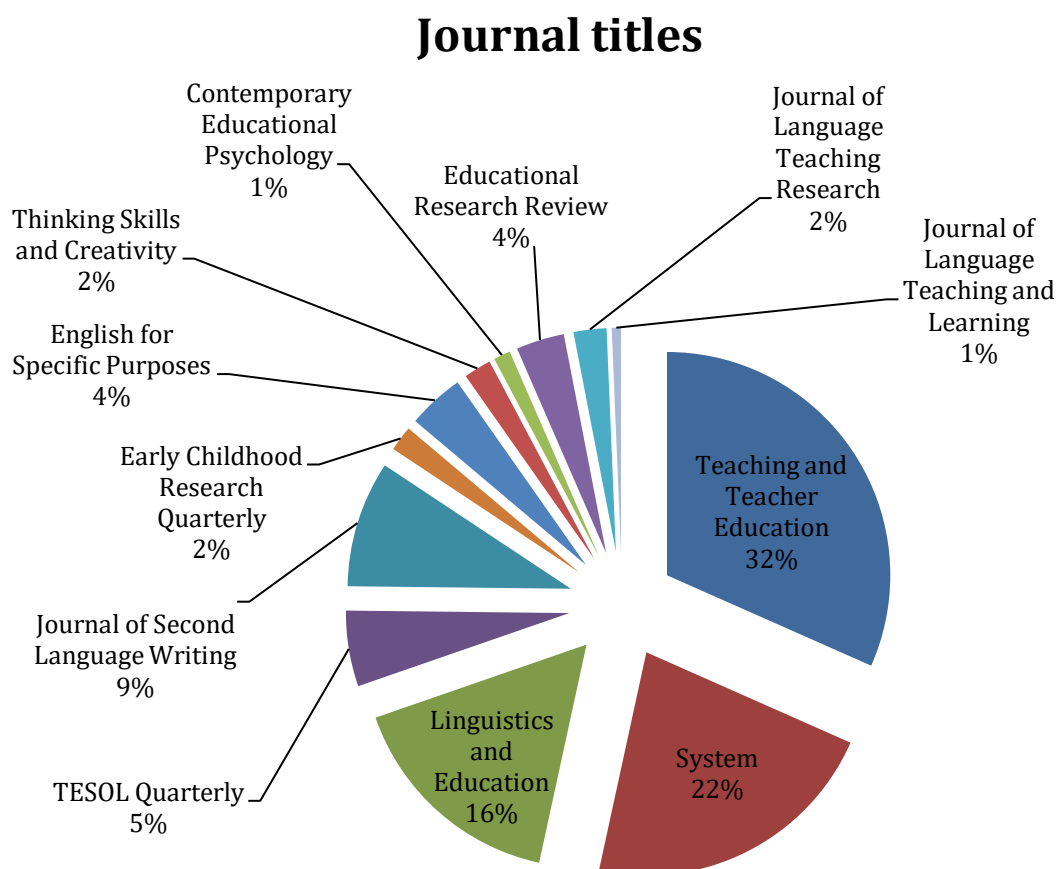


Figure 1. Journal Titles and Percentage of Article Excerpts

Thus, corpus techniques were utilized to delve into recurring themes in research on language teaching challenges. The principal research tool was the LancsBox software package. Among its numerous functions, the program runs statistical techniques of keyword, collocations, and n-grams analyses (Brezina et al., 2021). Keyword analysis has been widely used to observe statistically significant words in a corpus. It is considered a standard procedure in analyzing texts and highlighting their topical themes together with the collocation analysis (Baron et al., 2009; O'Halloran, 2010; Rayson, 2019). Keywords were defined as “words which are statistically more salient in a text or set of texts than in a larger reference corpus” (O'Halloran, 2010, p. 566). Keywords are calculated by comparing the word frequencies of a target corpus with a larger reference corpus (Baron et al., 2009). The identification of keyword profiles aids in discerning the predominant themes of a text of its focus, known as “aboutness” (Gabrielatos, 2018). In addition, collocation analysis was employed in this study to enhance corpus analysis. As posited

by Brezina et al. (2015), words are organized in a network-like fashion within a text collocating with one another. Through their observation relationship between the choice of language means and the discourse community could be understood (p. 139). Lastly, the analysis of n-grams was carried out to complement the above findings. The n-gram tool enables a quantitative examination of multiword expressions. N-grams are the type of multiword expressions which represent contiguous lexico-grammatical patterns (Brezina et al., 2015) and can be described as syntagmatic lexical sets. They serve to pinpoint the principal lexical patterns within a corpus, in this way highlighting its pervading narratives (Brezina et al., 2012).

As a result, the research procedure commenced with the generation of keywords using the Word technique of the LancsBox. The LOB corpus (The Lancaster-Oslo/Bergen Corpus) served as the study's reference corpus as it includes an "Academic Writing" subsection. The choice fell on this corpus since, as reasoned by Geluso and Hirsch (2019), "a reference corpus of the same sub-register will highlight words that are particular to a specific target corpus" (p. 231). The top one hundred positive keywords were selected for in-depth analysis. The Mutual Information (MI) statistical association measure produced the exclusive collocates of the lemma *challenge*. MI is utilized to identify the strength of association between words in a corpus. It gives more weight to collocates that are strongly associated with the node and are rarely found in the corpus without it, thus emphasizing a strong and rare association. Collocation Parameter Notation (CPN), as introduced by Brezina et al. (2015), was utilized to capture essential parameters for collocate identification, ensuring transparency and replicability in research. The following parameters were selected: CPN: MI (5.0)/ L5-R5/ C: 20.0-NC: 20.0. Mutual Information served as the statistical measure, with collocates having a MI value of 5.0 or higher considered significant. This threshold of 5.0 ensured the inclusion of only collocates with a strong association in the analysis. A span of 5 words to the left and 5 words to the right of the node was considered for context. The minimum frequency of the collocate and collocation in the corpus was set at 20.0. Thus, these parameters aimed to ensure a rigorous approach to identifying significant collocations in the dataset.

Following the above-presented quantitative phase of language data analysis, a qualitative interpretation of the keywords' use in context was performed by means of the KWIK (Key Word in Context) technique. The analysis of concordance lines is practical because it helps to disambiguate the dematerialized lemmas and reveal the patterning of themes. Finally, the analysis of n-grams was conducted using the simple math statistics, yielding a list of n-grams along with their respective frequencies. The analysis specifically considered only lexical word combinations since they are the main carriers of content. Function words, which convey grammatical meaning, were excluded from the analysis as they are of little value in determining the corpus's aboutness.

FINDINGS AND DISCUSSION

This section presents the findings and discussion on the typical academic discourses and the recurring themes relevant to challenges in language teaching.

Findings

The keywords produced by the above-described procedure were organized thematically to uncover the recurring discourses. The keywords were ordered into thematic groups based on their meanings and statistic values (Table 1). As noted by Baker et al. (2013), rendering keywords into themes relies not so much on the denotative component of the lexeme's meaning as on the topics they index.

Table 1. Keywords Organized Thematically

Themes	Keywords
Agents/ Subjects	(1) teacher (f=18820, sv=148.2730732594), (5) learner (f=1517, sv=25.6279677377), (7) student (f=4101, sv= 22.016539532), (31) educator (f=497, sv= 9.7091419506), (43) pre-service (f=313, sv= 6.606194), (47) novice (f=307, sv= 6.133518885), (65) in-service (f=219, sv=4.922545), (44) multilingual (f=298, sv= 6.337527), (53) international (f=343, sv= 5.5471182824), (70) bilingual (f=210, sv= 4.761344)
Objects	(2) language (f=14823, sv=91.7256678319), (4) classroom (f=2380, sv= 40.419617173), (13) English_n (f=1716, sv= 17.5934403982), (15) EFL (f=820, sv= 15.687155), (16) English_adj (f=2100, sv= 15.5163061386), (19) program (f=728, sv= 14.039328), (33) foreign (f=1021, sv= 9.4452936115), (54) school (f=1887, sv= 5.4638949916), (71) university (f=820, sv= 4.7219560812), (78) tesol (f=182, sv= 4.259832)
Instructional processes	(3) teaching (f=4751, sv=59.1117312452), (6) education (f=4784, sv= 25.2633479389), (8) learning (f= 1216, sv= 21.104470947), (r=9) teach (f=2299, sv=21.064606541), (10) study (f=2893, sv=20.5676631634), (11) research (f=2626, sv=18.4910067774), (14) practice (f=1985, sv= 15.8244792947), (21) learn (f=2821, sv= 13.8547088361), (22) instruction (f=1109, sv=13.8525152462), (23) interaction (f=699, sv=12.6417215304), (29) development (f=1836, sv= 10.2609213206)
Research foci	(12) challenge (f=1182, sv=17.9062327366), (17) context (f=1170, sv= 14.8719247492), (18) identity (f=944, sv= 14.6989955053), (26) belief (f=1048, sv= 11.2071418611), (27) online (f=554, sv= 10.922785), (28) curriculum (f=600, sv= 10.4966901561), (35) role (f=775, sv=8.6795111154), (36) assessment (f=588, sv= 8.434702501), (41) motivation (f=382, sv=7.332685347), (42) knowledge (f=1177, sv= 7.229789505), (45) approach (f=659, sv=6.3315965706), (46) feedback (f=290, sv= 6.194238), (49) technology (f=336, sv= 6.0050662913), (50) agency (f=355, sv=5.9430054952), (57) cognition (f=246, sv=5.3530226037), (59) competence (f=270, sv=5.214982584), (60) emotion (f=340, sv= 5.1857040143), (64) reflection (f=312, sv= 5.0383080027), (67) awareness (f=268, sv= 4.9211346403), (75) ideology (f=232, sv=4.4874079193), (77) self-efficacy (f=186, sv= 4.331477)
Language competence areas	(30) skill (f=866, sv=10.2218183011), (39) proficiency (f=362, sv= 7.4103011712), (48) writing (f=453, sv= 6.091305856), (68) vocabulary (f=299, sv= 4.8974103693), (79) communication (f=279, sv= 4.2329298419), (81) communicative (f=179, sv= 4.206098), (82) culture (f=277, sv= 4.0652719311), (99) grammar (f=208, sv= 3.5073129603)

Note: f: frequency; sv: statistical value

The group of lexemes with the highest statistical values pertained to the agents and objects of the language teaching/learning process. In tackling the language teaching challenges, the researchers ascribe the leading role to the *teacher* as seen by the lemma's statistical value (sv=148.2730732594), although lemmas *learner* and *student* are also frequent and highly significant in the corpus. However, this result could have been predetermined by the search terms used in this study (i.e., language teaching/teachers' challenges). Further qualitative analysis of concordance lines supported the obtained numeric result, whereby the language teacher was treated as the principal actor in the instructional process, with students seen by the researchers as subject to teachers' influence and playing a subsidiary role. This tendency persists across most concordance lines, as illustrated below:

*...Sakai & Kikuchi (2009) point out that teachers have a very significant role in inspiring...
...in identifying teachers' professional problems. As aforementioned, teachers have a critical part in the learning...
...Ornstein & Hunking (2010) state that teacher is the most authoritative implementer of... the most ...authoritative implementer of the curriculum. A teacher can be called as the main source...
...be adopted through the teaching process. Thus, teachers have to select the most appropriate and...
...significant impact on teacher's production of qualified students. Teaching language necessitates experiencing different approaches, methods, ...
...gets more difficult for teachers to encourage students to be enthusiastic in using English due...
...These challenges stem from the teacher, the students, and the educational system (Ozsevik, 2010) ...*

There is a general trend in research to emphasize the challenges experienced by *pre-service* and *novice* language teachers. The study of *in-service* language teachers' challenges is a step behind, with a greater focus laid on their professional development, as shown in the concordance lines *below*:

*...Given high attrition amidst teachers, we study pre-service teachers' identity expectations in a Canadian context....
...to document the benefits and challenges for pre-service teachers and cooperating teachers who...
...Due to contextual and personal challenges pre-service language teachers face, they may lose...
...Challenges encountered by pre-service language teachers can potentially threaten their well-being...
...and learners with learning disabilities as challenges novice EFL teachers face in Turkey...*

...described the challenges which novice EFL teachers perceived. Challenges related to classroom...

...challenging is sustaining a new approach once teachers' commitment to professional development ends, and supportive facilitation...

A considerable body of research documents the challenges of teaching *international* students. The issues of *multilingualism* and *bilingualism* are also high on the research agenda, as displayed in these examples:

... including many migrants and international students with English as an additional language,
...

... relevance and value of multilingualism: "students should experience that mastering several languages is...

... noted, the scholarship on teaching multilingual students "presents a collection of disconnected strategies....

... teachers' understandings of how multilingual students from immigrant backgrounds learn new languages, in...

The lemmas *language*, *English*, *EFL*, *foreign*, and *TESOL*, along *classroom*, *program*, *school*, and *university*, exhibited high frequencies and levels of prominence. Such a result was anticipated due to the status of English as a lingua franca and the enormous number of learners who presently study English as a second/foreign language (L2).

The exploration of diverse research foci emerged as the most lexically rich theme of the target corpus. As expected, a highly significant lemma was *challenge*. As displayed in Figure 2, among the close collocates of this lemma were *language-related*, *pose*, *cope*, *encounter*, and *experience*. The collocation analysis disclosed the facilitative nature of challenges suggested by such first-rate collocates as *cope*, *opportunity*, and *address*. Likewise, the most pertinent challenges experienced by language teachers were related to the language, as shown by the node's closest collocate, i.e., the lemma *language-related*.

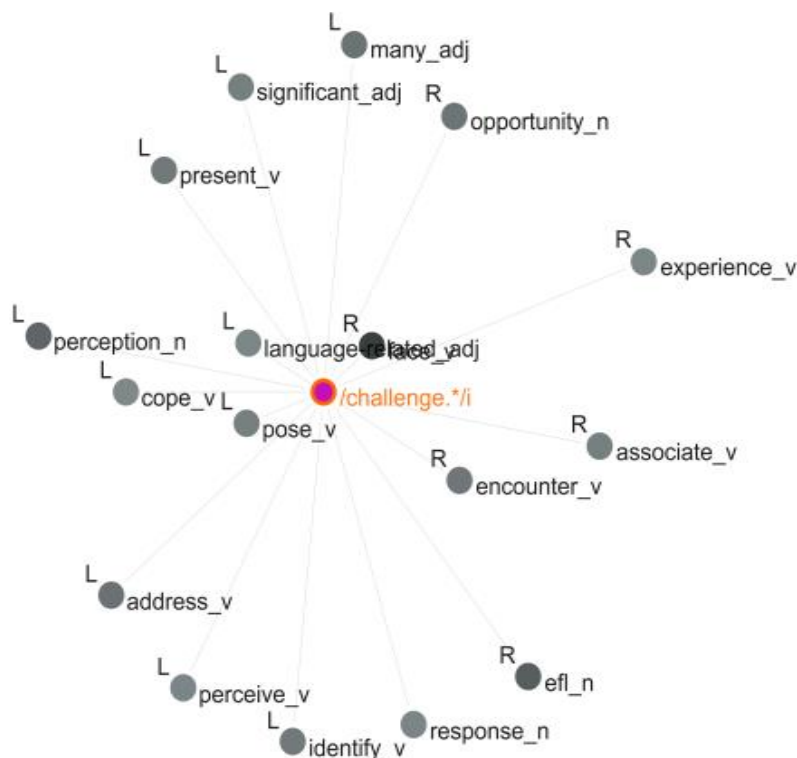


Figure 2. Results of Collocation Analysis of Lemma “challenge” in the Target Corpus

The common themes associated with challenges in language teaching identified through keyword analysis included lemmas such as *context*, *identity*, *belief*, *online*, and others, as presented in the column “Research foci” of Table 1. Researchers treat challenges mainly as context-specific deriving from micro- and macro-levels rather than generalizing them to the international context. There is a tendency to investigate challenges in the context of a geographical setting, educational institution, learners, and discipline, as can be seen below:

...been diagnosed as a strenuous task for teachers in the Iraqi context in particular...

...in a Turkish education context: Considering the challenges, suggestions and benefits from EFL teachers’ perspectives....

...in their classrooms. This poses quite a challenge in the Malaysian context since English is...

...of the real classroom context and the challenges teachers face in their teaching. Borg (2015)...

...help them cope with contextual challenges and facilitate their continuing development in higher...

The study of language teaching challenges was found to be closely aligned with teacher identity observations, as corroborated by the high significance of the lemma identity. The following concordance lines illustrate this finding:

... The kind of professional identity that teachers construct can impact their practice. Drawing on...

...The rapidly changing environment is a challenge to the teaching identity developed over time; ...

...conflicts and transformation. Special Issue on Language Teacher Identity in Multilingual Teaching. TESOL Quarterly, 50(3), ...

...professional identity serves as the linchpin of teacher development, teaching efficiency, teaching satisfaction, teacher commitment, ...

An increasing number of publications consider language teaching challenges by focusing on the prism of teachers' *beliefs* (f=1048, sv=11.2071418611). Language teacher beliefs were among the principal issues of language teacher education programs and development, hampering the implementation of innovative methodologies in the instructional process, as demonstrated in these examples:

...a better way to teach but...": EFL teachers' conflicting beliefs about grammar teaching...

...a growing recognition of the importance of teacher beliefs and practices, those of novice EFL...

...teacher educators must develop deeper understandings of teachers' beliefs about their abilities to implement CRI...

...learning under the shadow of conflict: Teachers' beliefs about teaching the language of the "other" ...

As expected, a high statistical value was calculated for the lemma *online*, reflecting the challenges of online education spurred by the Covid pandemic. The transition to online education is treated in the literature as particularly challenging, requiring researchers' heightened attention, as shown in the concordance lines below:

...in emergency online teaching which created additional challenges and stressors...

...Addressing the challenges of interaction in online language courses...

...Teaching and learning languages online: Challenges and responses... outbreak of COVID-19 generated...

...generated an unprecedented global push towards remote online language teaching and learning...

...learners have experienced in teaching and learning online, explores how they have addressed these challenges...

The constraints posed by the *curriculum* requirements transpired as one of the principal challenges treated in the literature. Problems associated with curriculum implementation by teachers, curriculum reforms, curricula of teacher education programs, content integrated language curriculum surface as common topics addressed in the target corpus:

...practicum experiences of English Language Major student teachers during a period of profound curriculum reform...

...notion of emotional capital and reveal that teacher engagement in curriculum implementation is an emotionally...

...explores how a group of novice English teachers (n=285) appropriated the national curriculum standards in...

Significant statistical values were documented for the lemma *skill*. The analysis of concordance lines revealed that it was associated with students' language skills or teaching skills, as the following examples illustrate. However, the various language competence areas, including the four language skills (speaking, writing, listening, and reading), were underrepresented in the target corpus.

...exploring English language proficiency, linguistic challenges, and academic language skills of Japanese students...

...students experienced significantly different levels of linguistic related challenges in each language skill when at a...

...theorized and the knowledge and skills that teachers need in order to function as effective...

...on provision of basic skills to prepare teachers for their first experiences with teaching...

...and few differences related to teacher pedagogical skill or intervention condition. Language use...

The lemma *role* emerged as a significant keyword of the target corpus. In the majority of instances, it was used in relation to teacher roles or in a generic sense. The discussion revolved around the changing roles of language teachers, a repertoire of language teachers' roles, and their seminal role in language education as displayed in the following concordance lines:

...teachers need to consider more than one role in the classroom. Teachers have to focus...

...out that teachers have a very significant role in inspiring students in language learning...

.... Review 2. 1 English Teacher's Role and Teaching Difficulties English has been presented...

...Teacher could engage a number of major roles in classroom: Controller (teacher is fully responsible...

...and inexperienced teachers all play a critical role to the teaching of English. To figure ...
...English teachers worldwide play a seminal role in the development of English competence
...

The challenges associated with language teachers' and learners' motivation were among the recurring concepts of the target corpus, as obviated by high statistical values of the lemma *motivation*. A notable challenge highlighted was the lack of learner motivation featured as the principal source of difficulties faced by language teachers:

...learner proficiency in English, lack of learner motivation and interest for English, dealing with individual ...
...teachers in the first place, increasing teacher motivation by increasing payment and respecting their beliefs ...
...problem of Turkish EFL learners' lack of motivation and interest was also already found in ...
...points out the necessity to focus on teacher motivation, the interaction among teachers ...

The frequent occurrence of the lemma *knowledge* foregrounds its place in the investigation of language teaching challenges. One of the oft-cited issues in this respect concerns the role of professional knowledge held by language teachers, knowledge construction by language teachers, the knowledge base of language teacher education, and the development of learners' knowledge:

...in teacher education. • Finnish teachers had knowledge about second language acquisition and positive attitudes ...
...Reconceptualizing and describing teachers' knowledge of language for content and language integrated ...
...authentic materials, a focus on subject matter knowledge and language awareness-based activities had a positive ...
...crossing the boundary between language and content knowledge. The study suggests that when creating cross-curricular ...

The high salience of the lemma *approach* highlights a consistent theme of the target corpus. A qualitative interpretation of the concordance lines revealed that challenges were discussed in relation to the implementation of contemporary language teaching approaches:

...found classroom management, implementation of the communicative approach in classrooms, unmotivated students and learners with ...
...that the old-fashioned grammar-based teacher-centered English teaching approach has been the main challenge of speaking ...

...the effects of a widely supported teaching approach, task-based or task-supported language teaching, on L2...

...and classroom practices in the ESP genre-based approach to teaching writing...

The common topics addressed in the literature regarding challenges were language teacher cognitions, competence, emotions, reflection, reflective, ideology, and self-efficacy, represented in the target corpus through corresponding lemmas. Language teacher cognitions is an umbrella term covering a range of concepts, like challenges, beliefs, knowledge, attitudes, and motives, to name just a few. As such, its salience in the target corpus was unsurprising. Contrary to expectations, the lemma *non-native* exhibited relatively low salience in the target corpus ($f=112$, $sv=3.00605$).

Keyword analysis revealed that the customarily targeted competence areas were signaled by the lemmas *proficiency*, *writing*, *vocabulary*, *communication*, and *communicative* posing a considerable challenge in language education. A detailed analysis of concordance lines revealed that the lemma *proficiency* was frequently used in the context of students' and teachers' levels of language proficiency:

...are primarily recruited based on their English proficiency and knowledge of teaching methods rather than...

...rather than their teaching potential. While language proficiency is an important predictor of the success...

...revealed that in both subjects, English language proficiency statistically significantly predicted academic language-related challenges. Furthermore, ...

...a gain in English proficiency significantly predicted the challenges in International...

Substantial statistical significance was observed for the lemma *writing*, which was unsurprising. As seen from the journal titles, which entered the target corpus (e.g., *Journal of Second Language Writing*), writing competence is of primary concern in L2 education. In addition, the typical discourses within the target corpus included vocabulary teaching and its acquisition:

...writing concepts for teaching purposes: Preservice L2 writing teachers' developing conceptual understanding of parallelism...

...relevant to L1-to-L2 rhetorical transfer in L2 writing: The cases of Chinese EFL writers across...

...particularly meaningful for the foreign language (FL) writing instruction in an acquisition insufficient environment where L1-to-L...

...most challenging tasks students encountered is mastering vocabulary

...taught through English obtained a larger academic vocabulary size and encountered fewer linguistic challenges adjusting...

The lemmas *communicative* and *communication* were likewise commonly referenced in the discussions of language teaching challenges. These lemmas were frequently combined with concepts such as oral proficiency, intercultural communication, and communicative approach in language teaching, as seen in the following excerpts:

... ESL students learn only the basic interpersonal communication skills (BICS) from their English language lessons...

...lingua franca for international trade and intercultural communication, English language education has become a complex...

...L2 learners' lack of behavioral engagement in communication and interaction using the target language'...

...crowded classes, lack of time to prepare communicative materials, loaded curriculums, technology and equipment deficiencies....

...found classroom management, implementation of the communicative approach in classrooms, unmotivated students and learners...

Other referenced themes in the target corpus concerned the challenges associated with teaching *culture* and *grammar*, as illustrated in these concordance lines:

...challenge their stereotypical impressions of Chinese educational culture but also facilitated their language use and...

...Iranian EFL teachers' self-reported and enacted culture teaching techniques: A case study...

...it is a long-held axiom that teaching culture is a part of second/foreign language ...

...poses more than technical challenges of teaching grammar and vocabularies; rather, hegemonic attitudes prevalent among ...

...use more traditional teaching methods like grammar translation which does not require a full...

Overall, challenges of teaching language skills received relatively little attention in the target corpus, as suggested by the numeric data obtained on the lemmas, respectively, e.g., listening (f=38, sv=1.616458673), reading (f=302, sv=3.154000562).

Table 2 presents the results of the n-grams procedure, where the n-grams were categorized into research domains according to their lexical meanings and frequency counts.

Table 2. N-grams Organized Thematically

Discourses	N-grams
Teacher Education and Development	teacher education (f=2631.00), language teachers (f=991.00), professional development (f=662.00), student teachers (f=424.00), teacher educators (f=340.00), efl teachers (f=350.00), pre-service teachers (f=268.00), higher education (f=195.00), preservice teachers (f=188.00), teacher preparation (f=152.00), teacher training (f=151.00), teacher learning (f=141.00), novice teachers (f=136.00), teacher development (f=115.00), teacher candidates (f=107.00), beginning teachers (f=85.00), teaching experience (f=84.00), professional learning (f=77.00), experienced teachers (f=72.00), teaching practicum (f=33.00), professional growth (f=25.00), teacher induction (f=25.00), esp teachers (f=24.00), teacher evaluation (f=20.00)
Language Teaching Methodologies and Practices	language teaching (f=1299.00), language writing (f=356.00), language education (f=311.00), teaching practices (f=150), language assessment (f=111.00), specific purposes (f=95.00), language instruction (f=92.00), language integrated (f=92.00), teaching practice (f=73), teaching challenges (f=71.00), bilingual education (f=69.00), english-medium instruction (f=67.00), teachers challenges (f=53.00), classroom discourse (f=50.00), language curriculum (f=45.00), reading comprehension (f=44.00), academic writing (f=44.00), language pedagogy (f=40.00), teaching speaking (f=29.00), lesson planning (f=26.00), teaching methodology (f=25.00), teaching reading (f=25.00), content-based language (24.00), teaching grammar (f=18.00), content-based instruction (f=17.00)
Language Learning, Proficiency and Skills	second language (f=1270.00), english language (f=1207.00), foreign language (f=1145.00), language learning (f=1106.00), language acquisition (f=272.00), language proficiency (f=176.00), language development (f=174.00), language skills (f=174.00), dual language (f=138.00), target language (f=135.00), language awareness (f=105.00), language-related challenges (f=78.00), oral language (f=73.00), communicative competence (f=47.00), english proficiency (f=42.00), language impairment (f=32.00), language performance (f=30.00), learning culture (f=29.00), language abilities (f=26.00), vocabulary learning (f=25.00), non-native speaker (f=20.00), communication skills (f=19.00), language competencies (f=17.00), receptive vocabulary (f=17.00)
Professional and Emotional Aspects	teachers beliefs (f=302.00), teacher identity (f=298.00), teacher agency (f=136.00), teacher cognition (f=114.00), content knowledge (f=94.00), teacher knowledge (f=77.00), teacher talk (f=75.00), teachers attitudes (f=64.00), language anxiety (f=64.00000), professional identity (f=40.00), language identity (f=40.00), effective teaching (f=37.00), teacher efficacy (f=37.00), teacher attrition (f=34.00), teacher resilience (f=33.00), emotion labor (f=30.00), lived experiences (f=30.00), coping strategies (f=30.00), pedagogical knowledge (f=28.00), teacher expertise (f=26.00), teacher wellbeing (f=26.00), job satisfaction (f=24.00), teacher motivation 22.00, teacher emotions (f=21.00), teacher effectiveness (17.00)
Learner Factors	language learners (f=444.00), individual differences (f=43.00), student achievement (f=42.00), learning motivation (f=30.00), learner motivation (f=26.00), students' motivation (f=25.00), learning experience (f=20.00)

Discourses	N-grams
Language Policy and Sociocultural Factors	language policy (f=109.00), multilingual matters (f=99.00), social justice (f=96.00), language ideologies (f=96.00), linguistic diversity (f=66.00), lingua franca (f=29.00), sociocultural perspective (f=24.00), linguistic complexity (21.00)
Technological Aspects	online teaching (f=106.00), online language (f=80.00), computer-assisted language, covid-19 pandemic (f=42.00), (f=20.00), educational technology (f=18.00)

Note: f = frequency

The analysis of semantic patterns and frequency counts of n-grams has uncovered prevalent discourses in the corpus. Notably, n-grams such as *teacher education*, *language teaching*, *second language*, *English language*, *foreign language*, and *language learning* exhibited the highest frequencies, underscoring their significance in the dataset.

Examining n-grams related to teacher education reveals their relevance to language teaching challenges, particularly within the context of initial teacher education and development. N-grams like *student teachers*, *preservice teachers*, *novice teachers*, *teacher candidates*, and *beginning teachers* indicate a heightened research interest in the challenges faced during the initiation into the teaching profession. This emphasizes the need for teacher education programs to adequately prepare professionals to handle these challenges. Additionally, continuous professional development, encompassing n-grams such as *professional development*, *teacher development*, *teacher learning*, and *professional learning*, is crucial to ensure language teachers stay updated on effective teaching methodologies and technological advancements.

The prominence of n-grams associated with language learning and teaching signals a strong emphasis on language education. The semantic domain of language learning and proficiency, represented by n-grams like *second language*, *English language*, *foreign language*, *language learning*, *language acquisition*, and *language proficiency*, is extensive. However, n-grams associated with specific language aspects and skills, such as *communicative competence*, *learning culture*, *vocabulary learning*, *teaching writing*, *teaching speaking*, *teaching reading*, and *teaching grammar*, appear less frequently in the corpus. This reaffirms the findings obtained through the keyword analysis conducted earlier in this study.

Addressing the diverse needs and backgrounds of students presents a challenge, as indicated by n-grams such as *specific purposes*, *bilingual education*, *English-medium instruction*, *dual language*, *language impairment*, and *individual differences*. Challenges related to student motivation, including n-grams *learning motivation*, *learner motivation*, and *students' motivation*, are widespread. Achieving desired levels of language proficiency also remains a

persistent challenge, as evident in n-grams *language acquisition*, *language proficiency*, *language development*, and *student achievement*.

The discourse related to contemporary language teaching approaches is highlighted through n-grams like *language integrated*, *content-based language*, *content-based instruction*, and *computer-assisted learning*. The presence of n-grams such as *online teaching*, *online language*, and *educational technology* underscores the challenges associated with the integration of technology in language education.

Professional and emotional aspects of language teaching challenges emerge as a lexically dense theme, as indicated by n-grams like *teacher beliefs*, *teacher identity*, *teacher agency*, and *teacher cognition*. Concepts such as *content knowledge*, *teacher knowledge*, *effective teaching*, *pedagogical knowledge*, *teacher expertise*, and *teacher effectiveness*, represented by respective n-grams, are central to understanding the challenges experienced in language teaching. N-grams such as *language anxiety*, *teacher attrition*, *teacher resilience*, *emotional labor*, *coping strategies*, *teacher well-being*, *job satisfaction*, *teacher motivation*, and *teacher emotions* underscore the focus on the emotional and professional well-being of language teachers.

Moreover, concerns regarding the implementation of language policy and sociocultural aspects are referenced through n-grams such as *language policy*, *multilingual matters*, *language ideologies*, and *sociocultural perspective*. Other sensitive topics are represented by n-grams like *linguistic diversity*, *social justice*, and *lingua franca*. Thus, focusing on the challenges of language teaching, the provided data highlights several critical areas within the field.

Discussion

In this paper, the study of language teaching challenges was approached from the premises of corpus linguistics. Although it somewhat steers away from the mainstream application of corpus analysis methods, the study has nevertheless borne out its adequacy in exploring the dominant discourses of challenges in language education. The investigation proceeded with a compilation of a specialized corpus of academic texts, followed by a quantitative analysis of its linguistic features, and a qualitative analysis of the linguistic environment in which they occurred.

Based on the keyword profile of the target corpus, the frequently referenced themes were organized into groups. As signaled by the frequency and salience features of the keywords, the most commonly explicated were the issues of agents and objects in language education, the instructional process itself, the research foci, and competence areas, which were closely aligned and partly overlapped. The principal findings obtained in this study are commensurate with and replicate previous research on language teaching challenges and, in particular, the field of language teacher education. Thus, the lemmas *pre-service* and *novice* featured more saliently than *in-service*, reflecting the expected challenges encountered by language teachers. For instance, after a period spent in the profession, EFL teachers reported feeling less challenged by all aspects of language teaching included in the study of Lőrincz (2022d). The teaching experience was likewise found to be a causal factor leading to decreased perceptions of language teaching challenges (ibid; Lőrincz & Greba, 2022).

Considering the situated nature of language teaching and learning, the high salience of the lemma context in the target corpus was predictable. Embedded in the socio-cultural perspective (Johnson, 2009), the interpretation of challenges in language education research is inevitably shaped by the context in which language instruction takes place (Poedjiastutiea et al., 2021). The existing scholarship, therefore, treats the challenges of language teaching and learning as context-dependent. Similarly, owing to the unprecedented spread of English as a lingua franca, it is presently being taught in increasingly diverse contexts involving diverse student populations, educators, or language learning objectives (Crandall & Christison, 2016). This observation is echoed in the target corpus through the lemmas *international*, *multilingual* as descriptors of educational contexts and student populations.

The concept of identity emerged as the field's overriding concern, as evidenced by this study's findings, which reprises previous research. In their book, Crandall and Christison (2016) highlight teacher identity as a central research area attracting heightened attention in English language teacher education and development research. The study illustrates how challenges intersect with teacher identity causing considerable transformations in the latter. Consequently, challenges caused by the dissonance between teachers' aspirations and actual performance enhanced their professional growth (Kubanyiova, 2012). Job-related challenges shaped language teachers' identity, a factor strongly influenced by the workplace's context, as demonstrated in Xu's (2012) study.

Significant statistical values of the lemmas such as *proficiency*, *language*, *English*, *EFL*, and *skill* as documented in this study, epitomize the prominent status of English in today's globalized world. This highlights the need for language proficiency among broad and diverse learner populations, as well as the level of language proficiency required of teachers. As corroborated in the existing research, language proficiency has gained unseen currency in applied linguistics (Crandall & Christison, 2016; Freeman, 2017; Richards, 2017). Contiguous with heightened expectations, language proficiency has become a topmost challenge faced by language specialists, which finds reflection in the high statistical values obtained on this theme in the target corpus.

As expected, the dominant discussions within the target corpus, as signaled by the lemma *online*, revolved around the challenges associated with the shift to online education, much in line with the recent research trend (e.g., Bezliudnyi et al., 2022; Huszti et al., 2022; Lőrincz & Komar, 2023; Zadorozhna & Datskiv, 2022). Accentuated in the corpus are the issues of language teacher roles, teacher and learner motivation, the knowledge base of language teachers, language teaching approaches, reprising the observations of the available examinations. To mention just a few of these, attending to learner motivation was found to be the second most challenging task in the quantitative studies of challenges conducted by Copland et al. (2014) and Lőrincz (2022d). The shifts in language teacher roles prompted by the transformation in educational models likewise received extensive treatment in the field (Crandall & Christison, 2016; Levrints, 2020). The problems of language teachers' professional knowledge received broad coverage in language education research. Mapping out the domains of knowledge language teachers should develop, the researchers conclude that expectations of language teachers' knowledge have recently multiplied compared to previous expectations (Lőrincz, 2022a).

However, the treatment of language skills through the lens of teaching challenges is relatively overlooked, as indicated by the study's findings. Apart from occasional exploration of difficulties of teaching grammar, vocabulary, and implementing communicative language teaching, there is a dearth of studies addressing other language competence areas. Contrary to expectations, the challenges experienced by non-native language teachers appeared less frequently in the target corpus than indicated by the available research, whose lack of confidence and language proficiency are under the lens of researchers (Lőrincz, 2022c; Richards, 2022). At the same time, since the majority of L2 teachers have a non-native language background, the researchers may not perceive it urgent to acknowledge this fact when describing the study's participants.

The n-grams query reprised the results of the keyword analysis, highlighting the challenges of teacher preparation and professional entry as key themes. Language teaching and learning issues, such as second language, English language, and foreign language, emerged prominently in both analyses. Notably, the professional and emotional aspects exhibited high lexical density, emphasizing academia's profound interest in the professional well-being of language teachers. Concepts like teacher beliefs, identity, the overarching notion of "cognitions," emotions, and agency underscore the overarching concerns in this regard. The emphasis on meeting quality standards is evident through frequent references to the concepts of teacher knowledge, learning, and effective teaching. The corpus also accentuates the importance of employing effective methodologies in language instruction, including the application of computer technologies. While a further discussion of the transpired themes and concepts exceeds the scope of this paper, the research perspective adopted here aligns with and reinforces the accumulated findings in the field.

Overall, the study's outcomes highlight the synergy between the employed techniques illuminating recurrent themes in the given field of inquiry. Keyword analysis unveiled paradigmatic lexical sets, constructing a keyword profile of the corpus (Gabrielatos, 2018), staking out the primary research territory in the study of language teaching challenges. Concurrently, the exploration of n-grams and collocations allowed for the investigation of syntagmatic associations among lexical items commonly found within a context of an utterance. Even the first-degree context provided by the extracted n-grams facilitated the identification of recurring research themes in the field. The complementary nature of the utilized corpus techniques enhanced the credibility and depth of the findings, offering a more comprehensive understanding of language teaching challenges.

CONCLUSIONS

This paper purported to explore the academic discourses on language teaching challenges through the utilization of corpus methods, while also assessing the validity of the applied methodology. Numerous parallels were drawn between the results of this study and those of the mainstream research obtained from various methodological designs. The challenges were systematically addressed within the background of teacher education and development, specifically emphasizing initiation into teaching. Additionally, the focus extended to addressing challenges in language learning and proficiency, language teaching methodologies and

practices, professional and emotional aspects, language policy and sociocultural factors, and technological issues. The findings underscore the critical role of English as the principal language studied in various educational contexts and the respective challenges, the situated nature of language teaching challenges, language proficiency, online education, and others. Interestingly, the development of language competence areas was less frequently discussed in the target corpus than expected.

As shown, among the principal merits of corpus methods is their potential to showcase the research venues at the forefront of the academic discourse by observing linguistic patterns of language items that express the respective concepts. Nevertheless, the keyword analysis per se is relatively shallow and lacks depth in analyzing factors posing challenges to language teachers, as in our case. But coupled with a qualitative analysis of concordance lines, it overcomes many of the shortcomings of quantitative methods. The application of corpus analysis can enhance the synthesis of investigation results and scaffold further research strengthened by other theoretical tools, including an extensive literature review. Thus, to reduce the arbitrariness inherent in the analysis carried out by a researcher, a software-assisted analysis could be utilized to raise the findings' objectivity. Even though corpus analysis cannot substitute systematic literature review, the techniques deployed in this study may usefully complement it: what may go unnoticed by humans becomes evident to the machine. Finally, it could be interesting to apply the research design adopted in this paper to explore the discourses on concomitant problems of language teaching and learning.

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