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Edited by Xiaoming Jiang

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Meet the editor

Dr. Xiaoming Jiang is a professor from the Institute of Linguistics and the Key Laboratory of Language Science and Multilingual Artificial Intelligence at Shanghai International Studies University, China. He obtained a BS in Psychology from East China Normal University and a Ph.D. in Cognitive Neuroscience from Peking University. He worked as a research fellow at the School of Communication Sciences and Disorders, McGill University, Canada, and as a senior speech scientist in nuance communication. His research utilizes experimental methodologies to uncover social and psychological aspects of human communicative processes, including speaker confidence and trustworthiness. While serving as the editor for journals such as *Frontiers in Psychology*, Dr. Jiang published nearly sixty peer-reviewed articles in high-impact journals such as *NeuroImage*, *Journal of Experimental Psychology: Human Perception and Performance*, and *Speech Communication*.

Contents

Preface

Psycholinguistics traditionally investigates and characterizes the psychological processes that make it possible for humans to acquire, comprehend, produce, and use language. This book presents multifaceted aspects of psycholinguistics, emphasizing the link between the latest developments in the field and real-world applications.

There is growing interest among psycholinguistic researchers to find answers to questions such as what are the linguistic and cognitive processes in different cognitive activities, including reading, listening, speaking, decision making, and face-to-face communication? What are the origins, developmental processes, and deficits related to linguistic competence in contexts of natural language use? What are the methodological advances beyond laboratory experiments to address psycholinguistic questions? What are the interdisciplinary demands on psycholinguistic research, especially the needs driven by social media, medical communication, language education, and pedagogy? This book examines a wide range of world languages (including minority ones and dialects), different cognitive processes relevant to language tasks, the populations with normal and abnormal competencies, the merging of novel and state-of-the-art techniques (such as natural language processing, brain–computer interface, virtual reality, etc.) and different real-world applications (including mental health, artificial intelligence, speech pathology, language development) with a variety of topics bridging the gap between experimental and applied psycholinguistics.

We have successfully solicited ten relevant contributions to this book project. To facilitate the reading, we have organized the manuscript into three sections, each of which focuses on one fundamental issue tightly linked to the new advances and real-world applications of psycholinguistics. These sections are "Psycholinguistics Approach: Next Frontiers in Language Acquisition," "Psycholinguistics Interests: From Linguistics Themes to Real-World Issues," and "Towards a Socio-Cultural-Communicative Implication of Psycholinguistic Research."

The first three chapters contribute to a growing topic of exploring cognitive mechanisms underlying L1 and L2 acquisition in learning disabilities with a specialized pedagogical method or implemented in a specific educational context. Research advancements in experimental psycholinguistics are evaluated and applied in educational science. Chapter 1 reports an empirical investigation into foreign language acquisition (FLA) using coaching methodologies, with a focus on psycholinguistic factors in second language acquisition (SLA). The study delves into the intricate interplay of psychological and linguistic elements influencing SLA, particularly language aptitude, anxiety, motivation, and self-regulated learning strategies. Chapter 2 assesses the levels of English Foreign Language (EFL) writing anxiety in inside- vs.

outside-classroom contexts among Arabic-speaking learners of English and discusses the implication of anxiety-provoking factors in L2 pedagogy. Chapter 3 reviews the cognitive and neural aspects of attention in language processing, emphasizing its impact on language development in students with ADHD. Practical strategies for educators are offered, including explicit instruction, guided practice, scaffolded support, skill integration, metacognitive awareness, and differentiated instruction tailored to these learners' unique needs.

The following three chapters showcase three good examples of how psycholinguistic methods can be used to validate/extend linguistic theories, facilitate the optimization of language testing in the field of applied linguistics, and even provide new angles for expanding the key concepts in mental health. These studies will demonstrate the trend of psycholinguistics shifting from theories to resolving real-world applications. Chapter 4 demonstrates how focus theory, a cognitive processing model, can explain how coreferentiality is determined in structures in the absence of a reference and how preference works in case of referential ambiguities. Chapter 5 showcases how psycholinguistic findings can benefit the design of reading comprehension questions for students in engineering to assess their academic reading skills. Chapter 6 provides a psycholinguistic perspective on ways to conceptualize how to address secondary traumatic stress (STS) risk among teachers.

Finally, the last four chapters demonstrate an emerging perspective within psycholinguistic research to address the interpersonal, cultural, and affective nature of human communication. Chapter 7 proposes a trend of applying psycholinguistic research to solve merging real-world imperatives, fostering equitable multilingual development and enabling clinical rehabilitation after language impairment. Chapter 8 provides a psycholinguistic interpretation of "critical communicative competence" and decomposes it into a complex interplay of cognitive, emotional–evaluative, and actional dimensions. Chapter 9 analyzes the psycholinguistic basis of (im)politeness implications in Coronavirus pandemic-related discussions. Chapter 10 demonstrates how rules in language use interact with religious and cultural practices to shape effective communications between counselors and counselees and serve peer counseling practices.

This book highlights the interdisciplinary endeavor across linguistics, psychology, cognitive neuroscience, communication sciences, education, artificial intelligence, and health sciences, among others. It draws upon areas of expertise from a team of experimental and applied psycholinguistics experts, who have made a tremendously impressive collaborative effort on various topics of psycholinguistics.

We believe this book is a novel and timely contribution to the broad field of psycholinguistics. We hope it will reach a large audience for a variety of purposes, including undergraduate and graduate students and professors in academic institutions for teaching and research activities, as well as educators, medical doctors, and policymakers for applying the relevant knowledge to the development of educational tutorials, the building of efficient communicative strategies, and the creation of policies based on latest research findings. We would like to thank the staff at IntechOpen,

especially Mr. Tonci Lucic, for his whole-hearted assistance over the entire process of preparing and publishing the book, and Ms. Jelena Germuth for contacting me about this great opportunity to serve as the book's editor.

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Section 1

Psycholinguistics Approach: Next Frontiers in Language Acquisition

Chapter 1

Psycholinguistic Factors in Second Language Acquisition: Foreign Language Teaching via Coaching

Oksana Chaika

Abstract

This chapter conducts a comprehensive investigation into foreign language acquisition (FLA) using coaching methodologies, with a focus on psycholinguistic factors in second language acquisition (SLA). The study delves into the intricate interplay of psychological and linguistic elements influencing SLA, particularly language aptitude, anxiety, motivation, and self-regulated learning strategies. The research methodology details the design, participant selection, data collection, and analysis methods. Findings underscore the significance of these factors in SLA and their impact on learning outcomes. Implications for language teaching and curriculum development are highlighted, offering insights for educators. The chapter acknowledges limitations and suggests future research directions. This contributes to understanding the complex relationship between psycholinguistic factors and SLA, benefiting both educators and researchers in the field.

Keywords: psycholinguistic factors, second language acquisition, language aptitude, language anxiety, motivation, self-regulated learning strategies, language teaching, coaching

1. Introduction

In recent years, the exploration of psycholinguistic factors in the context of second language acquisition (SLA) has garnered heightened attention, reflecting a deepening interest in understanding the intricate processes that govern foreign language learning [1–4]. As language educators and researchers strive to enhance pedagogical practices [5, 6], a profound comprehension of the psychological and linguistic dimensions that underlie successful language acquisition has become indispensable. It should be noted that from the learning perspective contemporary language learners, not limited to students only, have become far more challenged with life pace and time management in everyday routines, which expressly results in their need and feeling keen to utilize more cutting-edge technologies to enhance the learning outcome. Moreover, these do not merely cover advanced communications technologies and the learners' flare for growing digital skills [7]; they are more and more in search of emotional rather than cognitive satisfaction [8, 9]; hence, coaching

arises here at the right place and at the right time. To this part, the present book chapter embarks on a journey through this dynamic terrain, delving into the realm of psycholinguistic factors in second language (L2) acquisition, on the one hand, and specifically sharpening the focus on the need in applying coaching tools to meet the learning/teaching goals successfully [10], on the other.

To line it up, with the landscape of SLA that is fully multifaceted, as cognitive, emotional, and linguistic elements converge to shape learners' experiences and outcomes [11–13], this work endeavors to (a) bridge theory and practice by exploring recent advancements in the field, thereby rendering an up-to-date perspective on the subject matter; (b) it offers the opportunity to engage with a nuanced synthesis of cutting-edge research and its application to real-world language teaching contexts. In addition, another element of SLA as suggested under the present research refers to (c) the acmeological one, where the value of learners' desire for self-improvement and self-development while mastering a foreign language can hardly be overestimated. To this end, the acmeological approach to FLT and SLA involves the search and use of ways to activate and develop the potential of students, where the role of a foreign language instructor would rather be that of a moderator, mentor, and facilitator, thus, replacing a conventional teacher, and the learners' motivation [14] among the other psycholinguistic factors comes to the front.

Therefore, amid the myriad psycholinguistic factors that interact in the SLA process and highly contribute to the depth of the research, it is the integration of coaching methodologies as a facilitative approach that has not been under research scrutiny yet. It is believed that this contemporary lens would serve as the conduit through which the entwined threads of certain psycholinguistic factors are examined. The result will be a clearer understanding of the interplay between psychological and linguistic variables for effective foreign language teaching (FLT) and SLA and how the appropriate usage of coaching methodologies may enhance impact on and value of learning outcomes.

2. Theoretical framework and conceptual underpinnings

Psycholinguistic factors in SLA have drawn attention of many scholars and are instrumental in elucidating the intricate interplay between psychological and linguistic variables [15–18] and SLA theories are known to differentiate the three main ones: linguistic, psychological, and sociocultural. Next, according to Dayan Liu, Stephen Krashen is viewed as a pioneer in the field of SLA, and his "Monitor Model is seen as an innatist theory within the linguistic group", despite the scholar's critical review of Krashen's Input Hypothesis [19]. The critics taken, Krashen's pivotal role does not become lessened but on the contrary, it extends to catalyzing a transformative shift in pedagogical methodology; his contributions have been fundamental in steering education away from conventional rule-centric methods such as the grammar-translation approach and audiolingualism. Instead, Krashen championed a transition toward more meaning-centered paradigms, most notably exemplified by Communicative Language Teaching (CLT), and as the prevailing approach today, CLT prioritizes effective communication, ushering in a dynamic evolution in language education practices [20, 21]. With Chomsky's theories to follow, those of generative grammar and Universal Grammar, it is stressed how the foundational insights into the innate structures of language acquisition impact both linguistic theory and language teaching approaches [22].

More research has been done into interlanguage pragmatics and L2 writing, which contributes to understanding of language development in real-world contexts and effective writing instruction [23, 24], complexity theory in SLA that highlights the dynamic nature of language learning and its application to language teaching practices [25], Schmidt's Noticing Hypothesis and the importance of consciously attending to language forms as a key element in language learning [26], Swain's Output Hypothesis focused on the role of producing language (output) in language learning and its implications for language teaching methodologies [27, 28], bilingualism and cognitive benefits, as well as their implications for language learning strategies and cognitive development in multilingual contexts, on the one hand, and then how SLA theory and language teaching methodology informed communicative language teaching approaches and understanding of language learning processes [29–32].

Shifting more from linguistic to psychological footages and moving closer to entwine psychology, social culture and modern coaching technologies [10], of utter value is Dweck's work on growth mindset, especially in terms of language teaching, by promoting the idea that learners' beliefs about their abilities can impact language learning outcomes [33], and from a didactic perspective, DeKeyser's research on skill acquisition and explicit instruction provides insights into the role of explicit instruction in language learning, impacting instructional approaches in FLT and SLA [34, 35]. With the above in mind, it is sound to comment that understanding the phenomenal impact of psycholinguistic factors on learning outcome when supported via coaching methodology may help spotlight the benefits in FLT and increase the levels of SLA dynamics.

2.1 Relationship between psychology and linguistics in second language acquisition

The relationship between psychology and linguistics (SLA) is a pivotal area of inquiry that unveils the intricate interplay of cognitive processes and linguistic development. The key insights from recent years' publications highlighting the dynamic symbiosis between psychological factors and linguistic constructs in shaping language learning outcomes (**Figure 1**), under which the following comes to matter: psycholinguistic factors shaping SLA, cognitive mechanisms underlying linguistic acquisition within poly- and multicultural frameworks, language processing and psychological realms, and psycholinguistic insights in FLT.

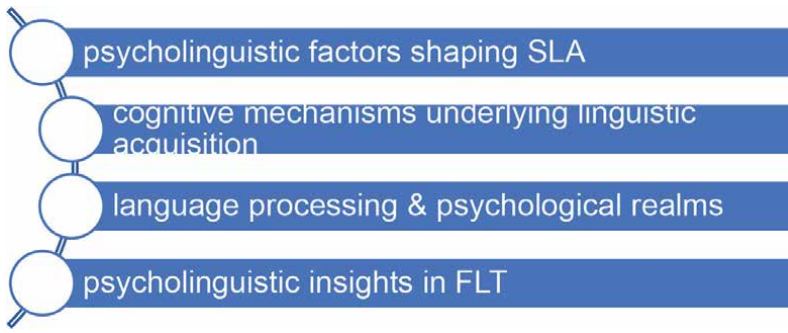

Figure 1.
Symbiosis between psychological factors and linguistic constructs for shaping language learning outcomes.

Following **Figure 1** above, the interaction between psychological attributes and linguistic competence has always been of high interest to scholars, gaining more substantial attention [2, 36, 37]. Language aptitude, a psycholinguistic trait [38], influences learning efficiency; language anxiety, a psychological construct [39], impacts proficiency development; the motivational drive [3, 5, 14, 36] underscores the psychological foundation that propels SLA efforts.

Similarly, the cognitive aspect is underscored by the role of working memory [40] in syntactic processing [41]. The interactionist perspective [25, 32] highlight the symbiotic relation between cognitive processes and linguistic input. At the same time, the overlap between language processing and psychological realms is evident through psycholinguistic research [42] elucidating the cognitive mechanisms underlying language production. This intertwining is illuminated by research on lexical access [43] and sentence processing [44]. Finally, in FLT, the integration of psychological principles enhances pedagogy [36, 45]. In parallel, motivation and anxiety management strategies [12, 36, 39] optimize teaching methodologies, underscoring the symbiotic nature of psychological and linguistic factors.

Therefore, the nexus between psychology and linguistics in SLA is a dynamic domain that underscores the synergy between cognitive and linguistic elements, which integration results in insights that will inform pedagogical approaches and enrich the understanding of the complex processes that characterize language acquisition.

Further, such psycholinguistic factors as language aptitude and motivation, self-efficacy and memory strategies, learning styles and metacognition among the others are increasingly recognized as paramount in shaping language learning trajectories; they help find resonance in a range of recent empirical studies, thus lending credence to their significance in effective FLT [2, 3, 5, 6, 18]. To strengthen the role of and understanding the interplay between psychological and linguistic variables for effective language teaching, it is the coaching skills set that will enable both language instructors and learners to move the needle and reach the desired goals [7–10, 34]. At large and in detail, psycholinguistic factors play a crucial role in both FLT and SLA as they encompass various cognitive, psychological, and linguistic elements that influence *how* individuals learn and use a new language, i.e., their learning strategies, which can be brought to attention and lit up in a coaching conversation with language learners and result in increased awareness and in future self-awareness with how to maintain and grow the capacity and desired skills.

2.2 Coaching methodologies in contemporary language teaching

The International Coach Federation (ICF) defines coaching as follows, "Coaching is partnering with clients in a thought-provoking and creative process that inspires them to maximize their personal and professional potential." [45] and specifies the five core values of coaching, among which is *integrity* as demonstration of honesty, trustworthiness, and transparency in all coaching interactions, and at the same time, upholding professional ethical standards; along with *excellence* that stands for "committing to continuous improvement, professional development, and providing the highest quality coaching services"; *collaboration* which means partnering with clients—under the research, with language learners, "in a respectful and supportive manner, honoring *their* agenda and promoting *self-discovery*"; *respect*, i.e., "recognizing the unique value and dignity of each individual, fostering a safe and

Figure 2.
Key concepts on coaching methodologies in Contemporary FLT and SLA.

non-judgmental coaching space"; and *empowerment* as guiding language learners under the study context "to define and pursue *their* goals, making *their* own decisions and taking responsibility for *their* actions" [46].

From the above-stated and as discussed in leadership and coaching books, it is relevant to focus on the deliverables and for the purpose of the study to outline the key concepts on coaching methodologies in contemporary FLT and SLA (**Figure 2**).

Coaching as *facilitation* makes an integral part of SLA and FLT given that contemporary language teaching embraces coaching methodologies that shift from traditional instruction to facilitation. Educators no longer opt to perform the teaching roles, on the contrary, they guide learners to discover and apply language skills through interactive and learner-centered approaches [10, 36].

Learner empowerment arises as one of the coaching methodologies that strives to empower language learners to take ownership of their language learning journey. It means that it is learners, not their teachers and language instructors, who will actively set goals, reflect on progress, and make informed choices [10, 47].

When it comes to *personalized learning*, coaching methods prioritize language learners' personalized learning paths tailored to individual needs, preferences, and learning styles. Learners engage in activities that resonate with their motivations and interests [36].

Goal setting and self-regulation as part of the acmeological perspective will contribute to language learners' success; coaching by itself in language teaching emphasizes goal setting, metacognition, and self-regulation. Learners develop skills to monitor and adjust their learning strategies [33].

Of exceptional value are *feedback and reflection* as coaching technologies for the learning outcome in FLT and SLA. Coaching methodologies integrate timely feedback and encourage reflective practice. Learners assess their language performance, identify areas for improvement, and refine their strategies [32].

To summarize, the above coaching methodologies foster facilitation over traditional instruction, empowering learners to set personalized goals, self-regulate, and engage reflectively. These dynamic approaches prioritize learner agency, personalized learning paths, and strategic metacognition, enhancing language acquisition outcomes, which makes them inseparable with the psycholinguistic factors in SLA and FLT.

3. Research methodology

Drawing on recent scholarly endeavors, the research design started with the literature review that was followed by the mixed-methods approach. To ensure a comprehensive exploration of the key concepts pertaining to coaching methodologies in contemporary SLA and FLT, quantitative data were collected through surveys (questionnaires) administered to the student participants, assessing their perceptions of [coaching-based] language instruction. Qualitative data were gathered through in-depth interviews with the language educators, eliciting their professional perspectives on coaching methodologies. It helped identify trends and patterns in the teachers and language learners' perceptions. Next, qualitative data from interviews were subjected to thematic analysis, where emerging themes were analyzed to extract nuanced insights from the language educators' narratives. Rigorous measures were undertaken to ensure the integrity and validity of the insights derived.

The study lasted 2 years (spring semester of 2020/2021—Round 1 *Data Collection*, winter semester of 2021/2022—Round 2 *Piloting*, spring semester of 2021/2022—Round 3 *Implementation*, and winter semester of 2022/2023—Round 4 *Finalization*) and involved a diverse cohort of participants, comprising 198 undergraduate students in their 2nd, 3rd, and 4th year of study and 44 language instructors—8 of which agreed to contribute to the experiment as FL moderators, mentors, and facilitators rather than FL teachers; they also were in charge of the Control and Experiment Groups 1–4, from the National University of Life and Environmental Sciences of Ukraine, Kharkiv Humanitarian Pedagogical Academy, Donbas State Pedagogical University, and Luhansk National University named after Taras Shevchenko. In terms of geography, the experiment covered the north, center, and east of Ukraine. The students' age varied between 19 and 25 (almost equally presenting male and female participants), while the teachers covered a bigger span of age difference, from 27 to 59 (female participants in prevailing majority). Additionally, out of the above-mentioned 8 four experienced language educators (FLTs) with expertise in coaching methodologies were purposefully selected to provide insights into the practical implementation of coaching in language teaching.

Control (x4) and Experiment (x4) Groups included from 20 to 24 participants each, with students from various geographic, linguistic, and social backgrounds.

Surveys were conducted in each round of the study in the form of questionnaires and interviews (with students) and panel discussions, brainstorming hours, and interviews (with FLTs). The questionnaires were e-circulated, and the participation was voluntary and anonymous. The first two mentioned activities with FLTs were open meetings where everybody could share concerns, challenges and underline the strengths in SLA/FLT. With the latter, interviews were held in private, allowing more room for FLTs' reflection and self-reflection afterwards.

In Round 1 the study focused on data collection, including (a) literature review to follow the latest trends that may greatly influence SLA, and (b) questionnaires. In Round 2 *Piloting*, coaching dialog templates based on students' answers and the data collected, processed, and analyzed, were designed, and circulated among the FLTs for acquaintance, discussion, and readiness to adopt for new classroom scenarios. To some FLTs, who felt less confident to assume the role of moderator and facilitator rather than the language instructor, professional trainings (growing a coaching mindset) were offered. Two discussion panels—*Understanding Self*, and *Understanding Others*, also contributed to professional growth, increasing confidence of teachers, and building up trust among the teachers/students. Next, another questionnaire was

set for students, after which the groups were formed, and the experiment started. In Round 3 *Implementation*, the coaching technology was fully introduced to see whether change in language aptitude, anxiety, motivation, and self-regulated learning strategies occurs with adoption of coaching conversations with students (and teachers, by the way) in class and after classes, how analysis of questionnaires and role of coaching tools such as goal-setting strategies, reflection, self-reflection, self-regulation, empowerment, etc. may influence academic performance and the final outcome. In the *Implementation Round*, of pivotal value were class observations along with the students' survey to collect the feedback and their perception of coaching way of teaching by FLTs in SLA.

With the collection of data, ethical considerations were upheld, and informed consent was obtained from all participants, ensuring their voluntary participation and anonymity under the Ethics Code and GDPR policies.

4. Results and discussion

The literature review showcases a list of key psycholinguistic factors that are relevant to FLT and SLA and under the research findings can be grouped as follows (**Figure 3**): (a) language aptitude, language exposure and input, (b) language anxiety and anxiety reduction strategies, (c) motivation, self-efficacy and self-regulated learning, (d) attribution theory, (e) learning styles, memory strategies and metacognition, (f) linguistic background and cultural awareness, (g) age of acquisition, personality traits, cognitive style and individual differences, (h) social interactions and sociocultural factors, (i) feedback and corrective input, and (j) affective factors.

Under the research, one of the key psycholinguistic factors that was endorsed via coaching is *language aptitude, language exposure and input*. The findings of the experiment reveal that in an L2 classroom, an FLT would rather play a role of a moderator and facilitator, helping language learners unveil and grow their innate ability or capacity to learn a new language, i.e., language aptitude, which includes such factors as phonological memory, grammatical sensitivity, and the ability to analyze and understand linguistic patterns. The mentioned refers to Round 1 of the experiment, under which the data collected underpinned the advantages of FLA in previous learning settings and disadvantages that mainly referred to apprehension to start speaking a FL (see below).

The main source of information was the 3 questionnaires based on language learners' previous experience, i.e., (1) *Student Past Experience with FLA*, (2) *Student Questionnaire on FLA Strengths and Preferences*, and (3) *Student Questionnaire on Expected Language Learning Model*. All the questionnaires opened with the same Section 1 *Background Information*, where students indicated their names (optional), age, gender (male, female, prefer not to say), major/field of study, and year of study. The other sections varied in number and the content focus.

Questionnaire 1 focused on 3 core sections, with the following headings, closed and open-end questions—*Language Learning Experience, University Experience,* and *Future Improvements.*

Language Learning Experience: 1. How long have you been learning English? 2. What motivated you to start learning English? 3. Have you previously learned any other foreign language(s)? If yes, which one(s)? 4. Which language learning methods or resources do you find most effective? Here the answers varied much, from traditional teaching/learning methods of grammar and vocabulary, reading books in

Figure 3.
Key psycholinguistic factors for SLA.

original, textbooks, language courses, to innovative language apps, immersion, etc. 5. Do you have a preferred time of day for language learning? Students in the 3rd and 4th year of study mainly preferred early afternoon to morning, while sophomores enjoyed morning hours more; no one (100% responses) would fancy evening for language practice. 6. What do you enjoy most about learning English? 7. What aspects or techniques of learning English do you find most challenging? 8. Do you engage in extracurricular language activities? If yes, please specify. These were language clubs, tandem learning via apps, language exchange programs.

University Experience: 1. How has your experience learning English changed since starting at the university? 2. How satisfied are you with the English language courses offered by the university? 3. Do you find the teaching methods effective? Please explain. 4. How do you feel about the interaction with your English teachers/professors? 5. Has your view of English language acquisition changed since you began your studies at the university? 6. What aspects of the university's language program would you like to see improved or changed?

At this stage of the study, there was little difference as to the learning experience from school, privately, and at university; the main comment mirrored a trend of FL teachers' perception in Ukraine, which finds the existing teaching/learning models fully acceptable. Most responses emphasized the 3 teaching/learning styles: *authoritarian*, where traditional FLTs were often seen or expected to be authoritative and strict in their approach to teaching students, which the latter found at Round 1 of

the experiment satisfying and even welcoming; students preferred to have a structured learning environment, as it disciplined them and made follow the rules if they wanted to achieve the result; *focus on grammar*: students perceived traditional FLTs to be right as placing significant emphasis on grammar rules, vocabulary lists, and rote memorization, and that resulted in preferred rule-based and textbook-driven learning techniques in their comments to questions above; and *lack of interactivity*: students saw FLTs relying on one-way communication, where the teacher lectures, and students listen and take notes; that did not make them sound happy about this style of FLA. These would change dramatically in Round 4 of the experiment, where value will be added to self-paced learning and more freedom for innovation and time constraints.

Future Improvements: 1. If you could change one thing about the way English is taught at the university, what would it be? 2. What suggestions do you have for making language courses more engaging and effective? 3. Do you think the university should offer more opportunities for real-life practice and immersion in the language? If so, how could this be achieved? 4. Any additional comments or suggestions about your language learning experience at the university?

The final section of the above questionnaire turned especially powerful, as the students did not expect to be taken out of their comfort zone, and it was the first round of the experiment. Their typical cognitive and behavioral patterns in the beginning spoke of the desire to be instructed and controlled, to be given assignments and advice on how to improve. However, specifically this part of Questionnaire 1 prepared them for more reflection and self-reflection in the coming two others. This is where the students started considering their personal preferences, accounting for natural abilities and already acquired skills, which could help them master the FL in a more engaging and fun way.

According to the students, it was also found that the amount and quality of exposure to the target language in authentic contexts strongly impacted language development (language exposure and input), fully supported in [20–22, 25].

Another psycholinguistic factor revealed in the answers was *language anxiety,* which related to the apprehension or fear experienced by them when using L2. The FLTs in interviews commented on this specific factor, drawing attention to high levels of students' anxiety that hinder language acquisition and communication.

These issues were fully addressed in Rounds 2 *Piloting* and 3 *Implementation*, when with support of coaching tools (endorsing reflection, feedback, emotional regulation, stress resilience, etc.) *anxiety reduction strategies for SLA* were adopted. These were the techniques to reduce language anxiety, such as relaxation exercises, deep breathing, positive self-talk, and gradual exposure to the language. The result was improved academic performance and levels of satisfaction in Round 4 *Finalization*.

Questionnaire 2 unveiled another batch of insightful comments from the students. The main 4 sections investigated strengths of FLA according to students, their learning experience including that from an emotional perception perspective, their learning preferences, and plans for future learning (a *perspective* coaching approach vs. *retrospective*), in particular:

- *Strengths in FLA*:

  1. What do you consider your strengths in learning a foreign language? The answers varied, i.e., listening comprehension, speaking, writing, reading, with none significantly prevailing.

2. What motivates you to learn a foreign language? Depending on the age criteria, the key focus was on travel (lower range), career opportunities (mid-range), and personal interest (higher range).

- *Learning Experience*:

1. How did you initially start learning the foreign language you are studying at university? The answers were homogeneous, i.e., in school, self-study, language courses.

2. Why did you choose this specific language for study? What interests you about it?

3. What aspects of learning a foreign language do you enjoy the most? The interest related to communication and travel (83%), cultural exploration (12%), language structure (5%).

4. Which learning method or approach has been most effective for you? The 73% indicated traditional classroom learning and only 27% referred to language apps.

5. Do you have a favorite language learning tool? The responses followed the previous streamline—mainly textbooks, activity and workbooks, audio files from the books (played in class), listening to music (home and leisure), watching movies in original (home and friends), podcasts (home), language apps, etc.

6. Why is it your favorite? The answers could be explained through behavioral patterns of established and rooted habits, only some students (32%) demonstrated their interest to innovate and act rather independently with a choice of learning tools.

- *Learning Preferences*:

1. What is your preferred way of practicing listening skills in the foreign language? As commented earlier, students enlisted watching films (68%), listening to music (94%), and podcasts (13%).

2. How do you like to practice speaking and conversation in the foreign language? The majority indicated language classes (91%) and speaking with native speakers (83%).

3. What methods or techniques do you use for improving your reading skills in the foreign language? These were books (46%), social media (72%), online articles (3%).

4. How do you practice writing in the foreign language? The students mainly referred to writing as part of their learning journey at university, meaning essays, and other written forms of assignments.

5. Do you prefer a structured classroom environment or self-paced learning? Why? The answers to this question split into the halves. To achieve results and

be in line with the planned outcome, the students (51%) commented that they needed teachers support on time management, planning the modules, and exercising control over the tasks. The other 49% underlined that they felt too stressed when teachers required specific delivery in the limited time, and complained of boredom and dissatisfaction with routines, where there is no room for creativity and innovation, meaning deviation from the curriculum.

- *Future Learning*:

1. What are your goals in FLA? The answers roughly grouped under such categories as fluency (94%), passing language exams (11%), career prospects (74%).

2. Are there specific language skills you would like to improve further? The answers were most likely based on the previous question, which after the processing and analyzing the data, was viewed as a leading question (under the coaching standards). Nevertheless, the responses broke into 83% for speaking fluency, 58% for business correspondence (mainly e-mails) in terms of writing skills, and only 44% for grammar.

3. How can educational institutions better support your foreign language learning journey? That was a hard one. In addition to "I find it difficult to comment", "I'm not an expert in this", "They know better", the suggest was providing students with more flexibility and freedom, which contradicted the expectation of high results that could not be possible without teachers' control and supervision. They craved for freedom, and at the same time 96% of students found time management the biggest challenge.

4. Any additional comments or suggestions related to your experience in learning a foreign language? The students wanted fun (75%), more entertaining classes (93%), less stress and tension (21%), which spoke of their everyday high exposure to stress and need in emotional balance as added value in communication.

These results underline the utter significance of *motivation, self-efficacy, and self-regulated learning,* acmeological component that makes part of these psycholinguistic factors. At this stage of the experiment, the findings speak of the students' internal drive and desire to learn and use a new language. In parallel, they speak of somewhat weak learners' belief in their own ability to successfully learn and use a new language independently. That said, it is only with Rounds 2 *Piloting* and 3 *Implementation* of the experiment, the students started demonstrating more confidence and readiness to improve whether with the FLTs or by themselves, which proved how the adoption of coaching tools for FLA as part of class and out-of-class communication impacted their performance and results. That underscores the statement that inasmuch positive self-efficacy can lead to greater engagement and achievement, ultimately it will lead to self-regulated learning, which means learners' ability to set goals, plan, monitor progress, and adjust learning strategies based on their needs and performance.

Overall, the findings of the study in Round 4 *Finalization* show that the motivated and aware learners are more likely to engage in language activities and persist in their efforts. Furthermore, it is *the attribution theory* that sets out how learners attribute success or failure in language learning. Thus, it is found crucial for SLA and FLT to adopt the coaching methodologies given the credit that attributing success to effort

and strategy use fosters a growth mindset (for both students and FLTs), while attributing failure to lack of ability can lead to decreased motivation.

In Rounds 2 and 3, by identifying and understanding the cognitive and behavioral patterns of language learners, both FLTs and learners could see what most contributed to students' success individually or in a group. Then, it becomes evident why it is the turn of *learning styles, memory strategies, and metacognition* to come to the forefront. It was with Questionnaire 3, that questions helped FLTs understand the students' learning styles and preferences. In particular, the survey aimed to discover the below:

- *Current Learning Situation*:

  1. Describe your current language learning situation. Are you learning in a formal classroom, online, or through self-study?

  2. How often do you engage in language learning activities?

- *Benefits of Language Learning:*

  1. What do you enjoy most about learning this language?

  2. How has learning this language enriched your life, or opened up new opportunities?

  3. What language learning tools or resources do you find most effective?

- *Drawbacks and Challenges*:

  1. What are the biggest challenges you face in your language learning journey?

  2. Are there any aspects of the language learning process that you find frustrating or difficult?

  3. How do you handle language-related setbacks or obstacles?

- *Desired Changes and Improvements*:

  1. If you could change one thing about your current language learning situation, what would it be?

  2. Are there specific areas where you believe your language learning experience could be improved?

  3. What kind of support or resources would help you progress in your language studies?

- *Future Language Learning Goals*:

  1. What are your future language learning goals or aspirations?

  2. Are there any specific language-related achievements you aim to accomplish?

- *Additional Comments:*

  Please share any additional comments or thoughts regarding your language learning experience.

As provided above, the questions of Questionnaire 3 may look similar or repetitive to those in the previously described questionnaires. Nevertheless, there is a huge difference in phrasing them. Such structure and formulation were intentionally designed to read the students' answers again, but from a different angle. The coaching idea of empowerment and personalized learning, already at the stage of data collection, influenced the thinking patchwork and encouraged students to be more open-minded and becoming prepared for the successful outcome, via setting goals in advance, reflection, feedback, and facilitation. Of critical importance here was the focus on the students' learning styles.

Learning styles are *preferred* ways of learning; these can be either visual, or auditory, or kinesthetic (Questionnaire 1). In Rounds 2 and 3, it was found that adapting teaching methods to match learners' styles can enhance comprehension and bring more insights when the FLT wearing a moderator's hat asks coaching questions accordingly. Memory strategies stand for techniques used to remember and retain new language material; mnemonics, visualization, and association were common memory strategies, which were identified as strengths of language learners instead of being advised for usage or adoption. Finally, metacognition had to be considered as it is learners' awareness and control of their own cognitive processes. At large, metacognitive strategies involved planning, monitoring, and evaluating language learning tasks, which mirrored the typical coaching management cycle in effective communication.

In Round 4 *Finalization*, another insight from classroom observations, final questionnaires/surveys and FLTs' interviews was the following: in SLA and FLT, one cannot neglect learners' linguistic background and levels of their cultural awareness. Linguistic background is extremely important as it is the learners' first language and its linguistic features can impact the acquisition of a new language, L2.

Cultural awareness is also significant, it is prerequisite for SLA as proper understanding of the cultural nuances and context associated with the new language; cultural awareness enhances language use and communication effectiveness, which can be exclusively strengthened with learner empowerment as a key coaching methodology in SLA and FLT.

Round 3 of the experiment outlined that another psycholinguistic set of factors was *age of acquisition, personality traits, cognitive style, and individual differences*. Age of acquisition helped the FLTs navigate and choose the right strategies for communication, as it is the age at which a learner is exposed to a new language. It is commonly believed that younger learners tend to acquire languages more easily and with native-like pronunciation. Cognitive style expressly links to age of acquisition and individual differences, it is precisely about the individual differences in how learners process information: for instance, field-independent learners tend to focus on details, while field-dependent learners see the bigger picture. Personality traits, especially such as extroversion or introversion, can influence how learners interact with the new language and culture (87% of students commented that misunderstanding is likely to take place mainly when their fellows, colleagues, friends are just different by nature, introvert vs. extravert). Individual differences in a whole speak of the psycholinguistic factors and similarly to cognitive abilities, personality traits, and learning styles contribute to individual variation in language learning.

In Round 3 of the experiment, the focus was laid on the new arrangement of communication in class. Every FL course started with students setting their personal and group goals, revising their strengths in SLA, and seeing to the benefits of the group. It helped them set self-regulating strategies for their learning journeys, encouraged feedback and reflection, that in the end of every class, module, term, and course was skillfully facilitated by the FLTs. Besides, it was the role of FLTs to ensure learner empowerment and see to the students' progress with their personalized learning.

With feedback and reflection in Rounds 2, 3, and 4, *social interaction and sociocultural factors* underlined the significance of engaging in conversations and interactions in the target language as the interaction enhanced language acquisition through real-life communication, and the cultural and social context in which language learning took place. It was clearly transparent how cultural norms and societal expectations impacted language use and learning outcomes. Then, coaching as facilitation became a game-changer in arising the self-awareness and willingness to engage and act more proactively in diversified multicultural environments.

In Round 3, *feedback and corrective input* refer(red) to timely feedback from either party in FLT, in particular, – either FLTs or learner, and corrective input from FLTs or peers helped learners identify and correct language errors. Coaching with its focus on constant feedback and reflection—retrospective and perspective, endorsed the value in SLA and FLT.

Ultimately, according to the feedback collected in Round 4, the affective factors are emotional factors such as self-esteem, attitude toward the language and culture, and perceived social support play a role in language learning. The FLTs acknowledged in the end that raising learners' awareness through coaching technologies led to visible results, and the changes for the desired effect were more frequently observed in the learning environment. It directly paired with goal setting and self-regulation that altogether enhanced quality in SLA and FLT. The self-assessment and self-evaluating tests by students brought a sharp increase in academic performance and self-satisfaction given the received results (from 57–96% in EGs as compared to 73–81% in CGs, accordingly).

These findings regarding psycholinguistic factors and coaching methodologies emphasize that everything is interconnected, although learning/teaching styles can vary among learners and language instructors. However, recognizing and addressing these factors via coaching can significantly impact the effectiveness of FLT and SLA.

The next part of the study connects the experiment results with the literature review on the discussed above, which can be seen as an endorsing tool to encourage FLTs to consider reviewing their methodological vision and interpretation for FLT/SLA.

4.1 Language aptitude: a catalyst for successful L2 learning

The exploration of language aptitude within the landscape of SLA reveals both commonalities and distinctions that contribute to successful L2 learning outcomes. Noteworthy scholars like Noam Chomsky and Stephen Krashen provide insightful vantage points for understanding the intricate interplay of language aptitude in language acquisition [20–22]. Chomsky's groundbreaking theories, including generative grammar and Universal Grammar, propose an innate cognitive foundation for language learning, although later challenged by Michael Halliday and his followers (functional linguistics perspective), Adele Goldberg and Charles Fillmore (construction grammar), Stephen Pinker and Paul Smolensky (connectionist models), George Lakoff and Mark Johnson (cognitive Linguistics), Lev Vygotsky (sociocultural theory). Here, language aptitude emerges as a common denominator, acting as a

bridge between Chomsky's assertions and effective L2 learning. Those with higher language aptitude appear predisposed to recognizing linguistic patterns, aiding in intuitive comprehension.

In contrast, Krashen's Input Hypothesis, criticized by Liu [19], shifts the focus toward comprehensible input as a catalyst for language acquisition. Language aptitude, under this framework, acts as an enhancer. Individuals endowed with a robust language aptitude possess a heightened ability to glean meaning from input, enabling more seamless vocabulary acquisition and syntactic understanding [20, 21].

Diving deeper into the discourse, Diane Larsen-Freeman's complexity theory adds an additional layer. It emphasizes that individuals with greater language aptitude might adeptly navigate not only linguistic intricacies but also the cognitive adaptability demanded in diverse language contexts [25].

The contrast emerges when considering the broader psycholinguistic landscape. Grigorenko and Sternberg's work accentuates that language aptitude intertwines with motivation, memory capacity, and individual learning styles. This intricate interplay underscores the nuanced nature of L2 learning, where aptitude interacts with other cognitive factors.

To conclude, the comparative perspective of language aptitude underscores its multifaceted role in L2 learning. Chomsky's innate predisposition aligns with Krashen's input-driven paradigm, while Larsen-Freeman's complexity theory broadens the scope. Simultaneously, Sternberg's insights offer a contrasting dimension [38], emphasizing the interconnectedness of aptitude with motivation and memory. It is within these intersections and divergences that the true essence of language aptitude's role in successful L2 learning emerges, providing a nuanced lens to the process of language acquisition.

4.2 Language anxiety: navigating emotional barriers

Within the realm of SLA, the phenomenon of language anxiety emerges as a distinctive yet interconnected thread that weaves through the journey of L2 learners. Earlier mentioned Chomsky and Krashen, while primarily focusing on linguistic aspects, indirectly contribute to the discourse by shedding light on the emotional facets of language learning [20–22]. The theories of generative grammar and Universal Grammar lay the foundation for understanding the cognitive complexities of language acquisition. However, these theories indirectly illuminate the emotional terrain as well. The innate structures shape not only linguistic proficiency but also the perception of challenges and anxieties that learners encounter. It means that in FLT and SLA, by acknowledging the cognitive intricacies, Chomsky's theories provide a backdrop against which the emotional landscape of language anxiety gains perspective.

In a contrasting light, Krashen's Input Hypothesis emphasizes the role of comprehensible input in language learning. Although not directly addressing emotional barriers, this perspective aligns with the notion of reducing anxiety-induced cognitive overload. To be borrowed and implemented in SLA and FLT is the possibility to create an environment of understandable and relatable input, under which language learners are better poised to navigate language anxiety [20, 21].

An additional layer to this exploration emerges through the lens of Elaine Tarone's research in interlanguage pragmatics and second language writing. Her work extends beyond linguistic development to acknowledge the intricate interplay between language and identity. Language anxiety, often rooted in fears of miscommunication or judgment, interacts with learners' self-perceptions and sense of belonging. Tarone's insights contribute to the understanding of how emotional barriers intertwine with

linguistic challenges [23]. In order to overcome these difficulties or challenges in FLT and SLA, it is advisory to consider the acmeological aspects and approaches to language education and endorse maximized learners' potential via coaching reflection and self-reflection practices, by analyzing individual differences, identifying personalized learning paths, and attributing the learning process with appropriate goal setting and emotional self-regulation.

When contextualized within the broader framework of Carol Dweck's growth mindset, learners' beliefs about their abilities become integral to the discourse on language anxiety. Dweck's work transcends disciplinary boundaries, resonating in language learning environments. A fixed mindset, where learners believe their language skills are static, may exacerbate language anxiety. In contrast, a growth mindset fosters resilience, allowing learners to perceive challenges as opportunities for growth [33], which is from beginning to end the integrity of coaching.

In sum, the comparative exploration of language anxiety reveals its intricate interplay with cognitive theories, linguistic development, and self-perception. Krashen and Chomsky [20–22] offer distinct insights that indirectly touch on the emotional dimension, while Tarone and Dweck broaden the narrative to incorporate identity and beliefs. It is within these intersections that the complex fabric of language anxiety is woven, navigating the emotional barriers that learners encounter on their path to L2 proficiency. To overcome the barriers, the knowledge and application of coaching tools may best serve the goals and objectives of FLT and SLA.

4.3 Motivation: fostering a positive learning drive

In the dynamic landscape of SLA and FLT, the undercurrent of motivation emerges as a powerful force, propelling learners toward proficiency. Eminent scholars have collectively delved into the intricate web of motivational factors that shape language learning journeys [2, 11–15, 38]. Dornyei [2] explores the psychology of second language acquisition, unraveling the interplay of motivation and its role in shaping language learners' success, others delve into the motivational dynamics that drive change, stability, and context in language learning, highlighting the evolving nature of motivation. Dewaele et al. [11] provide insights into classroom emotions, attitudes toward English, and teacher behavior, shedding light on how learners' willingness to communicate is intricately connected to emotional experiences. Li and Han [12] contribute to the narrative by examining the predictive effects of enjoyment and boredom on learning outcomes, emphasizing the nuanced interplay between affective states and motivation. The extensive work of Pekrun and colleagues navigates the landscape of achievement emotions and academic performance, uncovering the reciprocal effects that emotions and motivation exert on each other, while Wang enriches the discussion by exploring how L2 enjoyment and academic motivation impact Chinese EFL students' engagement, underlining the role of positive affect in driving learning participation [13, 14]. Taking that further, [37] contributes to the dialog on positive psychology perspectives in foreign language learning and teaching, recognizing the significance of motivation in creating an uplifting learning environment, and [38] illuminates the concept of intelligence, underscoring the multidimensional nature of motivation and its influence on cognitive processes.

The findings also underscore the importance of understanding motivation as a psychological factor and a coaching focus in SLA and FLT.

Following the survey results and comments of the language instructors, and as demonstrated above in **Figure 4**, it should be noted that learners' motivation can

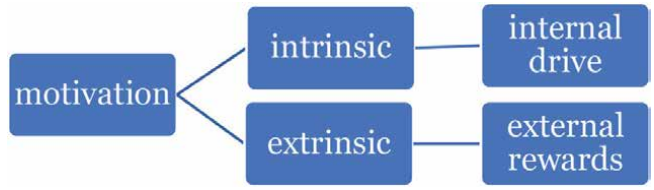

Figure 4.
Types of motivation of language learners in SLA.

be intrinsic (internally driven) or extrinsic (seeking external rewards). The study results reveal that intrinsic motivation tends to lead to more sustainable and effective language learning.

Therefore, in this multifaceted narrative, motivation emerges as a beacon guiding learners through the intricacies of language acquisition. As scholars and researchers collectively emphasize, motivation fosters a positive learning drive. It transcends mere cognitive constructs, intertwining with emotions, attitudes, and social dynamics, shaping a holistic approach to language learning.

4.4 Self-regulated learning strategies: empowering learners

Recently, SLA and FLT have witnessed a paradigm shift as scholars delve into the empowerment of learners through self-regulated learning strategies. Scholars are exploring the multifaceted dimensions of self-regulation, unveiling its profound impact on language learners.

Dewaele et al. [11] delves into classroom emotions, a precursor to self-regulation, recognizing that learners' emotional states significantly influence their ability to regulate their learning processes. Emotions, intertwined with motivation, serve as driving forces for learners to employ self-regulation strategies effectively [11, 15]. In Li and Han [12], the study further complements this research area, offering insights into the predictive effects of enjoyment and boredom on learning outcomes. These affective states play a critical role in the self-regulated learning process, as learners adjust their strategies based on their emotional experiences. As stated in Pekrun et al. [13], extensive research on achievement emotions underscores the reciprocal relationship between emotions and self-regulation. Learners who effectively manage their emotions are better equipped to engage in metacognitive processes, plan their learning strategies, and monitor their progress. This interplay shapes learners' capacity to regulate their learning trajectories successfully.

Positive psychology perspectives add a layer to the discourse by emphasizing the role of positive emotions in self-regulation. Learners who experience positive emotions are more likely to engage in adaptive self-regulatory behaviors, fostering a proactive approach to language learning.

The implementation of coaching technologies and recognition of outstanding value of psycholinguistic factors in SLA may dramatically influence and increase academic performance, highlighting the significance of self-regulation in mediating the relationship between emotions and learning outcomes. Learners who harness self-regulation strategies effectively can manage emotional responses, enhancing their engagement and cognitive processing.

The research findings point to the pivotal role of self-regulated learning strategies in empowering language learners. Self-regulation integrates emotions, motivation,

and cognitive processes, offering learners the tools to navigate the challenges of SLA autonomously. This empowerment aligns with contemporary pedagogical approaches, emphasizing learner agency and self-directed learning, thereby contributing to a holistic and effective language acquisition journey.

5. Empirical findings and analysis: coaching technologies applied

The findings demonstrate that the integration of coaching methodologies has sparked a paradigm shift, revolutionizing traditional language teaching approaches. The exploration of empirical findings and analysis concerning the application of coaching technologies in combination with the comprehensive awareness of the role of psycholinguistic factors for SLA and FLT adds a dynamic layer to this learning and teaching transformation. Investigation into the adoption of team coaching competencies for innovative language instruction in higher education paves the way for a comprehensive understanding of the role of coaching technologies. The study navigates the complex terrain of polylingual and polycultural dimensions, highlighting the potential of coaching technologies to transcend cultural and linguistic barriers, resonating with the psycholinguistic factors of language background and cultural awareness of language learners [10].

Another focus on positive psychology in FLT and SLA research enriches the discourse. This exploration underscores how coaching technologies can facilitate the infusion of positive psychological principles into language instruction, fostering a conducive environment for effective learning. Role of enjoyment and positive emotions in EFL fosters students' academic motivation and engagement, bridges the gap between coaching technologies and affective states. This is to emphasize again how technology-mediated coaching interventions can cultivate a positive emotional climate, enhancing motivation and engagement in language learning.

This empirical exploration unveils the potential of coaching technologies in enhancing teacher efficacy, subsequently translating into enriched engagement levels among language learners. In addition, it collectively indicates that coaching technologies wield the potential to revolutionize language acquisition. From fostering positive psychological climates to transcending cultural divides and empowering both teachers and learners, coaching technologies emerge as catalysts for dynamic pedagogical shifts. The interplay between technology, coaching, and language learning serves as a promising avenue for innovative practices, promising enhanced engagement, motivation, and holistic language development.

The analysis of the empirical findings evidences that coaching technologies hold the promise to reshape language teaching methodologies. The transformative impact they exert aligns with the evolving needs of learners in a technology-driven world. These empirical insights invite educators and researchers to explore the synergistic possibilities of coaching technologies in cultivating effective language learning ecosystems, steering the SLA landscape toward a future marked by empowerment, engagement, and achievement.

6. Implications and limitations for language teaching and curriculum development

The core findings of this exploration shed light on the pivotal role played by psycholinguistic factors in shaping the efficacy of FLT and SLA within coaching

paradigms. Through a synthesis of both empirical and theoretical perspectives, this work unveils the ways in which language aptitude, anxiety, motivation, and self-regulated learning strategies interact to influence learners' language acquisition trajectories. The implications of these findings reverberate within the realm of language education, offering educators and practitioners actionable insights for curriculum design and instructional strategies.

However, this scholarly journey does not shy away from acknowledging its limitations. The research result candidly addresses potential biases, scope constraints, and methodological intricacies that may have influenced the outcomes. By embracing transparency in its approach, it strives to maintain a scholarly integrity that is integral to the academic discourse.

7. Conclusions

The analysis of the findings results to evidence the enhanced value of language learners' learning outcomes with the application of coaching methodology for FLT. The student and educator surveys (questionnaires and interviews) facilitated a comprehensive understanding of coaching methodologies as an effective tool to enhance quality of FLA in- and outside the classroom. In addition, the psycholinguistic factors in SLA were presented at a different and much more distinguishable angle when paired with coaching.

As the study concludes, it simultaneously opens the doors to future research endeavors. The dynamic nature of SLA and FLT, coupled with the evolving landscape of coaching methodologies, beckons researchers to traverse uncharted territories, unravel novel dimensions, and continue unraveling the intricate tapestry of psycholinguistic factors in language acquisition.

In summation, the work amalgamates recent research insights and coaching frameworks to offer a comprehensive understanding of the multifaceted interplay between psychology and linguistics within language learning contexts. It is believed that the exploration into the specifics of psycholinguistic factors in SLA and FLT through the lens of promoting the coaching mind-set in the educational environment is dynamic and informative, anchoring theory in practice and advancing the discourse in foreign language education.

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Chapter 2

An Investigation of Foreign Language Writing Anxiety Inside Vs. Outside Classroom among Arabic-Speaking Learners of English in Saudi Arabia

Rashidah Albaqami

Abstract

Empirical evidence suggests that anxiety is considered an obstacle that hinders the process of foreign language development, including writing anxiety. This research attempts to investigate the levels of English Foreign Language (EFL) writing anxiety inside- vs. outside-classroom contexts among Arabic-speaking learners of English and to determine the anxiety-provoking factors in these contexts and the potential remedies for them. A total of 15 female Arabic-English majors students at Taif University in Saudi Arabia were interviewed in the study. The findings suggest that the participants suffer from high levels of writing anxiety in the classroom context, whilst they experienced low levels of anxiety in the outside-classroom context. This may have originated from the fact that the in-classroom context entails severe anxiety-provoking factors such as fear of judgements from others, time constraint, unfamiliar topics, striving for perfection, inadequate practice, former painful experience, lack of supporting resources and so on. The participants account for the low levels of anxiety when writing in the outside-classroom context that the aforementioned triggers do not exist or that some of them hardly occur when writing online, for instance. Besides, the outside-classroom context permits stress-free methods such as accessing supporting resources online. The study concludes with some pedagogical implications.

Keywords: Arabic learners, English, foreign language, Saudi Arabia, writing anxiety

1. Introduction

Krashen's Affective Filter Hypothesis [1] suggests that learners' feelings negatively affect the development of second/foreign language. Negative emotions including low motivation, low self-confidence and anxiety function as filters that hinder language development.

According to Horwitz et al. ([2], p. 125), *Anxiety* is described as 'a subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of

the automatic nervous system'. Foreign language learners often feel worried and nervous when learning or using a second or foreign language. Foreign Language Anxiety (FLA), also called as *Xenoglossophobia*, is defined as 'a distinct complex of self-perceptions, beliefs, feelings, and behaviours related to classroom language learning arising from the uniqueness of the language learning process' ([2], p. 128). It has been established that FLA has several aspects, including reading, listening, speaking, and writing anxiety. Second Language Writing Anxiety (SLWA) is described as 'a general avoidance of writing and of situations perceived by the individuals to potentially require some amount of writing accompanied by the potential for evaluation of that writing' ([3], p. 4). For the purpose of the present study, English foreign language (EFL) writing anxiety and English second language (ESL) writing anxiety will be referred to as the same.

Although writing is a fundamental productive language skill, countless EFL learners encounter several challenges in writing. Empirical evidence suggests that anxiety is considered an emotional block and an obstacle during the process of foreign language development, including writing anxiety [4–6]. Evidence of interlanguage representations can be found in foreign language learners' writing, which suggests that they face a potential learnability problem. Findings of early research suggest that not-target-like representations increase when writing anxiety increases (e.g. [7–13]). Empirical evidence suggests that high-anxious learners are acknowledged to attain poorer foreign language command (e.g. [14]), including lower writing performance (e.g. [15, 16]). This is evident in instructional settings rather than naturalistic settings.

Learners write for real-life purposes not to pass or get good grades in classes. The majority of studies in the field has paid extensive attention to classroom anxiety. This brings up the question of whether EFL learners would experience the same levels of anxiety while writing in real-life contexts such as writing mails or blog posts. Thus, the present study contributes to the field by shedding some light on some psychological facets of writing, explicitly writing anxiety not only in classroom contexts. The purpose of this qualitative study is to determine if Arabic-speaking learners of English experience the same writing anxiety levels in naturalistic as well as instructional settings and if the anxiety-provoking factors of these contexts are different from the learners' perspectives. A total of 15 female Arabic English majors students at Taif University in Saudi Arabia participated in this study. They responded to a face-to-face interview that was advanced to determine their EFL writing anxiety levels and their triggers in different contexts (i.e. instructional vs. naturalistic) from their own perspectives.

2. Previous research

Early research on FLA studies has reported a steady negative correlation between FLA and learners' performance (e.g. [15, 16]). There has been a contemporary trend to determine more particularly not only the levels of FLA but also the triggers of FLA and the relationship of FLA to different foreign language aspects. A large and growing volume of research has paid extensive attention to speaking anxiety (e.g. [17, 18]), yet more work has been conducted lately on reading anxiety (e.g. [19, 20]), listening anxiety (e.g. [21, 22]) and writing anxiety (e.g. [4, 5]).

Research on ESL/EFL writing demonstrated that anxiety has great impacts on writing (e.g. [3–6, 15, 16, 23–25]). A number of studies revealed that learners with high rates of writing anxiety wrote simpler and shorter pieces of writings with less quality than their low-anxious peers did according to Faigley et al. [26] and

Hassan [3]. Empirical evidence also showed that high-anxious learners have poor self-confidence (e.g. [3]) and achieved poorer scores (e.g. [6]), which indicates low language competency. MacIntyre and Gardner [27] claimed that FLA reduces when the learners' proficiency level gets advanced.

A large number of researchers (e.g. [2, 28–30]) have paid extensive attention to Foreign Language Classroom Anxiety (FLCA), with a special focus on both internal and external triggers of FLCA. MacIntyre and Gardner [31, 32] claimed that FLCA may perhaps be amplified by extreme self-evaluation, uncertainty over disappointment, and fear of judgements from others. All these result in hindering language development according to MacIntyre and Gregersen [30]. Cheng [15, 16] examined causes related with ESL writing anxiety, and he also designed the Second Language Writing Anxiety Inventory (SLWAI), to measure the levels of ESL writing anxiety. Cheng [16] tested the scale and the three subscales (i.e. Somatic Anxiety, Cognitive Anxiety, and Avoidance) on a sample of 421 EFL Taiwanese learners. Cheng [16] concluded that both the overall scale and the subscales of the SLWAI are fundamentally reliable and valid.

In the same vein, a number of studies attempted to capture some anxiety-provoking sources in a class across different language learners. Lin [33] conducted a qualitative study to investigate the reasons that trigger writing anxiety among university students (n = 16) in Taiwan. The findings revealed five key triggers including time restrictions, instructors' evaluation, peer's competition, uninterested topics and uniformed layouts. Likewise, Zhang [6] identified some causes of writing anxiety including former painful experience, linguistic challenges including poor grammar and vocabulary knowledge, inadequate practice, fear of tests (TEM), poor knowledge of relevant information, poor self-confidence, concern over harmful evaluation, inadequate writing methods and insufficient informative feedback.

Besides, Genç and Yaylı [4] reported that the Turkish learners suffered from more FLA writing anxiety during examinations than in class or at home. Topic choice, gathering supporting ideas, time constraint and insufficient informative feedback were established to be the most anxiety-provoking reasons for the learners, which were tracked by linguistic challenges such as grammar, brainstorming, and organisation of the relevant ideas. More interestingly, they listed other sources of high FLA writing anxiety including the sense of perfection.

Furthermore, Nagahashi [34] examined the effectiveness of cooperative learning methods for decreasing foreign language anxiety among freshman Japanese students (n = 38) who joined the Akita University for English Academic Purposes course. The findings suggest that planned cooperative learning activities may be successful in decreasing language anxiety by offering a non-threatening, supportive setting in which the learners can advance their language skills.

Although extensive research has been carried out on EFL writing anxiety, no single study compares EFL writing anxiety in the inside- vs. outside-classroom contexts from the learners' perspectives. The current research attempts to fill this gap by affording learners' opinions not only on the levels of their FLA writing anxiety but also on its triggers and the potential remedies. The majority of the studies offers a list of causes suggested from the researchers' opinions, but only a few of them reported the learners' opinions (e.g. [23, 25]). Thus, this study measures the level of EFL writing anxiety experienced by Arabic English majors in different contexts. Furthermore, it explores the reasons why Arabic EFL learners feel anxious about English writing inside vs. outside classroom and offers some suggested potential remedies from the learners' perspectives.

The findings of this study may help to advance EFL learning and teaching, for example, generating a stress-free writing setting, pinpointing high-anxious learners and determining the underlying triggers of learners' unsuccessfulness to be tackled. Based on the reported triggers, some learning and teaching methods were suggested to decrease EFL writing anxiety and support EFL writing performance accordingly.

3. The empirical study

The study endeavours to capture the levels of EFL writing anxiety in different environments and explore the leaners' views on the updated anxiety-provoking sources of their EFL writing anxiety nowadays. Also, it suggests some potential remedies from the learners' perspectives.

3.1 Research questions

This study set out to answer the following questions:

1. What are the learners' levels of EFL writing anxiety in in-class vs. out- of-class contexts according to their self-reported proficiency levels?

2. What are the anxiety-provoking factors in in-class vs. out- of-class contexts from the learners' perspectives?

3. What are the methods that the learners often use to reduce EFL writing anxiety in in-class vs. out- of-class contexts?

3.2 Research design

This study attempts to measure the levels of EFL writing anxiety in inside- vs. outside-classroom contexts among Arabic learners of English in Saudi Arabia from the learners' perspectives. In this vein, it also endeavours to identify the up-to-date triggers of EFL writing anxiety in in-class vs. out- of-class contexts from the learners' perspective. Besides, it proposes some potential solutions from the learners' perspectives. To achieve the study purposes, a total of 15 female Arabic-English majors students at Taif University in Saudi Arabia participated in this study. The informants' ages ranged from 19 to 22 years (M = 19.87, SD = 0.74). They fulfilled all the admission requirements including achieving 47 in STEP. All of them must take 3 hours of writing courses (i.e. basic, intermediate, advanced) in one writing course each semester for three succeeding years. However, the participants were not classified according to this standard due to the fact that all of them completed the course successfully and that their scores are not based on a standard scale. Since the participants were asked to self-rate their writing anxiety, they were also asked to self-report their linguistic proficiency levels in EFL. The researcher attempted to determine the relationship between their self-reported linguistic-proficiency levels and their self-reported levels of writing anxiety.

A semi-structured interview research method was adapted in the current qualitative study. As suggested by Patton [35], a semi structured-interview is planned to gather in-depth responses from the participants and to set sharp borders of questions in evading broader participant responses. To achieve the study purposes,

15 participants were interviewed, in order to capture their own perspectives. This tool aimed to encourage the participants to give extra details and share their feelings and opinions related to the levels, triggers and any potential solutions of their writing anxiety.

The data collection tool consists of a background section that collected demographic data of the participants such as age and self-rated proficiency levels (1 = elementary, 5 = advanced) and then three open-ended interview questions. So as to answer the first research question, the levels of EFL writing anxiety of the participants were assessed by the first question in the interview. The mean scores were inspired by Zhang's [6] classification: high level of anxiety for a mean score over 65, low level of anxiety for scores lower than 50 and moderate level for scores between 50 and 65. To simplify the 1–100 scale, the researcher used a short version (1 = low anxiety, 10 = high anxiety). Initially, the participants were asked if they experienced anxiety while writing and then they were requested to rate the extent to which they felt anxious while writing inside vs. outside the English classroom. Whereas, the second question aimed to determine the sources of EFL writing anxiety during the process of writing inside vs. outside the English classroom. The third question explores the methods they often use to decrease their writing anxiety in the classroom vs. out of the-classroom and allows them to recommend any further methods that they think can help.

After completing the writing courses in the program, the participants were invited to share their feelings and opinions in a face-to-face interview that took approximately 20–25 minutes for each participant. The participants were interviewed through a digital pen recorder. The participants were encouraged to feel relaxed and frankly share their writing experience and what triggered their anxiety during the phase of writing in class as well as out of class.

Some of the interview questions were inspired by previous research (i.e. [4, 33, 36]). Additional questions were included in order to meet the nature of the study. The participants were inquired to (a) rate their levels of EFL writing anxiety they often experienced in inside- vs. outside-classroom contexts (if any), (b) mention the anxiety-provoking triggers of writing inside and outside of classrooms including individuals and conditions and finally (c) clarify their methods of decreasing writing anxiety and recommend any further methods to diminish FLA writing anxiety in the -classroom vs. out of the classroom. With these open-ended questions, the participants freely communicated their own feelings and perspectives.

Ethical consideration was taken into account, and all of the participants signed informed consents. The Participants were compensated for their participation (SRA 50 gift cards). The design was piloted (n = 3), and necessary adjustments were made accordingly. Three experienced EFL teachers, then, examined the research tools and gave their consent afterwards. The data collection was completed in 2 weeks.

As far as the qualitative analysis of this study is concerned, the researcher analysed the data using a constant comparison approach by means of pattern-coding method (e.g. [33, 37–39]) for the emerging themes. The researchers searched for similar assertions that belonged to different themes emerging from the learners' views and then intellectualised them into numerous key concepts. That is, their responses were constantly compared and then distributed into subdivisions, which were categorised as codes in view of the classifications. Finally, the frequencies and percentages were gauged through the numbers of replies with the same codes in each class. In the discussion section, some examples of the participants' responses will be anonymously shared with digits (e.g. interviewee no. 8) to maintain high confidentiality.

4. Results

Data collected from the interview were analysed and discussed with respect to the research questions regarding the anxiety levels and triggers and the methods of reducing EFL writing anxiety from the learners' perspectives.

4.1 The levels of EFL writing anxiety in different environments among Arabic-English majors with different self-reported proficiency levels

4.1.1 Research question 1: what are the learners' levels of foreign language writing anxiety inside-class vs. outside-class contexts?

The first research question explores the most EFL anxiety-provoking environment from the learners' perspectives with respect to the writing skill according to different self-reported proficiency levels. All the participants agreed that they experienced FLA writing anxiety in the two contexts. Nevertheless, the levels of foreign language writing anxiety largely vary in the two contexts. The results show that the participants suffered from high levels of EFL writing anxiety in the in-classroom context (M = 7.87, SD = 1.25). On the other hand, they experienced low levels of EFL writing anxiety in the outside-classroom context (M = 3.13, SD = 1.13), as **Table 1** shows.

The levels of FLA writing anxiety in the inside-classroom context vary from 1 to 5, whereas the levels of FLA writing anxiety in the outside-classroom context vary from 6 to 10, as **Table 2** shows. This suggests that the percentage of EFL writing anxiety inside the classroom is higher than that outside the classroom. The participants in the

Anxiety levels	no.	M	SD	Minimum	Maximum
In-class	15	7.87	1.25	6	10
Out-of-class	15	3.13	1.13	1	5

Table 1.
The learners' writing anxiety levels in-class vs. out- of-class.

Settings	no.	Anxiety Levels	Valid percentage
In-class	3	6	20.0
	2	7	13.3
	5	8	33.3
	4	9	26.7
	1	10	6.7
Out-of-class	1	1	6.7
	3	2	20.0
	6	3	40.0
	3	4	20.0
	2	5	13.3

Table 2.
The percentage of the learners' writing anxiety levels in-class vs. out- of-class.

Settings	Proficiency levels	no.	Mean	SD	Minimum	Maximum
In-class	Low-inter	4	8.22	.67	6	10
	High-inter	9	8.00	1.83	7	9
	Advanced	2	6.00	.00	6	6
Out-of-class	Low-inter	4	3.00	1.41	1	5
	High-inter	9	3.00	1.12	4	4
	Advanced	2	2.00	.00	1	5

Table 3.
Writing anxiety levels according to the learners' proficiency levels.

in-classroom context were found to suffer from greatly higher levels of EFL writing anxiety than writing in out-classroom contexts. This may be attributed to several factors that the second question attempts to uncover.

Moreover, the results show the levels of the learners' writing anxiety according to their self-reported proficiency levels in both contexts; the low-intermediate learners experience the highest levels of writing anxiety (M = 8.22, SD = .67), followed by the high-intermediate learners (M = 8.00, SD = 1.83), then the advanced learners (M = 6.00, SD = .00) in the classroom. Whereas, the low-intermediate learners experience the highest levels of writing anxiety (M = 3.00, SD = 1.41), followed by the high-intermediate learners (M = 300, SD = 1.12), then the advanced learners (M = 2.00, SD = .00) in the outside-classroom context, as **Table 3** shows. This brings evidence that the less proficient the learners are, the more anxious they are likely to feel.

4.2 Sources of EFL writing anxiety in different environments among Arabic-English majors

4.2.1 Research question 2: what are the anxiety-provoking triggers in in-classroom vs. out-classroom contexts?

The second research question explores the most EFL writing anxiety-provoking factors in different settings from the learners' perspectives. **Figure 1** shows a total of fourteen EFL writing anxiety-provoking factors found in the study including: low motivation, poor self-confidence, striving for perfection, linguistic difficulties, inadequate practice, fear of judgement from others, competitions, former painful experience, time restrictions, uninterested topics, poor knowledge of relevant information, lack of accessible supporting resources, uniformed layouts and inadequate writing skills.

However, the impact of the reported sources wasfound not to be the same in the two contexts. For instance, for the in-classroom context, fear of judgements from others was observed to be among the most important anxiety-provoking factors (100%). For example, participant no. 2 states, 'I often feel nervous because I'm afraid of what other people would say about my writing'. Whereas, former painful experience was observed to be to among the primary sources of EFL writing anxiety in the out-classroom context (53.33%). For example, participant no. 5 points out, 'I used to feel nausea and had stomach cramps while writing in class and I remember the pain every time I write'. Furthermore, 13 of the participants (86.67%) reported suffering from anxiety triggered by inadequate writing methods in the classroom, whereas only 6 of the participants (40%) were found to

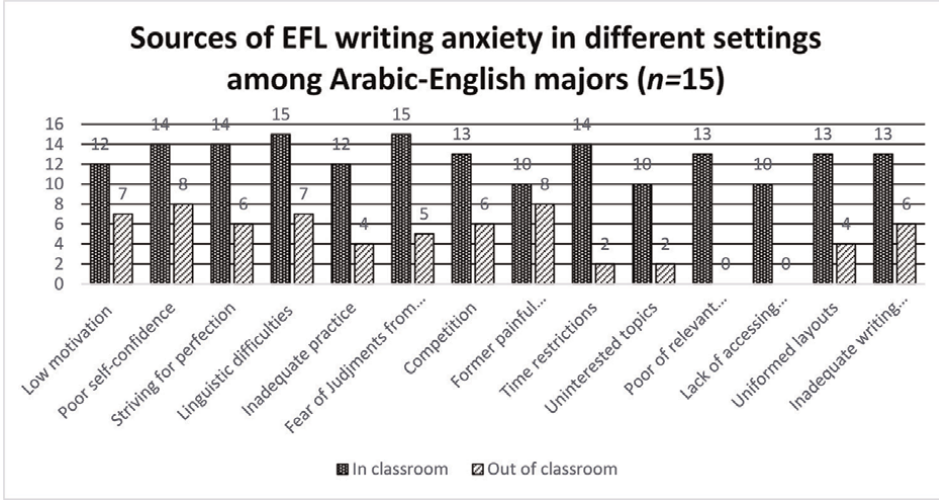

Figure 1.
Sources of EFL writing anxiety in different settings among Arabic-speaking learners of English.

suffer from the same reason in the 0ut-classroom context. For example, participant no. 10 asserts, 'I often feel nervous in class because I know my writing skills are quite poor'.

For a more detailed picture, consider the following statement by interviewee no. 8 who extensively reported different sources of EFL writing anxiety:

> *Actually there are many reasons that make me feel anxious when writing in English, but my big concern is getting low grades or negative comments from my professor or my classmates. I worry that they would not like my writing or think my writing is worthless. I became very picky about grammar, sentence structure, and word choice because I am frightened of failing or being criticised. Yet, I feel that writing outside classroom, such as writing blog posts, does not make me more frightened or stressful in the same way it really does in the classroom. May be because nobody will directly judge me! And I got a plenty of time and I can freely consult and check some useful online resources for help whenever I want. This makes me more relaxed.. I think …*

All of the participants totally agreed these triggers increase anxiety, which has a negative impact on your writings. This supports Krashen's Affective Filter Hypothesis [1], which proposes that learners' feelings such as anxiety negatively affect the development of second/foreign language and function as filters that obstruct their language development.

4.3 Methods of reducing EFL writing anxiety in different environments among Arabic-English majors

4.3.1 Research question 3: what are the methods you often use to reduce EFL writing anxiety in in-classroom vs. out-classroom contexts?

Based on the interview data, the participants suggest some strategies that they often use to lessen their writing anxiety; the common strategies include: (1) three

participants suggest practicing writing in English and sharpening writing techniques; the more you write, the less anxious you feel, the better you write; for example, participant no. 5 states, 'Practice makes perfect, I believe the more I write, the less stressful I will be'; (2) four participants recommend not to avoid writing in English to build self-confidence and stress the role of repeated exposure; for example, participant no. 9 asserts, 'to feel less stressful while writing, we should face it ... face what you always fear the most ..This makes you get used to it'; (3) five participants suggest advancing their lexicon knowledge to help them recognise the appropriate words or phrases for writing in any given context; for example, participant no. 12 points out, 'I do believe that a writer with a very rich amount of vocabulary will feel more confident and less stressful while writing'; (4) three participants recommend accessing different supporting resources to enhance their writing quality makes them feel more relaxed; for example, participant no. 13 states, 'I feel less anxious and I write better when I have something I could rely on such as a dictionary or online supporting materials' and (5) two participants suggest expanding their motivation by forming a positive mindset when they are requested to write in English; for example, participant no. 14 points out, 'I think motivation plays a role in lowering my anxiety especially when I write outside classes'.

For a more detailed picture, consider the following statement by interviewee no. 3 who extensively reported different methods of reducing EFL writing anxiety:

> *In my mind, I think I am always under a lot of pressure because I want to make everything perfect. But I know nothing is perfect. We have to face this reality and we should not avoid any obstacle. That's why we have to be objective and accept our weaknesses and work on them. I always do my best to practise writing in English as much as possible to enhance my confidence and then my writings. This can help reducing language anxiety, I think. And of course, we need support from our teachers and classmates. This can help in building some kind of positive mindset which make us realise that these obstacles are parts of the long journey.*

Taken together, the results showed that the learners largely felt more anxious when writing in the classroom rather than outside the classroom. The participants asserted that they suffered when writing in exams particularly, then in everyday class, and finally in the out-classroom context, such as writing at home, including writing emails or writing on online networks such as blog posts. This may have originated from the fact that the fear of judgements from others including teachers and peers generates the most anxiety-provoking conditions in the classroom. The learners also listed other triggers for feeling nervous in in-classroom contexts including: time constraints, unfamiliar writing topics, lack of accessing supporting resources. They also emphasised that due to the fact that these severe triggers are absent or seldom occur in out-classroom contexts, they usually feel less anxious when writing.

5. Discussion

The study attempts to capture the levels of EFL writing anxiety in different environments and explore the leaners' opinions on the updated anxiety-provoking sources of their EFL writing anxiety nowadays. Also, it suggests some potential remedies from the learners' perspectives.

As far as the first question is concerned, the results of the present study suggest that Arabic-English majors suffer from writing anxiety at different levels according to the settings of writing. The participants in classroom were found to suffer from largely greater levels of EFL writing anxiety than when writing in outside-classroom contexts. The participants asserted that they suffered from panic attacks and some painful physical symptoms including rapid heart rate, feeling stressed, and sweating in in-classroom contexts. However, these symptoms are mild, absent or rare when writing in outside-classroom contexts. These findings support the conclusion of Genç and Yaylı [4] who found that the learners suffered from more FLA writing anxiety in class especially during examinations than at home. This may be attributed to several factors that the second question attempts to uncover.

Furthermore, the first question also examines the links between writing anxiety in different contexts and self-rated language proficiency. The results show that the low-intermediate learners experience the highest levels of writing anxiety, followed by the high-intermediate learners, then the advanced learners. This suggests that the less proficient the learners are, the more anxious they are likely to feel. This supports the claim by MacIntyre and Gardner [27] that FLA decreases when the learner's proficiency level gets advanced.

As far as the second question is concerned, different themes were captured in the interview and emerged as the sources that made the learners highly anxious. As for the individuals and settings that trigger EFL writing anxiety from the learners' point of view, the interview yields a number of the key sources of EFL writing anxiety experienced by Arabic-English majors. A deep investigation of the sources of EFL writing anxiety showed that in-classroom writing entails severe anxiety-provoking factors such as linguistics difficulties and fear of judgements from others and fear of examinations, which involves fear of low grading and teacher's negative evaluation. Furthermore, because of their perceived poor writing competency, poor self-confidence and fruitless teachers' feedback, they suffered from a concern of receiving low evaluation and low grades. This seems to be consistent with Cheng's [15] claim that it is more vital how learners assess their writing competence rather than their real competence. Therefore, learners' having true evaluation is as important as their writing competency.

Furthermore, the participants listed some common factors that trigger EFL writing anxiety including time constraint, unfamiliar topics and poor topical information. The participants agreed that writing under time constraints was one of the key triggers of their writing anxiety in the classroom. Inadequate time was one of the main reasons for preventing them from reaching an effective thinking process, which is essential for in-classroom writing. These findings support the findings of previous research (e.g. [4, 6, 33, 40]). Also, some communal triggers are found in both inside- and outside-classroom contexts, such as linguistic difficulties including poor vocabulary familiarity and low grammar awareness, inadequate writing practice, inadequate writing methods, poor self-confidence and low motivation.

On the other hand, the participants justified the reasons for feeling less anxious when writing outside the classroom that the aforementioned triggers do not exist or that some of them hardly occur when writing emails or posting blogs online, for instance. Besides, the outside-classroom context permits stress-free methods such as writing on topics of their interests and accessing supporting resources online, which help in advancing their writing performance. Several learners declared that they feel less anxious and can productively generate ideas owing to the lack of time limitation out of the classroom. Furthermore, a number of participants mentioned that they

usually felt less anxious when writing in outside-classroom settings due to the lack of perfection in contrast to what they often feel in class because they must produce high-quality piece of writings within a very limited time.

In the same vein, the topics of writing have an essential impact on the learner's writing, especially if there are certain appointed topics in class. So as to write successfully, an individual must have proper cognitive representations and appropriate vocabulary familiarity, as Hyland [41] also suggested. Hence, while familiar topics might support constructive attitudes regarding writing, unfamiliar topics may be inconvenient for the learners. This supports Cheng's [16] conclusion that unfamiliar topics may enhance not only less-competent learners' but also highly competent learners' EFL anxiety. The flexibility of writing outside the classroom helps in reducing FLA levels. The participants asserted that because they are unforced to write outside the classroom on a certain topic with uniformed layouts, they feel less anxious, and they believe their writing performance is improved as a result. For instance, they may perhaps choose to write online some posts on topics of their interests, for example, sport, fashion, politics, food and travel. Familiar topics encourage them to overcome the lack of vocabulary required to generate appropriate writing. Moreover, a number of participants emphasised that peer competition is a source of their writing anxiety in the in-classroom context, whereas they find self-competition in both contexts is a very key motive for them to achieve a certain goal.

The triggers of EFL writing anxiety emerged in the present study are generally consistent with the relevant literature. Most of the triggers of EFL writing anxiety found broadly supports the findings of other studies in this area including concerns over judgements from others including teachers' evaluation and low grading, time limitation (e.g. [4, 6, 16, 31–33]), challenges triggered by unfamiliar topics [33, 40], uniformed writing layouts [33], low self-confidence (e.g. [3]), striving for perfection (e.g. [4]) and so on. Another significant updated source of writing anxiety that emerged in this study is the lack of supporting resources, which was not reported in the previous literature.

As far as the third question is concerned, the participants suggested a number of methods they often use to reduce anxiety including practicing writing in English and sharpening writing techniques; the more you write, the less anxious you feel, the better you write; not avoiding writing in English to build self-confidence; providing clear and sufficient feedback by teachers and allocating sufficient time for boosting writing skills and for introducing relevant techniques and vocabulary. They also pointed out that advancing their lexicon knowledge will help them recognise the appropriate words or phrases for writing in any given context and control their stress. They also suggest that accessing different supporting resources (e.g. virtual thesaurus, academic phrasebanks) in English classes will support and foster their writing, enhance its quality and make them feel more relaxed. These resources will make them feel more relaxed and control their concerns. Some of the participants mentioned that in order to control their anxiety, they work on expanding their motivation by forming a positive mindset when they are requested to write in English.

To conclude, the findings of the current study suggest that the participants suffered from high levels of anxiety in the in-classroom context, whilst they experienced low levels of anxiety in the outside-classroom context for different reasons. The impacts of the emerged sources of EFL writing anxiety in in-classroom and out-classroom contexts largely vary. The study captures some new methods of controlling writing anxiety from the learners' perspectives. The study concludes with some pedagogical implications in the next section.

6. Limitations, implications and avenues for future research

The limitation of this study is that the sample is from a university in Saudi Arabia, which represents roughly higher-level proficiency and one gender only (i.e. females). Thus, the findings cannot represent the whole population of EFL learners in Saudi Arabia.

In the era of modern globalisation, interaction through English, including writing, has become inescapable. Affording ample courses of English writing within a stress-free setting has become the key concern of several teachers, curriculum developers and policy makers. Based on the achieved findings, this study recommends maintaining a learner-centred and less-threatening and anxiety-free environment to control and diminish EFL writing anxiety. To decrease the EFL writing anxiety levels triggered by, for instance, low self-confidence and fears of judgements from others including concerns over harmful evaluation, we support the recommendations of a number of researchers (e.g. [2, 3]) who proposed that instructor's evaluation should be diminished and be substituted with peer-evaluation or self-evaluation. Although this method has been criticised by some scholars (e.g. Zhang [6] for being inefficient because teacher's evaluation is highly appreciated by learners and the fact that peers are not qualified and their comments may be unclear and not beneficial. However, we suggest that learners can be trained on self-evaluation as well as peer-evaluation. Note that different proficiency levels must be considered when examining whether self-evaluation and peer-evaluation would be implemented or not.

Based on the achieved results, language instructors should acknowledge the significant influence of writing anxiety and find effective and innovative methods to diminish the consequences of EFL writing anxiety as possible. For instance, instructors must be trained on how to create and foster less-threatening and anxiety-free writings by offering more topics for writings that meet the learners' different interests, allocating more time for writing, offering positive reinforcement before giving any instructive feedback, creating a more cooperative but not competitive class, practicing deep breathing, promoting a growth mindset and finally teaching through useful online games and encouraging learners to practice outside the classroom, which will help in controlling their anxiety and advancing their writings inside the classroom.

Finally, this study would be a fruitful area for further work. Considerably more work also will need to be done to evaluate the suggested pedagogical recommendations. Further research with mixed methods needs, for instance, to examine more closely the links between writing anxiety in different contexts and accessing supporting resources online.

7. Conclusions

Empirical evidence suggests that anxiety is considered an obstacle during the process of foreign language development, including writing anxiety. This paper attempts to investigate the levels of foreign language writing anxiety in the inside- vs. outside-classroom contexts among Arabic learners of English in Saudi Arabia. It also explores the sources of EFL writing anxiety and the potential remedies for reducing EFL writing anxiety from the learners' perspectives. To achieve the study purposes, a total of 15 female English majors students at Taif University were interviewed in the study. The findings suggest that the learners suffered from high levels of anxiety in

the in-classroom context, whilst they experienced low levels of anxiety in the outside-classroom context. This may have originated from the fact that classroom context entails severe anxiety-provoking factors such as fear of judgements from others including teacher's evaluation, concerns over examinations and grading, time constraint, unfamiliar topics and so on. The participants justified the reasons for feeling less anxious when writing in the outside-classroom context that the aforementioned triggers do not exist or that some of them hardly occur when writing emails or posting blogs online, for instance. Besides, the outside-classroom context permits stress-free methods such as lack of perfection; writing on topics of their interests; accessing supporting resources online, which help in controlling their anxiety, and advancing their writing performance accordingly. The study concludes with some pedagogical implications.

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Authors' contributions

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Ethical Approval

This research was approved by the Research Ethics Committee of Taif University, Saudi Arabia (Application code: 45–006).

The author considered all the ethical procedures for involving human participants.

Availability of data and materials

The data is available upon request by contacting the author.

Appendix

Section 1: Biographical information

1. How old are you?
2. Do you speak any other languages? If any, how do you learn them? List them in order.
3. Have you spent time in an English-speaking country? (Where?/For how long?/ What for?)
4. On a scale of 1–5, how would you rate your English writing proficiency?

Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Elementary	Low intermediate	High intermediate	Advanced	Proficient
○	○	○	○	○

Section 2: Interview questions

no.	**Classroom Context**	**Low High**									
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	In										
2	Out										

1. Do you feel anxious while writing in English? (If yes) On a scale of 1–10, how would you rate your English writing anxiety inside and outside of English classrooms including palpitations, trembling, sweating, tenseness … .etc.?
2. In your opinion, what are the anxiety-provoking triggers of writing inside and outside English classrooms?
3. What are the methods you often use to decrease your writing anxiety inside and outside English classrooms?

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Chapter 3

Optimising Language Learning for Students with ADHD: Strategies for Cultivating Attentional Mechanisms

Ahmadreza Mohebbi

Abstract

This chapter examines the critical role of attentional mechanisms in language learning, particularly in the context of students with attention deficit hyperactivity disorder (ADHD). Attention profoundly influences language comprehension and production, significantly affecting language learning outcomes. Drawing from current research, the chapter explores the cognitive and neural aspects of attention in language processing, emphasising its impact on language development in students with ADHD. This chapter also offers practical strategies for educators, including explicit instruction, guided practice, scaffolded support, skill integration, metacognitive awareness and differentiated instruction tailored to these learners' unique needs. It highlights the importance of considering students with ADHD in language learning contexts. Incorporating attentional mechanisms into language instruction can enhance language proficiency, vocabulary acquisition and metalinguistic awareness in this specific group. The chapter concludes by advocating for ongoing research and collaboration to refine pedagogical approaches that promote attentional skills in students with ADHD, ultimately improving language learning outcomes.

Keywords: attentional mechanisms, attentional skills, language comprehension, language production, students with ADHD

1. Introduction

Language learning presents a complex cognitive journey, particularly for students with ADHD. This demographic grapples with unique challenges in directing their attention, significantly influencing their language comprehension and production abilities [1]. Acknowledged by both researchers and educators, the role of attention in language learning is pivotal, impacting the efficiency and effectiveness of language acquisition and skill development [2, 3].

Recognising the significance of attentional skills, it becomes imperative for language teachers to integrate strategies tailored to students with ADHD into their instructional practices. By explicitly teaching attentional mechanisms, educators can

equip these students with vital tools and strategies to navigate their specific attentional challenges and optimise their language learning experiences [4].

Within the realm of attentional strategies, selective attention, divided attention and sustained attention hold particular relevance for students with ADHD [5–7]. This chapter aims to provide an in-depth exploration of current research on attentional mechanisms in language processing, emphasising their importance in supporting students with ADHD in language learning. It will delve into the cognitive and neural mechanisms underpinning attention in language processing, examining how these processes intersect with language-related neural networks [8, 9].

Furthermore, this chapter will scrutinise the profound impact of attention on language development, specifically considering its influence on language proficiency, vocabulary acquisition and metalinguistic awareness for students with ADHD [10–12]. In addition, practical strategies will be outlined for language teachers to promote attentional skills exclusively tailored to students with ADHD. Teachers can achieve this by designing exercises and activities strategically targeting specific attentional skills adjusting complexity and demands as students progress [13]. Moreover, the present chapter will explore the utmost importance of cultivating a supportive and structured learning environment for these students, offering differentiated instruction and timely feedback to meet their individual needs [14, 15].

By meticulously investigating the intricate relationship between attention and language learning among students with ADHD, this chapter aims to empower language teachers with valuable insights and actionable strategies. Ultimately, the integration of attentional mechanisms into language instruction can optimise language learning outcomes for these students, bolstering their language proficiency and empowering them to become more effective and engaged language users.

2. Attentional mechanisms in language processing

Attention plays a pivotal role in language processing, enabling learners to effectively allocate their cognitive resources to relevant linguistic information and optimise their language comprehension and production abilities [1]. Within the context of language learning, attentional mechanisms encompass a range of processes that facilitate the efficient processing of linguistic input. Selective attention allows learners to focus their attention on specific aspects of language, such as recognising and retrieving vocabulary words or attending to syntactic structures [6]. By selectively attending to relevant linguistic features, learners can enhance their ability to comprehend and produce accurate linguistic forms.

Divided attention is another crucial attentional mechanism in language processing, particularly in situations that require multitasking or simultaneous processing of multiple linguistic elements. For example, learners may need to listen to a speaker while taking notes or engaging in a conversation, where they must process and respond to incoming information in real time [7]. Divided attention skills allow learners to effectively manage and allocate their cognitive resources to handle multiple language-related tasks simultaneously.

Sustained attention is essential for maintaining focus over an extended period, enabling learners to engage deeply with language input and sustain their concentration during language learning activities [5]. This form of attentional control is particularly valuable in language learning contexts, where learners engage in extensive

Attentional mechanism	Description	Examples
Selective attention	Focusing attention on specific aspects of language	Recognising and retrieving vocabulary words, attending to syntactic structures
Divided attention	Simultaneously processing multiple linguistic elements	Listening while taking notes, engaging in real-time conversations
Sustained attention	Maintaining focus over an extended period	Engaging in extensive reading, listening or language production tasks

Table 1.
Attentional mechanisms in language processing.

Brain region	Function in attention
Prefrontal cortex	Attentional control and regulation during language processing
Posterior parietal cortex	Directing and shifting attention, allocation of attentional resources
Superior temporal gyrus	Enhancing comprehension and integration of linguistic information

Table 2.
Neural underpinnings of attention in language processing.

reading, listening or language production tasks that require sustained mental effort and concentration (**Table 1**).

Neuroscientific research has provided valuable insights into the neural underpinnings of attention in language processing. Functional magnetic resonance imaging (fMRI) studies have identified specific brain regions involved in attentional processes during language tasks. The prefrontal cortex, associated with executive functions, plays a significant role in attentional control and regulation during language processing [8]. The posterior parietal cortex directs and shifts attention, facilitating the allocation of attentional resources to relevant linguistic stimuli [9]. Additionally, the superior temporal gyrus, a region implicated in language processing, interacts with attentional networks to enhance the comprehension and integration of linguistic information. Understanding the intricate interplay between attentional mechanisms and language-related neural networks provides valuable insights into the significance of attention in language learning and processing. By recognising the cognitive and neural processes involved in attention, language teachers can design instructional strategies that effectively promote attentional engagement and optimise language learning outcomes (**Table 2**).

3. Impact of attention on language development

The impact of attention on language development is multifaceted and far-reaching, influencing various aspects of learners' linguistic competence and proficiency. Extensive research has demonstrated the significant role of attentional mechanisms in shaping language learning outcomes and highlighting the importance of fostering attentional skills in language instruction. Firstly, attentional skills play a crucial role in language comprehension. The ability to selectively attend to relevant linguistic features, such as specific vocabulary words or syntactic structures, allows learners

to focus their cognitive resources on the most salient information [6]. This selective attention enhances learners' comprehension accuracy by enabling them to prioritise and process key linguistic elements more effectively. By attending to important lexical and grammatical features, learners can better extract meaning from the language input and build a more robust understanding of the target language. In addition to comprehension, attentional mechanisms significantly impact language production. Selective attention facilitates the accurate retrieval and use of vocabulary words and syntactic structures, enabling learners to generate linguistically appropriate and fluent utterances [6]. Learners can produce more precise and contextually relevant language by attending to the specific linguistic features required in a given communicative context. Divided attention also comes into play during language production tasks that involve multitasking, such as maintaining a conversation while formulating appropriate responses. The ability to allocate attentional resources effectively in such situations contributes to the fluency and coherence of learners' spoken and written output.

Furthermore, attentional skills are closely linked to vocabulary acquisition. Learners who actively engage in selective attention to new words during reading or listening activities demonstrate improved word retention and retrieval [11]. Learners enhance their vocabulary knowledge and expand their lexical repertoire by directing their attention to unfamiliar vocabulary items and engaging in deliberate efforts to encode and remember them. Sustained attention, which enables learners to maintain focus over an extended period, is particularly beneficial in vocabulary acquisition tasks that require consistent exposure and practice.

Metalinguistic awareness, the ability to reflect upon and manipulate language structures, is another crucial aspect of language development influenced by attentional mechanisms. Attention allows learners to notice and analyse linguistic features, such as phonological patterns, grammatical rules and discourse conventions [12]. By attending to the nuances of language, learners develop a heightened sensitivity to linguistic form, which facilitates their ability to self-correct and refine their language production. Metalinguistic awareness is essential for accuracy and contributes to learners' overall language proficiency and ability to adapt their language use to different communicative contexts. It is important to note that attentional deficits, as seen in individuals with ADHD, can pose unique challenges to language development. Learners with ADHD may struggle with sustaining attention, maintaining focus, and inhibiting distractions, which can affect their language learning progress. Therefore, language teachers must recognise and accommodate the specific attentional needs of these learners by providing structured and supportive learning environments, incorporating engaging and multimodal instructional materials and implementing strategies that promote attentional engagement [15].

4. Strategies for fostering attentional skills in students with ADHD

Language teachers play a pivotal role in nurturing attentional skills among their students, including those with ADHD, by crafting an environment that fosters engagement and optimises language learning outcomes. To better serve students with ADHD, educators can implement practical strategies tailored to their specific needs.

One highly effective strategy is the creation of a learning environment that supports focused attention. Teachers can establish clear expectations, routines and procedures,

ensuring that students, particularly those with ADHD, comprehend the structure of lessons and activities. This structured and organised approach provides a stable and supportive foundation, helping students effectively engage their attention [16].

Another essential approach is incorporating active learning methods that capture students' interests and maintain their focus. Teachers can design interactive and hands-on activities that encourage participation and stimulate multiple senses, which is particularly beneficial for students with ADHD. Group work, discussions and real-life examples can create a dynamic learning experience, captivating their attention and deepening their engagement with the language [17].

Utilising technology in language instruction can be a powerful tool for students with ADHD. Interactive multimedia resources, online language learning platforms and educational apps can provide engaging and interactive learning opportunities, offering visual and auditory stimuli, interactive exercises and immediate feedback [18]. These digital tools are well-suited to capturing the attention of students with ADHD.

Diversity in instructional materials and techniques remains crucial for sustaining students' attention, including those with ADHD. Combining authentic materials, such as newspapers, articles, videos and podcasts with targeted language resources, can cater to individual interests, ensuring continued engagement and learning motivation [19].

Moreover, language teachers can implement instructional strategies that foster metacognitive awareness and self-regulation of attention, which is particularly beneficial for students with ADHD. By explicitly teaching attentional strategies, teachers empower these students with the knowledge and skills needed to manage their attention effectively. Guiding students in reflecting on their attentional experiences helps raise awareness of their strengths and weaknesses, enabling them to make conscious adjustments to their learning strategies [20].

Differentiated instruction is another valuable approach when addressing the diverse attentional abilities of students with ADHD. Understanding each student's learning profile and preferences allows teachers to tailor instruction accordingly. This may involve providing additional support, offering alternative learning materials or modifying the pace and complexity of activities to align with students' attentional capabilities [21].

Effective communication and collaboration with students and their families are also essential. Involving students in goal-setting and providing regular feedback empowers them to take ownership of their learning and develop metacognitive skills [22]. Furthermore, maintaining open lines of communication with parents or guardians about students' attentional needs and progress creates a collaborative support system that reinforces attentional development both in and outside the classroom.

By implementing these tailored strategies, language teachers can effectively promote attentional engagement and optimise language learning outcomes for students, including those with ADHD. Fostering attentional skills enhances their language proficiency and equips them with valuable lifelong learning skills. As educators continue to refine their instructional approaches, ongoing research and professional collaboration remain crucial to deepen our understanding of attentional mechanisms and their impact on language learning.

4.1 Explicit instruction on attentional strategies for students with ADHD

Explicit instruction on attentional strategies emerges as a pivotal approach in the context of students with ADHD, significantly contributing to the development

of their attentional skills during language learning. This tailored instruction equips these students with essential knowledge and techniques to enhance their attentional abilities [4].

In the initial phase of explicit instruction, educators introduce students with ADHD to diverse attentional mechanisms, elucidating their relevance in language learning. Selective attention is emphasised, highlighting its role in focusing on specific linguistic elements while filtering out distractions (such as clutter, dimming lights, or using white noise machines). This skill allows learners, particularly those with ADHD, to allocate cognitive resources effectively and prioritise essential information for comprehension and production [4]. Teachers underscore the importance of directing attention to critical vocabulary, grammatical structures or discourse markers during listening or reading tasks.

Divided attention, another attentional mechanism, is a crucial aspect that educators address for students with ADHD. It pertains to the capacity to simultaneously distribute cognitive resources across multiple language-related tasks. Students with ADHD frequently encounter scenarios demanding the management of diverse language processing demands, such as listening while taking notes or participating in a conversation while monitoring non-verbal cues. Teachers guide these students in developing strategies to effectively divide their attention and balance these tasks to optimise language learning outcomes [23].

Sustained attention, the third attentional mechanism, plays an essential role in maintaining focus over extended periods—an aspect of particular value during extensive reading, language immersion programs or extended listening practice [5]. Teachers emphasise the significance of sustained attention in language learning contexts and provide strategies to help students with ADHD resist distractions, stay focused and sustain their engagement with language input.

Following the introduction of attentional mechanisms, educators proceed to demonstrate specific attentional strategies. Through modelling and practical examples, teachers offer students with ADHD insights into how attention impacts language processing and learning outcomes. For instance, during a listening comprehension activity, educators can explicitly instruct students with ADHD to focus on specific vocabulary words or syntactic structures while listening to an audio passage. These explicit demonstrations enable students to develop a repertoire of practical techniques for managing attention in language learning contexts.

Subsequently, teachers provide guided practice and scaffolded support to ensure that students with ADHD can independently apply these strategies. This phase includes designing exercises and activities that explicitly target attentional skills, with gradually increasing complexity as students progress [24]. For example, teachers can create listening exercises with comprehension questions requiring selective attention to specific details. Step-by-step guidance and support are offered to help students with ADHD develop their attentional abilities and gradually transfer these skills to authentic language tasks.

Scaffolded support remains a critical component of explicit instruction on attentional strategies. Visual cues or prompts are employed to draw students' attention to specific language aspects, facilitating focused processing and a deeper understanding of language materials [25].

Furthermore, educators incorporate reflection and metacognitive awareness into explicit instruction on attentional strategies for students with ADHD. This phase involves providing opportunities for students to reflect on their attentional experiences during language tasks, fostering a conscious understanding of their strengths

and areas for improvement [26]. Facilitating discussions or reflective journaling activities allow students with ADHD to monitor and evaluate their attentional performance, recognise effective strategies and identify areas for growth.

Additionally, teachers guide children with ADHD in setting goals and developing action plans to improve their attentional skills in specific language learning contexts. Encouraging students to establish specific, achievable goals related to their attentional development promotes self-regulation. Students can identify areas, where they want to enhance their attentional skills, such as sustaining focus during extensive reading or improving selective attention in listening comprehension [27].

Teachers should integrate these strategies across different language skills to maximise the effectiveness of explicit instruction on attentional strategies. Students with ADHD benefit from this holistic and transferable approach to managing attention throughout their language-learning journey [24]. Integrating attentional strategies across language skills allows students with ADHD to apply their attentional abilities comprehensively and transfer them effectively to various language tasks, accommodating their unique learning profiles and needs.

It is noteworthy that to cater to the needs of students with ADHD in language learning, language teachers are advised to consider implementing flexible seating options. This approach allows them to select a seating arrangement that suits their focus best, whether it is standing, using a cushion or employing a fidget tool. By offering this flexibility, students with ADHD can create a comfortable and conducive learning environment for themselves during language activities.

Furthermore, teachers should emphasise the significance of flexibility and adaptation. Only some strategies will be effective in some situations, so students should feel encouraged to experiment with different techniques to determine what works best for their individual needs.

Finally, language teachers should promote self-monitoring skills among students with attention challenges. They should encourage them to develop self-awareness regarding their attentional patterns in the classroom and during independent study. Teaching them to recognise signs of distraction or inattention, such as wandering thoughts or restlessness, empowers them to take proactive steps to improve their focus and engagement.

4.2 Targeted attention-focused exercises and activities for students with ADHD

Teachers can design a variety of exercises and activities specifically tailored to enhance attentional skills in students with ADHD within the context of language learning. These targeted attention-focused tasks offer students with ADHD opportunities to practice and improve their attentional abilities across various language contexts. Through explicit instructions and practice opportunities, educators can guide these students in selectively attending to pertinent linguistic features, thereby promoting accuracy, comprehension and overall language proficiency [4].

In listening tasks, educators can implement exercises requiring students with ADHD to listen for and identify specific vocabulary words or grammatical structures within a given context [24]. By providing explicit instructions to direct their attention to these targeted elements, educators enhance the selective attention skills of students with ADHD. For example, teachers may present students with a short audio passage and accompanying comprehension questions that require them to identify key vocabulary words or grammatical patterns. This focused approach encourages students to allocate their attention effectively, ultimately leading to improved listening

comprehension and language processing abilities. Furthermore, educators can design listening exercises involving multiple-choice questions or gap-filling activities, where students must select or complete missing information based on their attentive listening skills. These tasks challenge students with ADHD to selectively attend to auditory input, extract relevant information and accurately apply their vocabulary and grammar knowledge [25].

Within reading activities, teachers can incorporate tasks that require students with ADHD to concentrate on specific textual elements, such as identifying essential information or analysing sentence structures. For instance, educators can present students with a reading passage and instruct them to identify the text's central ideas, supporting details or specific vocabulary words. By explicitly guiding the attention of students with ADHD toward these targeted aspects, teachers enhance their selective attention during reading tasks [24]. Moreover, educators can design activities that prompt students with ADHD to analyse sentence structures, identify grammatical patterns or make inferences based on the text. These tasks prompt students to pay close attention to the language features and structures within the reading material, fostering focused processing and deeper comprehension [25].

To further develop sustained attention in students with ADHD, teachers can design extended reading or listening activities that require students to engage with language input over an extended period. For example, educators can assign reading tasks that involve students with ADHD reading an entire short story, novel or non-fiction article. Engaging in sustained reading helps students practice maintaining their attention and focus on the text, enabling a more profound understanding and analysis of the content. Similarly, teachers can assign extended listening tasks, such as listening to podcasts, lectures or audiobooks, where students must sustain their attention and actively process the language input over an extended duration. These activities strengthen the ability of students with ADHD to stay focused and engaged with language input for more extended periods, enhancing their learning outcomes [5].

In addition to listening and reading tasks, attentional skills can also be targeted in speaking and writing activities for students with ADHD. During speaking activities, teachers can design tasks that necessitate students with ADHD to pay attention to non-verbal cues, such as body language or facial expressions while engaging in conversations or role-plays. By explicitly instructing students to attend to these non-verbal cues, teachers promote the development of divided attention skills in language production contexts. Furthermore, teachers can encourage students with ADHD to self-monitor their attentional focus during speaking tasks, reflecting on their ability to maintain attention while expressing their thoughts and ideas coherently [28].

In writing activities, teachers can incorporate exercises that require students with ADHD to pay attention to specific language features or structures. For example, teachers can present students with writing prompts that explicitly ask them to include certain vocabulary words, grammatical patterns or rhetorical devices in their compositions. By directing students' attention to these targeted linguistic elements, teachers facilitate focused writing and enhance students' ability to produce accurate and cohesive written texts [24].

Teachers can employ various strategies and instructional techniques to support students with ADHD's engagement and attention during language tasks. Visual cues, such as highlighting important information or using graphic organisers, can draw the attention of students with ADHD to specific aspects of language materials [29]. For instance, teachers can provide students with graphic organisers to help them organise

and structure their thoughts during writing tasks, promoting focused processing and attention to the task at hand. Additionally, teachers can use visual aids or real-world objects to enhance the attention of students with ADHD during language activities. For instance, in vocabulary learning tasks, teachers can display images or real objects related to the target words, directing students' attention to the visual stimuli and facilitating the acquisition and retention of new vocabulary [24].

Incorporating reflection and metacognitive awareness into targeted attention-focused exercises and activities can further enhance the attentional development of students with ADHD. Teachers can provide opportunities for students with ADHD to reflect on their attentional experiences during language tasks, encouraging them to identify effective strategies and areas for improvement. Reflective discussions, journaling activities, or peer feedback sessions can facilitate metacognitive awareness, helping students with ADHD recognise how their attentional focus influences their language learning outcomes and providing them with strategies to regulate and improve their attentional skills [30].

Furthermore, integrating mindfulness meditation exercises into the classroom can be a powerful tool for helping students cultivate awareness and concentration. Students can learn to refocus their attention and effectively manage distractions through short, guided mindfulness sessions. Integrating attention-building games and puzzles such as Sudoku, crosswords and brain teasers into the curriculum can further challenge students to hone their attention to detail and problem-solving abilities. Encouraging students to engage in visualisation exercises can boost their capacity to maintain concentration by stimulating their ability to create and sustain mental images. Moreover, promoting artistic expression, whether through drawing, painting or sculpting, allows students to channel their focus into creative endeavours, fostering patience and acute attention to detail. By weaving these strategies into the educational experience, educators can empower students with valuable tools for enhancing their attention and concentration skills, equipping them for success in their academic journey and beyond.

4.3 Multimodal materials and interactive activities for students with ADHD

Integrating multimodal materials and interactive activities into language instruction holds significant potential for enhancing the engagement and sustaining the attention of students with ADHD throughout the learning process. By incorporating a variety of visual, auditory and kinesthetic elements, educators can create a dynamic and stimulating learning environment that caters to the unique needs of students with ADHD [25].

Visual aids, including charts, graphs, diagrams and images, can be especially effective in supporting language instruction for students with ADHD. These visual representations help students grasp abstract concepts, establish connections between ideas and reinforce their understanding of linguistic structures and vocabulary [24]. For instance, when introducing new vocabulary words, educators can employ visual images representing word meanings, aiding students in forming mental associations and sustaining their attention on the visual aspect of word representation.

Additionally, teachers can utilise gestures and body language as accompaniments to verbal explanations, providing extra visual cues that aid comprehension and maintain the attention of students with ADHD [13].

Real-life contexts and authentic materials can be particularly engaging for students with ADHD, fostering deep involvement with language learning. By integrating

authentic texts such as newspaper articles, advertisements or excerpts from literature, teachers expose students to genuine language use and cultural contexts, heightening motivation and encouraging students to pay close attention to language features, contexts and pragmatic elements [24]. For example, teachers can design activities that require students to analyse real-life conversations or dialogues, identifying linguistic features specific to natural communication contexts.

Multimedia resources offer a wealth of diverse materials that can captivate students with ADHD and provide a multisensory learning experience. Videos, audio recordings, interactive websites and online simulations can engage students through visual and auditory stimuli, making language learning more interactive and dynamic [25]. For instance, teachers can incorporate video clips depicting authentic language use in real-life situations, allowing students with ADHD to observe and analyse linguistic features, cultural norms and non-verbal cues.

Interactive websites or language learning apps can provide engaging and interactive language practice, incorporating games, quizzes and interactive exercises that require active participation and sustained attention. These tools can be particularly effective in engaging students with ADHD and maintaining their focus [13].

Role-plays, group discussions and problem-solving tasks are interactive activities that encourage students with ADHD to actively participate in language tasks, interact with peers and apply their language skills in meaningful contexts. For instance, in a role-play activity, students assume different roles and engage in a simulated conversation, demanding their active listening, response and adaptation of language use based on the interaction. These activities require focused attention, promoting language processing and communicative competence [25]. Collaborative activities, such as group discussions or project-based tasks, also foster sustained attention and engagement. Students work together toward a common goal, necessitating active listening, idea contribution and meaning negotiation [13].

Educators should thoughtfully select and scaffold resources and tasks according to the specific needs of students with ADHD, considering their proficiency levels and learning objectives. Clear instructions, modelling, and guidance are essential to ensuring that students with ADHD direct their attention effectively and engage meaningfully with materials and activities. Post-activity discussions or reflective tasks can encourage self-reflection and metacognitive awareness, prompting students with ADHD to reflect on their attentional experiences, employed strategies and areas for improvement [28].

4.4 Creating a supportive and structured learning environment for students with ADHD

In the context of students with ADHD, establishing a supportive and structured learning environment is paramount for their academic progress. Educators can employ various strategies and techniques tailored to meet the specific needs of students with ADHD, with the aim of promoting attentional control and sustained task engagement throughout the learning journey.

One foundational strategy involves setting up clear routines, rules and expectations [14]. This structured framework creates a predictable learning environment that reduces uncertainty and aids students with ADHD in managing their attentional resources effectively. By offering explicit instructions and maintaining consistent procedures, teachers ensure that students understand what is expected of them, enabling them to focus on the educational task.

Breaking down complex tasks into smaller (chunked instruction), manageable steps is another approach that supports attentional control for students with ADHD. This method presents tasks sequentially and provides explicit guidance for each step [17]. By doing so, educators alleviate the cognitive load that students with ADHD may experience, facilitating their ability to attend to and successfully complete individual components of a task. This incremental approach promotes a sense of accomplishment and prevents students from feeling overwhelmed.

Visual cues and checklists serve as valuable tools in helping students with ADHD maintain attention and organisation [31]. Educators can utilise visual aids, such as charts, diagrams or graphic organisers, to visually represent tasks or processes. For instance, a checklist can outline the necessary steps to complete a project or assignment. These visual cues and checklists serve as external reminders, aiding students in staying focused on the task, tracking their progress and maintaining attentional control.

Incorporating regular movement breaks or kinesthetic activities is another strategy to assist students with ADHD in regulating their attention and sustaining focus [32]. Short breaks featuring physical movement or kinesthetic exercises can help release excess energy, improve alertness and enhance attentional functioning. Educators can seamlessly integrate these breaks within the instructional period, allowing students to engage in brief physical activities, stretching exercises or mindful movements. Such mindful breaks serve as opportunities for students to recharge their attentional resources and optimise their engagement in subsequent learning tasks.

Providing individualised support and accommodations is a cornerstone of assisting students with ADHD in the classroom. Educators can collaborate with students, their parents or guardians and support professionals to develop a personalised plan tailored to address the student's specific attentional needs [17]. These accommodations may encompass modifications such as preferential seating near the teacher, access to fidget tools or the utilisation of assistive technologies. Individualised support ensures that students with ADHD possess the necessary resources and strategies to manage their attention in the learning environment effectively.

Furthermore, implementing strategies that enhance self-regulation skills empowers students with ADHD to actively manage their attention [32]. Educators can teach and model self-regulatory techniques, such as goal-setting, self-monitoring and self-reflection. These strategies help students develop metacognitive awareness and self-control. By guiding students in setting achievable goals, monitoring their attentional performance, and reflecting on effective focus-enhancing strategies, educators foster students' ability to regulate their attention independently.

Collaboration and open communication with students and their families remain pivotal in cultivating a supportive learning environment for students with ADHD [14]. Regular communication between educators and parents or caregivers facilitates the exchange of information, shared observations and discussions about strategies that promote attentional control and academic success. This collaborative approach ensures a consistent and holistic support system at home and in the classroom, ultimately enhancing students' overall attentional functioning and well-being.

4.5 Tailored instruction and targeted feedback for students with ADHD

Individualised instruction and timely feedback are indispensable components of effective language teaching, especially when catering to the unique attentional needs of students with ADHD. Teachers can establish a learning environment that optimises

attentional engagement and supports academic success by acknowledging and accommodating students' individual attentional profiles, challenges and strengths.

Teachers should employ a range of strategies to individualise instruction, aligning them with students' attentional preferences and capabilities [15]. As students with ADHD may exhibit varying attentional styles, educators can adapt their instructional methods, materials and tasks accordingly. Some students may thrive with visual aids or graphic organisers to bolster their attentional focus, while others may benefit from more kinesthetic or hands-on activities. Teachers foster inclusivity by comprehending and adapting to students' distinct attentional profiles and ensuring that each student can effectively engage with the learning materials. Additionally, implementing flexible grouping strategies can be highly beneficial. Grouping students based on their individual strengths and weaknesses enables them to collaborate with peers who can complement their skills. This approach fosters a more supportive learning environment and allows students with ADHD to benefit from peer assistance, enhancing their overall educational experience.

To cater to diverse attentional styles and preferences, teachers can provide alternative pathways for students to demonstrate their language proficiency [15]. For example, instead of mandating a conventional written essay, teachers can offer students the flexibility to opt for a visual presentation or engage in an oral discussion to showcase their language skills. By accommodating the range of attentional needs within the classroom, educators promote an environment, where all students can actively interact with the learning materials.

Providing timely and specific feedback is vital for supporting the attentional development of students with ADHD [33]. When students receive prompt, relevant feedback concerning their attentional performance, they gain valuable insights into their strengths and areas that require improvement. Teachers can offer feedback that centres on attentional strategies, emphasising effective techniques for managing distractions, sustaining focus or selectively attending to pertinent linguistic elements. Specific feedback empowers students to reflect on their attentional performance and make necessary adjustments in subsequent tasks or activities.

Moreover, feedback should be individualised and tailored to each student, considering their unique attentional strengths and challenges. Recognising students' efforts, progress and areas of improvement through specific praise and acknowledgment of their attentional achievements helps create a supportive and motivating learning atmosphere.

In addition to addressing attentional strategies, teachers can guide metacognitive awareness and self-regulation [30]. Metacognition involves students' ability to self-reflect on their cognitive processes and actively regulate their attention. Teachers can engage students in discussions or reflective activities that cultivate metacognitive awareness, prompting students to monitor their attentional performance, identify effective strategies and establish goals for improvement. Fostering metacognitive skills empowers students to manage their attention and regulate their learning actively, leading to greater autonomy and self-regulation in their language learning journey. Moreover, to support students with ADHD effectively, it is essential to promote self-advocacy skills. Teachers should encourage these students to voice their needs, ask questions and seek clarification when required. By teaching children with ADHD to communicate effectively, you empower them to take an active role in their education.

Another important point worth mentioning is that ongoing formative assessment practices, such as observation, check-ins, or informal quizzes, are invaluable tools

for teachers to gain insights into students' attentional engagement and progress [28]. Educators can pinpoint areas that necessitate additional support or adaptation by continually assessing students' attentional performance and modifying their instructional methods accordingly. Regular assessment enables teachers to monitor students' attentional development over time and deliver targeted interventions when required.

In summary, individualised instruction and timely feedback are paramount when addressing the distinctive attentional needs of students with ADHD in language learning. By recognising and embracing students' individual attentional profiles, teachers can tailor instruction to optimise attentional engagement. Timely and specific feedback facilitates students' reflection on their attentional performance adjustments and reinforces their motivation and self-regulation. Incorporating personalised instruction and feedback in language teaching creates a nurturing learning environment that enhances students' attentional development and fosters overall language learning success.

5. Pedagogical implications

Exploring attentional mechanisms in language processing yields profound pedagogical implications, particularly when considering the unique needs of students contending with ADHD. It is imperative that language educators not only acknowledge the significance of attentional strategies in language learning but also implement targeted approaches to optimise the linguistic development and overall learning experience of students grappling with ADHD.

In this context, language instructors must elucidate the pertinence of attentional strategies to language acquisition, furnishing students with explicit instruction on pivotal components such as selective attention, divided attention and sustained attention [4]. This imparted knowledge equips students, including those with ADHD, with the essential cognitive tools and awareness necessary to effectively modulate their attentional faculties. Crucially, the provision of scaffolded support, encompassing guided practice and gradual increments in task complexity, ensures that students can progressively apply these attentional strategies autonomously [24].

Visual cues, prompts and supportive materials assume heightened importance in guiding students, including those with ADHD, toward the salient linguistic features deserving of their attention, thereby nurturing their comprehension and production skills [25]. Importantly, these strategies should be integrated equally across diverse language skills. Such an approach fosters holistic attentional management throughout the language acquisition journey [28]. Through activities that mandate the utilisation of attentional skills across listening, speaking, reading and writing, students gain proficiency and the ability to apply their honed attentional skills in real-world language processing [10].

Metacognitive awareness assumes particular significance for students with ADHD. By incorporating opportunities for reflection and self-evaluation, educators enable students to systematically monitor and assess their attentional performance [34]. This self-awareness empowers students, including those grappling with ADHD, to assume an active role in their learning process and adapt their attentional strategies accordingly [27].

Furthermore, pedagogical practices must embrace differentiation, recognising the diversity in students' attentional capabilities. Tailoring instruction, providing timely and precise feedback and addressing specific attentional challenges are pivotal

in facilitating the development of attentional skills [15]. To this end, the creation of a supportive and structured learning environment remains non-negotiable, wherein lucid directives and manageable tasks cater to the unique requirements of students with ADHD [14].

Additionally, individualised accommodations and strategies must be implemented to buttress the attentional development of students contending with ADHD [35]. Such accommodations may encompass preferential seating arrangements, access to assistive technologies and the incorporation of sensory interventions. These tailored interventions afford students with ADHD the requisite resources and strategies to navigate their attentional landscape effectively.

In corroboration, as language instructors weave these pedagogical implications into their instructional fabric, they pave the way for students, particularly those with ADHD, to unlock their latent potential and harness attentional strategies as formidable allies in their linguistic journey. Imbued into instruction, these strategies fortify comprehension and production and extend their influence into vocabulary acquisition and metalinguistic awareness. As the synergy between attention and language learning continues to unveil its intricacies, ongoing research and collaborative endeavours remain indispensable, promising to enrich the learning experiences of diverse language learners, especially those navigating the terrain of ADHD.

6. Conclusion

This chapter has delved into the intricate dynamics of attentional mechanisms in language processing, particularly emphasising their profound significance for students with ADHD. By synthesising contemporary research and drawing upon seminal studies in this domain, this chapter has underscored the pivotal role of attention in language learning and its profound influence on various facets of language acquisition, especially for individuals with ADHD.

A substantial body of research has illuminated the profound impact of attentional skills on language development, and this holds particularly true for students with ADHD. Learners with heightened attentional capacities have consistently demonstrated superior language proficiency, expansive vocabulary acquisition and enhanced metalinguistic awareness [10–12]. The intricate interplay of attentional mechanisms, including selective attention, divided attention and sustained attention, empower learners to pinpoint specific linguistic nuances, concurrently process multifarious language components and sustain their focus over extended durations. For students with ADHD, developing these honed attentional skills becomes even more critical as it invariably culminates in more precise and efficient language comprehension and production [5–7].

Furthermore, insights from neuroscientific investigations have illuminated the neural substrates of attention in language processing, shedding light on how these mechanisms manifest differently in students with ADHD. Studies utilising functional magnetic resonance imaging (fMRI) have discerned that distinct cerebral region, prominently including the prefrontal cortex, posterior parietal cortex and superior temporal gyrus, orchestrate attentional processes during language tasks [8, 9]. Understanding these neural underpinnings underscores the importance of targeted attentional interventions and support for students with ADHD in language learning and processing.

For educators working with students grappling with ADHD, it is paramount to implement a plethora of pragmatic strategies to foster attentional skills. Offering explicit instruction on attentional strategies, encompassing selective attention, divided attention and sustained attention, becomes a cornerstone in the education of these students [4]. Through meticulously curated exercises and activities that meticulously target specific attentional proficiencies, educators provide students with salient opportunities to cultivate and refine their attentional competencies actively, acknowledging the unique challenges faced by individuals with ADHD [24].

Furthermore, by enmeshing multimodal materials and interactive activities into pedagogical practices and creating a supportive learning milieu characterised by lucid directives and manageable tasks, educators can amplify students' engagement and foster sustained attention, recognising the need for additional support for students with ADHD [13, 14, 25]. Reflection and metacognitive awareness are vital in this endeavour, especially for students with ADHD who may require additional guidance. Encouraging students to introspect upon their attentional experiences during language tasks while nurturing their metacognitive acumen imparts the invaluable skill of self-regulated learning. This empowerment enables students, including those with ADHD to actively monitor and assess their attentional performance, setting the stage for meaningful progress [27, 34]. Augmented by the ability to set goals, formulate action plans and fine-tune attentional strategies through introspection, students, particularly those with ADHD, can sharpen their attentional prowess [29].

The imperative of integrating attentional strategies across language skills remains paramount for students with ADHD. By orchestrating cohesive tasks that necessitate the application of attentional skills across listening, speaking, reading, and writing domains, educators usher students into authentic language contexts wherein attentional flexibility and resource allocation emerge as prerequisites for successful language processing [28].

In summation, attentional mechanisms assume an unequivocal position of centrality within the realm of language learning and processing, particularly for students with ADHD. Cultivating attentional skills offers a transformative gateway to heightened language proficiency, expansive vocabulary acquisition and enriched metalinguistic awareness while also addressing the unique needs of individuals with ADHD. For educators, particularly those working with students grappling with ADHD, there exists a profound responsibility to integrate attentional strategies into language instruction. The pragmatic strategies delineated within this chapter, substantiated by seminal research and scholarship, proffer a robust foundation for language educators to nurture attentional competencies and bolster their students' language development, with special consideration for those with ADHD. As research continues to illumine the intricate interplay between attention and language, educators must remain steadfast in their commitment to championing attentional mechanisms and seamlessly infusing them into pedagogical practices, thereby conferring immeasurable benefits upon language learners, especially those with ADHD, worldwide.

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Section 2

Psycholinguistics Interests: From Linguistics Themes to Real-World Issues

Chapter 4

Semantic Uses of Emotional Intelligence in K-12 Teacher Roles: Discussing Concepts across Social Cognitive Context

Adam I. Attwood

Abstract

Emotional intelligence (EI) is a term derived from the concept of interpersonal intelligence in Gardner's multiple intelligences (MI) theory. This term has been used to explain one of the many expectations placed on K-12 teachers in that they are often expected to display EI. Given the prevalence of this term and popularity of MI theory, there is need to contextualize the semantic use of EI. To do so, Bronfenbrenner's ecological systems theory (EST) is discussed in relation to EI to provide a perspective on ways to conceptualize how to address secondary traumatic stress (STS) risk among teachers. The semantic use of EI relates to a theoretical understanding of teachers' emotional labor. The purpose of this analysis is to highlight semantic conceptualization and links made between these concepts and to call for additional research on this interdisciplinary topic. Implications are discussed for how collaboration with speech-language pathologists can benefit general education teachers.

Keywords: ecological systems theory, emotional intelligence, emotional labor, multiple intelligences theory, Sapir-Whorf hypothesis, semantics, stress, teachers

1. Introduction

News reports and research studies from 2019 to 2022 have highlighted the issue of teacher attrition and teacher shortages in several regions [1–6]. While there are many potential reasons for why many school districts have struggled to retain teachers, secondary traumatic stress (STS) is a reason that should receive greater attention. There is continued need to expand understanding of teachers' risk of STS, especially in how to formulate support interventions to prevent high turnover in the profession. A research group highlighted that "trauma-informed approaches to care are distinct from trauma-specific interventions" ([7], p. 5). There continues to be a gap in intervention approaches that will require additional research on the role of emotional labor in the teaching profession. When considering developmental trends from psychological perspectives, additional systematic supports may be developed.

Exploring the interrelated issues of teachers at risk of experiencing STS in providing educational—and potentially emotional—supports to students who experienced or are experiencing adverse childhood experiences (ACEs) is important for study from the perspective of ecological systems theory as it applies to emotional intelligence in developmental psychology. This analysis discusses emotional labor as a reification of emotional intelligence. Emotional intelligence (EI) is defined here as the skill to understand and use emotion in ways that effectively communicate knowing and empathizing with other individuals to reduce stress and help solve challenges and reduce conflict. Emotional labor, then, is an individual's work in operationalizing EI in personal and professional settings [7]. In this context, stress is defined as the feelings an individual has in response to their personal and professional environments that are causing adverse physiological and/or psychological effects in that individual. As such, this analysis addresses the Sapir-Whorf hypothesis of linguistic relativism as a conceptual framework but delimited within the English language—not in comparison across languages—to inform exploratory discussion into the influence of the interpretation of the terms *stress*, *STS*, and emotional intelligence as they are used in relation to schools and teachers. What are the implications of the semantic use of emotional intelligence for teachers? Specifically, this question is focused on a discussion of implications for teacher education and educational psychology in addressing STS. This assumes that MI theory is valid per the studies by Shearer [8, 9] and Shearer and Karanian [10] in contrast to a previous study challenging the validity of MI theory by Schulte and colleagues [11]. Emotional intelligence is addressed here and is assumed valid for the purposes of this analysis.

Effective teachers may often be expected to have high levels of EI. A selection of the literature on this topic is analyzed within the context of Gardner's [12, 13] multiple intelligences (MI) theory. However, this alone does not seem to answer the question: What is the role of the semantic use of EI in the expectations placed on K-12 teachers? Additional context is posited in this analysis through applying Bronfenbrenner's ecological systems theory (EST) as a way to bridge the individual's microsystem context with their mesosystem context of the school. The EST provides further theoretical context for how an individual may perceive their stress level and how the larger school community may perceive an individual teacher's exposure to stress. When stress levels become too much—or become toxic stress—then that can adversely affect that teacher's effectiveness. However, how stakeholders, such as administrators, students, and students' families, interpret a teacher's EI and to what extent they believe a teacher should engage in emotional labor all have a role in teachers' stress levels. This is partially an issue of semantics in that one stakeholder may define a teacher's emotional labor differently than another stakeholder. One might define it as chronically stressful while another stakeholder may not define emotional intelligence as having a decisive role in teachers' labor.

It is important to address semantic conceptualization of EI and emotional labor for the K-12 teachers' work context because these concepts may often be assumed without critical evaluation. The association between these concepts is important because they are linked; however, there is a need for additional discussion in how theoretical constructs such as ecological systems theory can provide a way to demonstrate how or why there can be variation in semantic interpretation within the same culture. An administrator may have a different perspective on what EI or emotional labor is than a teacher's perspective which might differ from a student's family perspective. The definitions may be the same, but how those definitions are interpreted in practice might show divergence. The Sapir-Whorf hypothesis has historically been posited to

discuss intercultural understanding, but additional research is needed on intracultural understanding of selected semantics and the role of semantics in how a person interacts with their social environment.

2. Emotional intelligence through the lens of ecological systems theory

Analyzing emotional intelligence from the interpersonal intelligence construct in Gardner's [12, 13] MI theory through ecological systems theory (EST) may provide additional understanding of the semantic use of intelligence as it is understood in educational psychology and, more specifically, how it highlights the importance of the emotional labor that teachers do. While debate about MI theory has largely revolved around the definition and use of the term *intelligence*—and whether it is a plural or singular concept [11]—the usefulness of MI theory and the validity of the concept of multiple intelligences has been supported in some neuroscience studies [8–10, 14]. When considering MI theory through the lens of EST—also known as bioecological systems theory—development of intelligence at the individual level is necessarily tied to a community as a comparative and supportive process. As Sloman and colleagues argued: "The representations entailed by collective cognition, in contrast, can be analyzed" ([15], p. 11). This is to say that intelligence, when defined as the singular *g*, has largely been a norm-referenced criterion. Norm-referenced is comparative across individuals to give, for example, an average or a median number for interpretation. However, when intelligence is plural—not the singular *g*—then intelligences is also criterion-referenced as much, if not more than, than norm-referenced. This perspective suggests a collective cognition that aligns both Bronfenbrenner's ecological systems theory and Gardner's MI theory.

Emotional intelligence has been shown to have correlation with prosocial behavior among adolescents [16]. According to a study by Espino-Díaz and colleagues [16], their study found that "several variables showed significant correlation with PSB [prosocial behavior]: EI [emotional intelligence] and EF [executive functions]. On the other hand, EI also showed significant association with the rest of the dimensions that form the PSB construct: empathy, respect, social relations and leadership. In the case of EF, it also correlated with respect" ([16], p. 11). The variables of empathy and respect are especially notable, because if students or other people in the school community demonstrate low levels of empathy and respect toward teachers then that has a cumulative effect on teachers. When considering Cheung and colleagues' study on "psychological capital" among teachers [17], low levels of perceived respect from students or the school community and behaviors that undermine teachers can increase the risk of STS which can affect teacher self-efficacy [18–21]. When teachers perceived high levels of respect from students, there was a reduced risk of stress having adverse impacts on teachers' self-efficacy and instead bolstered teachers' self-efficacy in teaching their students [17, 22, 23]. When this term is added to the semantic context of teachers, it provides for an additional variable to consider in what words or phrases are connected in discussions among researchers in what affects teachers' efficacy in preventing or mitigating emotional stress.

Bronfenbrenner's EST [24] was published just before Gardner's MI theory [12]. It seems relevant, then, to review the semantic use of emotional intelligence (EI) through the lens of EST. While there is much literature on each of these two contemporary theories, there is very little on exploring the semantic connections between concepts of stress, especially when considering the context of EST to analyze MI

theory. This is especially relevant to the social cognitive context of teachers because of the substantial expectations of them to have a high level of emotional intelligence and to demonstrate that consistently. This term can be used suppress a teacher's expression of frustration at high levels of stress insofar as the term *emotional intelligence* having semantic power to enforce the expectation of teachers to automatically absorb students' stress because that is the expectation of the term in the context of teachers. This gap is addressed to call attention to the need for additional research on this interrelated topic. The student-to-teacher working relationship is part of their microsystem (e.g., students, teachers, families) and to a lesser extent their mesosystem and exosystem (e.g., school administrators, district administrators, and/or school board).

Discussion of semantic use of emotional intelligence may come into holistic focus when considering ecological systems theory—also known as bioecological systems theory, though it will be referred to as ecological systems theory (EST) in this analysis similar to Eriksson and colleagues' holistic use of the theory [25]. This has been used to explain how individuals interact with their environment when considering larger social contexts [26]. It is, at its foundation, tied to language modeling insofar as individuals communicate their place within a larger community and vice versa. For example, EST has been used to discuss trauma-informed practices in educational contexts [27–30] and, by extension, its relevance for analyzing public health issues [25]. It has been used to analyze how individual students in certain group affiliations interact with schools [31, 32]. The family unit, as part of a student's microsystem, affects students' experiences in school [33]. This is itself a type of public health issue when considering the mental health of K-12 students and teachers. Ecological systems theory has been used to address various issues related to trauma such as issues stemming from school absenteeism [34]. It has also been used to consider instructional context [35, 36] and cultural context that is interrelated with these contextual items in which the teacher as a crucial person in a student's microsystem [37–39]. This emphasizes the importance of mitigating what scholars and mental health professionals call STS that educators sometime experience, especially considering that many teachers did not know that STS had a name [18, 19, 40]. STS can, among other things, disrupt belongingness [40, 41]. Taken together, the naming of the condition has semantic power because it makes it efficient to communicate the issue when there is a name for it that can be communicated with one phrase, STS, so that it has semantic resonance. This is to say that the common understanding of the term gives those experiencing it a sense of being heard, so semantically the concept has meaning to those not experiencing the condition.

3. Semantic use of emotional labor

Emotional intelligence and emotional labor are semantically linked concepts. When considering that *intelligence* and *labor* are both modified by *emotional*, it might be assumed that the modification is the same, but it is not because of the social cognitive context within which these terms are often used in K-12 education. The assumption is that teachers must have emotional intelligence to be effective. This is a reasonable assumption; however, when that is coupled with emotional labor, there is a tendency to require teachers to engage in emotional labor nearly all the time. The semantic use of the term emotional labor, then, is predicated on teachers always being expected or *de facto* required to continually use their emotional intelligence at a high level and with a very low error rate.

Belongingness is considered a component of emotional intelligence or, rather, emotional intelligence is like a skill that educators have in which they foster belongingness among their students. By extension, then, school administrators who have developed their emotional intelligence will support teachers so mitigate STS. Successfully mitigating STS can lower the risk of burnout [19, 42, 43]. This is part of the concept of *emotional labor* which is semantically tied to words such as *satisfaction* and *burnout* [17, 44, 45]. This is sometimes also semantically tied to the term *public health* which is tied semantically to *mental health* for teachers that is as important as mental health for students [46]. Educators are regularly the first adult authority figures in schools who are affected by student behavior and often placed in situations where they must evaluate students' actions and what they say. Educators screen every day for student behavior that they must decide if it is something to refer to the school administrator or school mental health professional. Students may divulge sensitive information to their teachers that may further increase educator stress [18, 40].

There are substantial emotional labor expectations placed on teachers from within their microsystem and macrosystem contexts [17, 44]. During class and while at school, teachers are required to monitor all student behavior, detect patterns, screen for behavior issues, and refer to school administrators, as well as intervene if students are being disruptive. In a study of 193 elementary and secondary school teachers in 2020, McMahon and colleagues [46] noted multiple patterns in how teachers are expected to address student behavior, suggesting a complex emotional labor requirement on teachers that requires continual calibration in addition to their other responsibilities. In another study of teachers in the United States, Horner and colleagues [45] posited a new model of an emotional labor construct adapted from the other human service professions outside of education and from the business hospitality field. Their adapted, new model was constructed specifically for K-12 teachers. They stated: "We argue that the model we present is more appropriate for these applications than the model imported from the business literature because our model is tailored directly to the teaching profession, which has clear distinctions from business professions and from other 'helping' professions such as nursing" ([45], p. 7). They analyzed types of emotional labor that teachers must engage, including "feeling rules" (i.e., expectations of how someone *should* feel) and "display rules" (i.e., expectations for how someone at work should show or not show emotions), as well as linked concepts such as "emotional acting" expectations [45]. Navigating these processes individually and in a group are complex and mediated by cultures as well as various interpersonal perspectives. The researchers acknowledged previous studies that had "mixed feelings around the display of natural emotions" in emotional acting strategies, but they found: "Teachers also described using emotional acting strategies in relation to the goal of helping students develop their own emotion regulation skills, particularly in the social sense" ([45], p. 19). Teachers are observed for what they say and do not say, what they do and do not do while at school. Their responsibility for teaching and supporting their students' social-emotional development is a continuous process.

In terms of avoiding burnout, Horner and colleagues further observed that "when teachers' emotions do not meet these expectations, they may experience a sense of failure to authentically uphold the ethic of care" ([45], p. 25). The high expectations placed on teachers to perform authentic care on a consistent basis is substantial emotional labor that often is a requirement rather than expectation. It is important, according to these researchers, that preservice teachers are informed about the important role they have in their students' social-emotional development. They concluded: "The emotional climate of schools inherently hinges on the ability of teachers to serve

not only as content educators but also as facilitators of social and emotional development" ([45], p. 25). As such, teachers can quickly find themselves placed in the *de facto* role of counselor.

STS is an issue among school personnel that, according to some researchers, needs systematic study for the purpose of designing effective supports for teachers [47]. When considered as a public health issue, STS may be more systematically addressed by school districts so that school administrators and licensed mental health professionals might better coordinate more proactively rather than relying on reactive measures [47, 48]. This would require trauma-informed education so that teachers know current best practices within their school context [49, 50]. By providing proactive support for teachers, school administrators support the maintenance of emotional intelligence so that it can be reliably applied [18, 19]. In a 2017 study of teachers' qualitative responses to a survey, McMahon and colleagues found that school administrators were a crucial component to teachers' microsystem that directly affected teachers' feelings and perception of efficacy which affected job-satisfaction and burnout [48]. The linkage between teacher labor and emotional intelligence has been summarized by Harvey and colleagues as "providing the foundation for teachers' interpersonal attitudes toward, their liking, and caring for students, and their ability to provide a safe, secure social environment" ([51], p. 629). As such, teachers engage in emotional labor that exposes them to potentially to STS. With this perspective, Chafouleas and colleagues called for a proactive, systematic approach to trauma-informed practices in schools [52]. Coordinating licensed mental health professionals and school administrators in support of students by providing support for teachers is a piece of this puzzle to acknowledge the emotional labor of teachers and to support it in ways that lower the risk of burnout from STS [20, 53].

Systematic approach to trauma-informed practices that support teachers tend to be undermined when there is frequent turnover of school leadership. Teacher turnover tends to increase when school leader turnover increases [54]. This can disrupt the delicate system of support for teachers and, by extension, the supports for students. Their findings reinforce results from other studies in which emotion-regulation ability of teachers was positively correlated with supportive principals and related administrative support factors [55]. Such disruptions add further to the challenges some students face as well as those teachers who are at risk for STS that can lead to a negative feedback loop if there is insufficient support from administrators and school mental healthcare staff [56]. Collaboration between administrators, teachers, and licensed mental health professionals who have clearly defined roles and responsibilities is important in effective intervention [57].

A term that has increasingly been associated with trauma-informed practices is *toxic stress*, which can be linked to STS. These are semantically linked in discussing intervention practices. Toxic stress is defined as chronic or having acutely severe episodes that can cause substantial problems with an individual's physiological or psychological health. Intervention in the microsystems of people is essential for increasing the likelihood of success in mitigating toxic stress [25, 58]. A group of researchers concluded that their "analysis shows that studies utilizing Bronfenbrenner's ecological system concepts, by clearly considering interactions within and between different ecological systems, can come up with most useful recommendations for public mental health promotion and interventions" ([25], p. 429). When considering emotional intelligence from the context of MI theory, it is important that school administrators have a high level of emotional intelligence to support the teachers in their schools in coordinating with licensed mental health professionals to therapeutically assist students who

have experienced ACEs that are affecting their behavior or belongingness in school [49]. Some students with ACEs might project their stress onto their teachers in what has been called psychological transference [59]. This could include aggressive verbal disrespect or even physical attacks against their teacher which substantially increases the risk of those teachers having STS. In a 2022 study of K-12 students in relation to aggression toward teachers, the researchers found that when students were aggressive toward a teacher this predicted higher self-reporting by teachers of feeling traumatized which led to self-reporting of lower job-satisfaction [60].

Having trauma-informed practices at each level of the ecological systems is important from a practitioner's viewpoint in how the language of such practices is commonly understood. If there is semantic misalignment among stakeholders' assumptions of those terms, that could lead to lower efficiency or effectiveness in addressing concerns. The screening and diagnostic instruments are components that should be intentionally integrated across systems [61]. Doing so might foster resilience [62]. Another group of researchers, Tebes and colleagues, argued for "infusing trauma-informed practice into everyday activities so it is a routine part of interpersonal transactions" ([62], p. 494). Similarly, Berardi and Morton noted in 2019: "We caution educators not to minimize the importance of developing trauma-informed competencies, and to name them as such. This includes continued discernment regarding implementation language sensitive to social context" ([63], p. xi). That sensitivity to social context is part of emotional intelligence.

4. Semantic use of emotional intelligence with emotional labor in context with ecological systems theory to address risk for STS

4.1 Semantic link of compassion to emotional intelligence in expectations on teachers

Part of the modern concept of emotional intelligence is now increasingly influenced by artificial intelligence (AI) and how it might be used to support decision processes [64]. This is important because these are rooted in large-language models. Such models use the predominant semantic assumptions of the day, usually. These use algorithms that are embedded in more educational software being used in schools. In theory, this can help lower the stress burden on teachers by "sharing" the decision-making process. However, this is inconclusive with many examples of how such reliance could cause problems. Nevertheless, a well-designed and implemented AI can offer some assistance in lowering teachers' stress levels. Such processes may be used to address mental health in schools. This remains to be seen, but it is important to mention. AI programs could be used to inform and support decisions by both licensed mental health professionals and by classroom educators, especially if doing so might increase efficiency in supporting teachers [65]. Regardless of whether AI is used or not in supporting emotional labor, there will remain the human support element in which school administrators play a key role. According to Ormiston and colleagues, "to mitigate the effects of student trauma on teachers, we can provide training in pre-service teacher programs, provide professional development, lessen teacher's workload, create trauma-informed schools, and hire more mental health providers who can serve students and provide guidance and consultation for teachers" ([20], p. 815). But where staffing ratios do not meet the need, AI might play a larger role in the future.

Compassion is viewed as a part of emotional intelligence. The two terms are semantically linked. In the social context of teachers, it is assumed that to have emotional intelligence is also to have a demonstrated level of compassion. When a teacher's microsystem is not receiving adequate support, a group of researchers observed that teachers who are experiencing STS can quickly exhibit "compassion fatigue" ([20], p. 803). Compassion fatigue (CF) is defined by Cieslak and colleagues as: "a reduced empathic capacity or client interest manifested through behavioral and emotional reactions from exposure to traumatizing experiences of others" ([66], p. 76). Ormiston and colleagues summarize the implication for teachers: "This means caring for children with trauma histories—and bearing witness to the behavioral, socioemotional, and academic cost of being victims of trauma—which can lead to higher rates of CF" ([20], p. 803). It can also include teaching students who exhibit maladaptive behaviors and/or are disrespectful toward the teacher. In a study of 150 teachers, Simon and colleagues found in 2022: "Results from multi-level structural equation modeling indicated that, as hypothesized, teacher STS symptoms were positively associated with their ratings of students' socioemotional difficulties ($\beta = .28$, $p < .01$) such that as teacher symptomology increased, so did the level of student difficulties reported" ([23], p. 213). STS affecting the emotional labor of the helping professions—such as teachers—tends to require multiple modes of systematic support to reduce the risk of STS occurring or mitigating STS if it is already being experienced [20, 23, 67, 68].

There are few studies that empirically test interventions that are aimed at supporting teachers in their emotional labor where variables identified are STS and compassion fatigue. One such study by Halamová and colleagues in 2022 tested an emotion-focused training for helping professionals (EFT-HP) online module. 22.6% of their participants were educators. Halamová and colleagues found:

> *"participants' lives showed significant improvements after only a 14-day online intervention. This is very important as a time efficient intervention that can be delivered without direct contact with mental health professionals and managed by the participant to some degree might prove to be a good alternative for helping professionals who are often overworked and under great pressure" ([67], pp. 13–14).*

They also found:

> *"Compared to the control group, the experimental group participants had significantly lower scores of secondary traumatic stress, burnout, self-criticism, and higher scores of self-compassion after the intervention. No significant changes were found for the control group, except a significant increase in time in the reported score for one dimension of burnout—exhaustion" ([67], p. 1).*

Taylor and colleagues in 2021 made similar observations in their study of a brief mindfulness-based intervention (bMBI) module for teachers. These findings set the stage for additional research that designs and test support intervention strategies [69]. The EFT-HP and bMBI examples substantiate the proactive support model for teachers and are in parallel with data-based support models used for children and adolescents. The behavioral measures in the Brown parent scale, for example, according to Leisman and colleagues:

> *"demonstrated that a significant number of children in the treatment group no longer met the diagnostic criteria for ADD/ADHD after the 12-week intervention, while the control*

> *group did not demonstrate a significant change and actually demonstrated a decreased performance on the Brown scale (BADD) associated that is reflective of an increase in the reported symptoms of ADD/ADHD relative to the treatment group" ([70], p. 6).*

These studies provide a basis for addressing STS as a public health issue that can be mitigated through proactive interdisciplinary support programs [60]. Systematic programs are needed to assist teachers in their emotional labor. More research is needed to design and test trauma-informed support programs that may be implemented school-wide [30, 71].

A study in Australia demonstrated that training programs in trauma-informed education for general education teachers tended to increase teachers' self-reporting of more confidence—or less indecision—in how to respond to students who have experienced trauma that may have been affecting their behavior in school [72]. More training in trauma-informed practices is needed in K-12 school administrator preparation programs as well as a concerted effort among school districts to support coordination between school administrators, licensed mental health professionals, and teachers. In doing so, both teachers and students may have more proactive strategies in implementing an "ethic of care" that Berardi and Morton summarized as "ultimately a commitment to being in community in a manner that provides a welcome and inclusive environment fostering relational safety and well-being" ([63], p. 104). When each stakeholder is engaged in this ethic of care, or at least knowledgeable about it, a more supportive environment in the school may be achieved and maintained.

Adverse childhood experiences (ACEs), as a concept, has semantic implications that have evolved during the past decade. According to Portwood, the definition of ACEs has included various forms of physical and emotional abuse and neglect, and "more recently, other events, including poverty, bullying, exposure to community violence and discrimination have been conceptualized as ACEs" (para. 1) [73]. ACEs tend to increase the risk of negative health outcomes in adulthood and, as such, should be viewed as developmental issues [58, 74]. Studies have provided evidence that ACEs affect the brain, especially the hippocampus and the amygdala [75]. According to Shonkoff and colleagues, an ecobiodevelopmental framework for understanding toxic stress suggests "that many adult diseases should be viewed as developmental disorders that begin early in life and that persistent health disparities associated with poverty, discrimination, or maltreatment could be reduced by the alleviation of toxic stress in childhood" ([58], p. e232). Likewise, Herzog and Schmahl concluded: "Individuals with ACE seem to be at higher risk for the development of mental and somatic disorders throughout the lifespan" ([75], p. 2). These studies establish the context for how STS can affect teachers.

When a student divulges experiencing an ACE, or behavior is being affected by an ACE, or discusses their stress with their teacher, especially when done multiple times or from multiple students over time, this places the teacher at risk for STS. Expectations on teachers to perform emotional labor in support of students can be especially pronounced when staffing ratios do not provide readily accessible licensed mental health professionals for students [76]. When there are few licensed mental health professionals such as licensed school counselors, social workers, or school psychologists, the gap is filled by students' classroom teachers which shifts more expectations on teachers to perform additional emotional labor. As a crucial component of students' microsystem, teachers should have ready access to licensed mental health professionals to whom students may be referred for both the benefit of the student and to lower the risk of STS for teachers.

4.2 When emotional intelligence as labor is semantically linked to teachers' expanding role in supporting student mental wellbeing

Teachers may be placed in uncomfortable situations by the nature of their role in students' microsystem as functionally *de facto* mental health intake assessors [1, 63]. This shift in emotional labor increasing for teachers needs additional study for practical solutions to assist preservice and in-service teachers [49, 50]. Some states in the United States, such as Tennessee, with the Literacy Success Act of 2021, require competencies in trauma-informed practices for K-3 general education teachers [77]. This may be the scenario regardless of staffing ratios, but it is especially apparent when the number of licensed mental health professionals who are available in schools is below recommended minimums [76]. This context has led to calls for trauma-informed literacy [23, 49]. Although teachers will refer students to a licensed mental health professional in the school or district, the teacher still listens to the student's situation and must report to administration and follow up with the school counselor. Temporal proximity and student familiarity with their teachers makes it more likely that students will discuss their stress or behave in ways that requires the teacher to assess for mental health, especially if it affects the classroom learning environment. This perspective suggests the importance of bridging an individual's microsystem with the exosystem. In other words, the teacher needs support from their school administrators, licensed mental health professionals, and the district administration to efficiently support prosocial development among the children in their school who are at risk of maladaptive behavior and academic failure.

Addressing worker risk of STS within and across community service professions should be proactive [74]. In the context of K-12 education, this is important when considering the number of youth who have ACEs. For example, according to a study by Duke and colleagues: 136,549 students in grades 6, 9, and 12 completed the 2007 Minnesota Student Survey in which 28.9% reported at least one ACE [78]. In another study, Jimenez and colleagues found in 2016 that 55% percent of the study's sample of 1,007 children had experienced one ACE [79]. Teachers may be at especially high risk for STS when students have experienced or are experiencing ACEs. In a meta-analysis of studies researching the relationship between ACEs and psychological resilience among children, Morgan and colleagues in 2022 found that those "who experienced an ACE were 63% less likely to display high resilience, in comparison to subjects without such experiences" ([80], p. 1). This affects those students' academic performance and can, by extension, have what Lawson and colleagues (2019) identified as "spill-over effects" of increasing teachers' stress and adversely affecting the school community overall. Lawson and colleagues observed in 2019: "Undesirable effects of STS start with professional disengagement and declining performance, include spill-over effects into educators' personal lives, and, ultimately, may cause them to leave the profession" ([68], p. 421). If teachers are not supported by administrators and licensed mental health professionals as a team effort to provide supports for students with ACEs, it might cause a feedback loop of higher incidences of teacher attrition and turnover which might cause gaps in care for at-risk students. Teachers who have a supportive administration are more likely to have higher morale [81].

A teacher's emotional intelligence has become a factor of increasing focus recently in relation to their perceived skills in being able to be part of a support team for students who may be experiencing latent effects of ACEs. If ACEs are present in a child's microsystem (e.g., their families), that will have indirect—and potentially direct—effects on the rest of their microsystem, mesosystem, and

exosystem (e.g., their school community of teachers, other children in their school, etc.). According to Ballard and colleagues: "Classes of childhood traumatic experiences predict specific psychiatric and behavioral outcomes in adolescence and young adulthood" ([82], p. 3305). Jimenez and colleagues concluded in their study of ACEs in early childhood that children who had ACEs were statistically associated with teacher-reported, below-average academic and literacy skills in addition to behavior problems in kindergarten [79]. This affects teachers who may sometimes or often times be placed in situations of deciding how to provide emotional support or if the curriculum should or should not be modified. This has cumulative effects on teacher stress levels.

A new term entered the lexicon of cultural psychologists to refer to an individual's social standing within a group. The new term was "psychological capital" [17]. This term can be semantically linked to emotional intelligence in that teachers must have an active awareness of their standing with stakeholders to indicate that they have high levels of emotional intelligence as evidenced by good performance evaluations. Lower psychological capital generally results in lower job satisfaction [17]. Lower job satisfaction tends to lead to more turnover and increases the likelihood of teachers leaving the profession. For example, this phenomenon can be observed in Fortin and Fawcett's reporting in 2022 and Perna's reporting in 2022 and in studies of teacher attrition [1, 3, 6, 21]. Psychological capital may be increased or stabilized among teachers when there are clearly defined roles and proactive availability of licensed mental health professionals, such as counselors, in their school so that teachers may be more likely to feel supported in addressing the needs of their students [57].

In an unusual study of the concept of psychological transference, Boulanger concluded in 2018 that another new term called "vicarious trauma" had emerged within the lexicon of mental health professionals when working with individuals who experienced traumatic events can be a therapeutic tool if applied within carefully structured clinical contexts [59]. This term is semantically linked to the phrase "trauma is contagious" ([59], p. 60). This assumption asserts a foundational variable to consider when designing ways to mitigate psychic contagion. As such, the contextual semantics of these terms reinforce each other to emphasize the reification of teachers' emotional labor. They are tacitly expected to have advanced emotional intelligence to know when and how to engage in this emotional support labor on behalf of the students and their families [44]. Designing support with this in mind to mitigate teachers' risk for STS is important for school administration in trying to prevent burnout [42–44, 55, 56]. STS is a condition of psychological transference that Boulanger called vicarious trauma [59]. As such, designing countertransference routines for teachers would seem to be an important concept and skill to teach K-12 school administrators and school counselors in how to assist teachers in working with students who have experienced ACEs. This requires mental health professionals to be actively engaged and available to administrators and teachers for supporting their work with students and their families.

According to Boulanger, "Sometimes vicarious trauma is experienced as a form of psychic contagion, unwelcome and unintentional. Only in acknowledging the contagion can clinicians begin to work through their patients' traumatic experiences" ([59], p. 67). This is key, because it is a primary responsibility of mental health clinicians—not teachers—to assist students who have experienced trauma such as ACEs. Nevertheless, as several studies have demonstrated, part of the reality is that students experiencing ACEs may rely in part on teachers for initial discussion of their situation which may tend to place teachers in a de facto assistive role to the mental health

professionals for initial screening and even observation as students are in class regularly [45, 50]. This is more support for the calls to increase collaboration between K-12 school administrators, school mental health professionals, teachers, and students' families [49, 57, 83]. The students' microsystems, mesosystems, and exosystems are intrinsically linked, and so the importance of collaboration is essential in addressing psychic contagion, especially from a semantic perspective. The way words are used in relation to intense emotional experiences affects perception and the ways in which intensity can be mitigated and channeled into productivity.

When considering how the word *stress*—as in emotional distress—and STS are used among teachers and school administrators in comparison to how other stakeholders in education use those words, there should be considerable overlap and consistency. Relatedly, emergency preparedness or emergency response, the social cognitive context is one that is likely high in emotional distress. STS can emerge in these situations over time, but how emotional stress is discussed is relative to the culture within which it occurs. This goes back to the Sapir-Whorf hypothesis in linguistic relativity theory [84], in which questions such as this are asked: "Does our understanding of things shape and change our language or does our language shapes our understanding of things?" [85]. Local culture affects perceptions of EI, perceptions of how emotional stress affects teachers, and opinions on how teachers should address emotional stress with school administrators or whether they should at all. Local school culture, then, affects the social cognitive meaning of stress, as interpreted by stakeholders, and what it means in terms of expectations on, of, and for teachers, as well as how stakeholders perceive their roles [2, 5].

Differences may be seen across countries or even between districts within the same country in how stress or STS is conceptualized and used similarly or differently by teachers, administrators, and students' families. Given different perceptions based on level of exposure to stress, a teacher might have a different view of their risk for STS compared to how a students' family or a school administrator might perceive that teacher's risk level—if it is considered at all. The point here is that these words have emotional meaning because a teacher's role is, among many other things, one of emotional labor in addition to teaching. The word *stress*, as an emotional concept, and the term STS have emotional meanings that may not always have the same interpretation from each stakeholder in the school community. Perlovksy stated that there are "'conceptual' pragmatic cultures in which emotionality of language is reduced and differentiation overtakes synthesis resulting in fast evolution at the price of uncertainty of values, self doubts, and internal crises" ([86], p. 518). Given this observation of what Perlovsky called an "emotional version" of the Sapir-Whorf hypothesis [86], it can be adapted for application as a conceptual framework for studies of teachers' emotional labor and the related idea of emotional intelligence.

It is important to note that this conclusion is a modification of the Sapir-Whorf hypothesis in that the emotions of words may differ within the same cultural linguistic context without claiming there are any differences in thinking across languages. This is important also because the Sapir-Whorf hypothesis has been criticized for its initially narrow conceptual framing of its theorization of the potential effects of language on a person's thinking. This applies in this discussion because the semantic uses of terms such as stress, STS, emotional labor, and emotional intelligence within the English language can have different impact on individuals based on their individual psychological experiences. It is assumed in this discussion that an individual's primary language has no effect on that individual's thinking. In other words, the assumption here is that the word *stress*—as in *emotional distress*—has the same meaning across all

languages. This is different than the original Sapir-Whorf hypothesis, though it has been updated more recently [87]. Future research could test this by studying perceptions of stress and STS among teachers across linguistic groups.

4.3 Speech-language pathologists are essential in supporting primary school teachers

What has not been mentioned previously and that this study now highlights is the importance of speech-language pathologists and speech-language therapists for primary schools. These specialists should be part of the collaborative teams for teachers to consult because they can help with students' emotional intelligence development with general education teachers by providing their expertise in supporting students' literacy. Education is largely based on language, so speech-language pathologists are essential for schools [88]. This is especially important for those students whose language development may be affected by latent effects of ACEs [53]. When considering the Sapir-Whorf hypothesis [84] in its modified emotional version [86], it might offer a conceptual framework to exploring the concept of the semantic uses of emotional intelligence and its related vocabulary in research studies. The social cognitive context of teachers' emotional labor comes into focus as increasingly important. Students' perception of teachers' emotional labor has also been noted as an important factor [89]. The ways in which these terms are used in educator preparation programs and in schools affect the ways in which stakeholders address teacher roles. It is when expectations are out of alignment that problems can emerge; therefore, aligning expectations to the meaning of these concepts is essential. Speech-language pathologists can be a part of this process with their expertise in communication development to align expectations among stakeholders.

Cross-cultural study of stress and STS among teachers and school administrators is an area in need of additional research. How the word stress and term STS are conceptualized may be influenced by stakeholders' relative position in the discussion as they may have different levels of knowledge of what terms such as STS, EI, and EL mean and what the effects of stress or STS might be based on that knowledge or stakeholder interest. Speech-language pathologists informed in psycholinguistics can have an important role in supporting school administrators, students, students' families, and general education teachers. This is especially important for general education teachers in using literacy-informed approaches to content area instruction. Having consistent understanding of vocabulary is essential for cross-cultural communication as well as for internal consistency within a given language when used in schools. Language development is a central role of the school and should be in alignment with the developmental process [90, 91].

Cross-cultural communication is essential at many schools. If not directly stated, it is inferred through the content area literacy requirements in primary school and the requirement in many secondary schools to take modern language courses and a second language. It is an important skill that depends on advanced language skills that must be practiced. Cross-cultural competency can lower stress because teachers have more communication tools [84, 91]. A student may further develop their emotional intelligence by learning a second language. The level of proficiency in a second language should ideally have the goal to achieve advanced "C" level on the CEFR (Common European Framework of Reference) Scale; though beginning "A1" level may be enough to initiate growth in EI. This will be helpful should they decide to become a teacher as this will give additional understanding as they enter their

educator preparation program. Reviews of the semantic uses of MI theory provide important insights into trends in the field that can inform research studies [92].

An additional implication for future research of this conceptual review of the semantic use of emotional intelligence within a social cognitive context with EST is to expand on studies of preservice teacher perceptions of emotional labor and what they believe the expectations are for them in how to apply their emotional intelligence and how to measure that concept. For example, in a previous study of preservice elementary school teachers' semantic approach to responding to survey questions about their efficacy with the arts, this researcher performed a discourse analysis evaluating participants' use of grammatical person; if the participant used the first-person there was the suggestion that it inferred higher levels of self-efficacy than if the participant deflected with a third-person response [93]. The methodology in that study could be applied to designing a study on preservice teacher perceptions of the semantic uses of emotional intelligence and emotional labor as they individually perceive those concepts and how they believe other school stakeholders perceive those concepts in their expectations of teachers' role in supporting students' social development.

5. Conclusion

Emotional intelligence, when viewed through the lens of EST, is especially important at the microsystem level in the teaching profession. This concept has tended to be semantically linked to an assumption of the emotional labor in the K-12 teaching profession being always a given. It is also important at every other system level, but the microsystem is the area in which people have the most daily interaction. Coordination between the system levels from microsystem to exosystem and beyond is important for school administrators in supporting teachers to mitigate STS. When STS is not effectively addressed it can lead to compassion fatigue and, as such, is a public health issue affecting schools. Part of this process is school administrators acknowledging teachers' emotional labor and finding ways to increase the efficiency of collaboration between themselves, the teachers, and the licensed mental health professionals so that they may collectively address the needs of students while also mitigating STS. As such, the semantics of these terms matter. If a school stakeholder does not have the same definition of EI that another school stakeholder does, this can cause misalignment of priorities and potentially increase risk of STS and burnout among teachers who are at the forefront of emotional labor in schools. To assist in conceptualizing the semantic use of EI and emotional labor, Bronfenbrenner's EST can be used to situate teachers' experiences in the impact of the microsystem, mesosystem, and macrosystem levels that affect perception. Additional research is needed on designing and testing proactive support programs for teachers and students to mitigate STS in coordination with language learning specialists, especially speech-language pathologists. Research from multiple vantage points would advance understanding on the influence of the semantic use of emotional labor and how changing semantic use of the terms might influence stakeholders' expectations placed on teachers.

Conflict of interest

The author declares no conflict of interest.

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Nomenclature

MI	multiple intelligences theory
STS	secondary traumatic stress
EI	emotional intelligence
EL	emotional labor
ACEs	adverse childhood experiences
EST	ecological systems theory

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Chapter 5

Coreferentiality Considered from a Cognitive Perspective

Hans Buffart and Haike Jacobs

Abstract

We propose an explanation of the observations of Leddon and Lidz that the predictions of binding theory are not always borne out by the facts. More specifically their participants did not always interpret bound pronouns in line with government and binding principles. Our analysis is based on a paper by Buffart and Jacobs where they recognized structures and substructures in languages in accordance with Focus theory. In the theory, every element in a structure, and thus an anaphor as well, is bound to it. In the absence of a reference within the main- or substructure, an anaphor may refer to an element in the related sub- or main structure. We show how preference works in case of duality of interpretations.

Keywords: unexpected coreferentiality, competence as Focus theory in action, preferential interpretations in duality, binding theory, structure and duality

1. Introduction

Personal pronouns like "she" behave differently from reflexive pronouns like "herself." A sentence like *She sees the sun* is fine, but a sentence like *Herself sees the sun* is not. A pronoun like "she" can occur independently in a sentence whereas a pronoun like "herself" cannot. Personal pronouns are also called free and reflexive pronouns are called bound pronouns. The distribution of bound pronouns is syntactically determined by the principles of binding (cf. [1]).

In this paper, we will especially consider the behavior of bound pronouns and concentrate on cases that seem exceptional from a binding-theoretical perspective. We apply Focus theory to offer an alternative account for the exceptional behavior of bound pronouns.

This paper is structured as follows. In Section 1, we will briefly sketch the syntactic view on bound pronouns and we discuss the exceptional cases reported on by Leddon and Lidz [2]. After that, Section 2 introduces the key elements of Focus theory [3, 4]. Section 3 is devoted to an application of the theory on the observed problematic cases, and, finally, Section 4 summarizes the main results of this paper.

2. Background

2.1 Coreference

Reflexive pronouns like "himself" or "herself," in contrast to non-reflexive personal pronouns like "he" or "she," cannot occur without an antecedent, the person to which they refer, in a sentence. Let us next consider the sentences in (1), where a coreferential interpretation is indicated by the same subscript number.

(1a) My brother$_1$ likes himself$_1$ very much.
(1b) *Himself$_1$ likes my brother$_1$ very much.
(1c) *John$_1$ thinks that Bill likes himself$_1$ very much.
(1d) John thinks that Bill$_1$ likes himself$_1$ very much.

The reason why (1a) is fine, but (1b) is unacceptable is that the reflexive pronoun must be preceded by its antecedent (1a) and cannot be followed by it as in sentence (1b). Sentence (1c) shows that the antecedent cannot be too far away from the reflexive pronoun. In (1c), the reflexive pronoun is in the subordinate clause and the antecedent is in a different clause, the main clause. In (1d), both the antecedent and the reflexive are located within the same clause, the embedded or subordinate clause. In more technical terms, (cf. among many others in [1]) the conditions on coreference can be stated as a binding relation between the antecedent and the reflexive pronoun or anaphor within the same clause. Let us simplify it here by saying that the reflexive has as its antecedent the closest possible preceding subject.

Let us next turn to the sentence in (2).

(2) Which pictures of himself$_1$ does my brother$_1$ like most?
At first sight, the sentence in (2) should be unacceptable, given the fact that the reflexive pronoun is not preceded by its antecedent, but followed by it. The standard explanation in the syntactic literature is that the sentence in (2) is derived from a sentence where the reflexive pronoun is preceded by its antecedent, as in (3).
(3) My brother$_1$ likes those/which pictures of himself$_1$ most.
The sentence in (2) is thus derived from a sentence like (3) by movement of the wh-phrase to the initial position as indicated in (4). In order to judge a sentence like (2) to be grammatical or acceptable, a speaker thus has to reconstruct (3) as the underlying structure of (2) and interpret the antecedent reflexive pronoun relation in the underlying form.
(4) [Which pictures of himself$_1$] my brother$_1$ likes [which pictures of himself$_1$] most?

2.2 The problem

Leddon and Lidz [2] have drawn attention to the sentences (5) and (6), which are problematic to the above view and which show conflicting results.

(5) Bill$_1$ knew which pictures of himself$_{1/2}$ John$_2$ liked.
(6) Bill$_1$ knew how proud of himself*$_{1/2}$ John$_2$ was.

In (5), "himself" can be interpreted as either referring to Bill or to John, whereas in (6) a coreferential interpretation between "Bill" and "himself" is not allowed. In (5), the moved part from the subordinate close (CP, for complementizer phrase) is an

argument, the direct object (NP) of the verb "liked" and in (6), the moved part is the predicate (AP) of the verb "was." The underlying structures, the structures that need to be reconstructed in the process of evaluating the surface sentences in (5) and (6) are given in (7) and (8), respectively.

(7) Bill knew [CP John liked [NP which pictures of himself].
(8) Bill knew [CP John was [AP how/very proud of himself].

If the relation between antecedent and reflexive pronoun is always interpreted in the underlying structure, sentence (6) should behave as sentence (7), that is a coreferential interpretation of "Bill" and "himself" should be excluded in both (5) and (6). Leddon and Lidz [2] concluded on the basis of three experiments with children and adults that both children and adults in the case of a moved predicate do reconstruct the underlying form and thus are unanimous in judging sentences like (6). When it comes to sentences like (5) they conclude that reconstruction is optional both for adults and for children, but that: "Children demonstrate a clear preference for the surface structure interpretation when licensed by their grammar." They explain their findings by assuming different parsing mechanisms: "Specifically, it is likely that children initially assign the simplest possible parse to a given sentence, interpreting items where they are pronounced, or in other words, assign a surface structure reading." This seems, however, not to explain why adults still allow for a surface reading when it comes to moved arguments. In the remainder of this paper, we would like to explore an alternative explanation for the difference between the two types of moved elements. In the next section, we will briefly introduce the Focus theory developed by Buffart [3].

3. Theory

Focus theory starts from the observation that human processing is sequential, at least in the first 60 milliseconds. This means that there is a sequence of "elements" to be processed. Between the elements, relations can exist. For example, in vision it can be a similar color, a similar angle, or a similar shape/figure; in music, one can think of a similar pitch distance, pitch duration, or rhythm; in language, a relation between a subject and a verb, or between an adjective and a noun and so forth. Some of these relations are relations between neighboring elements (which are called neighbor relations), and others are relations between non-neighboring elements (jump relations). The basic assumption of the theory is, that in cognition, an element can only be involved in one type of relation at the same time. If this holds for each element of the sequence to be processed, the set of relations is called an interpretation of the sequence. This does not mean that an element cannot be involved in both a jump relation and in a neighbor relation, but it means that in an interpretation it can only be involved in one of both. Thus, a sequence can have more than one interpretation. The system that handles the sequences in this way is called Focus.

In fact, the statement is a little bit more complicated, since it depends on the mode of the relation. In a sequence of visual elements, for example, one could compare their shapes or one could compare their colors; in a sentence, one can compare parts or words with respect to the grammar or with respect to the meaning; in music, it differs when comparing melodic aspects of pitches or beats. In language, the distinction between grammar and meaning is difficult since they affect each other.

The assumption that an element is involved in only one type of relation at the same time leads to a mathematical theorem (see in [3]) according to which each sequence with a length of maximal seven elements can be described by maximal two interpretations. In vision the existence of two interpretations is well known, It is called duality or complementarity. Moreover, the discussion on the number seven has a long history in psychology and psycholinguistics. In almost all publications one generally assumes that the number seven is related to the short-term memory (STM) capacity or working memory (WM). In Focus theory, it expresses the capacity of Focus. In ref. [4], it is shown that it can explain the results of STM-capacity experiments, which seem to support the idea that this capacity is four.

Systems with a Focus capacity of four elements or less qualitatively differ from those with a capacity of five, six, or seven elements. We [5] assumed that the latter systems reflect the capacities of the standard population. This implies that the structure of the communication within such a population must be based on a Focus capacity of five. For sure, there may exist communication methods, that require a minimum capacity of six or seven, but that cannot be the case for languages since language is used by everyone.

In ref. [5], we applied this theory on structure in cognition to linguistic phenomena especially syntactic embedding in sentences and phonological interacting processes. Karlsson [6, 7] and Christiansen and Charter [8] showed that to understand center-embedded sentences their depth of embeddedness is limited. Universal Grammar (UG) cannot explain these results since the depth of embedding only plays a role in center-embeddedness, but not in right- or left-embeddedness, whereas from a purely generative perspective, they are equally complex. Focus theory has a different starting point. As we argued [5], structural grammar is a consequence of the Focus-restrictions. They not only generate grammar, but they also account for the restrictions on embeddedness. The theoretical calculations cover the experimental findings. In order to explain restrictions, one often (e.g. [7]) argues that these might be due to WM or STM without being able to substantiate it by a calculation.

We will use Focus theory to explain co-referentiality since it generates grammar and correctly predicts the experimental findings on center-embedding and STM-capacity. A more extensive description can be found in the paper mentioned [5]. Since duality and the restricted capacity of five up to seven are two sides of the same coin the theory offers two ways to look at experimental data. One way is based on Focus capacity, which we applied in [5] to restrictions on embeddedness. The other way is based on the duality or complementarity of interpretations, which we applied to consonant shifts and which we will use in this paper to provide an alternative explanation for coreferentiality.

4. Application to coreference

4.1 Duality and transposition

Sentence 9b is a question sentence that can be generated from or is related to sentence 9a. **Figure 1** shows this in a simplified grammar notation. In a similar way, one can generate a so-called "*in situ*" question sentence (9d), that is a question where the question word is not moved, from sentence (9c). In a language like French, an "*in situ*" question is quite normal: Le chien a chassé quel chat? In English or Dutch, a similar question requires a specific intonation pattern, and the noun "which cat" in a question

like (9d) is normally transposed to the front of the sentence, and the noun "the dog" is replaced after the verb (**Figure 2**), so that the surface structure of this question sentence is the same as the surface structure of the question sentence (9b) generated by (9a). However, their meanings differ; that is, expression (9b) can be interpreted in two ways; "which cat" can be the subject or the object.

(9a) The cat chases the dog.
(9b) Which cat chases the dog?
(9c) The dog chases the cat.
(9d) The dog chases which cat?

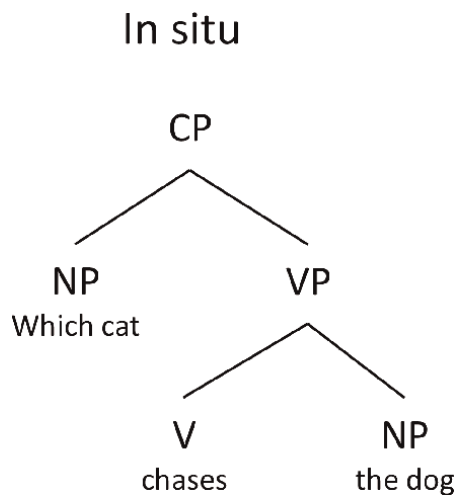

Figure 1.
The cat chases the dog.

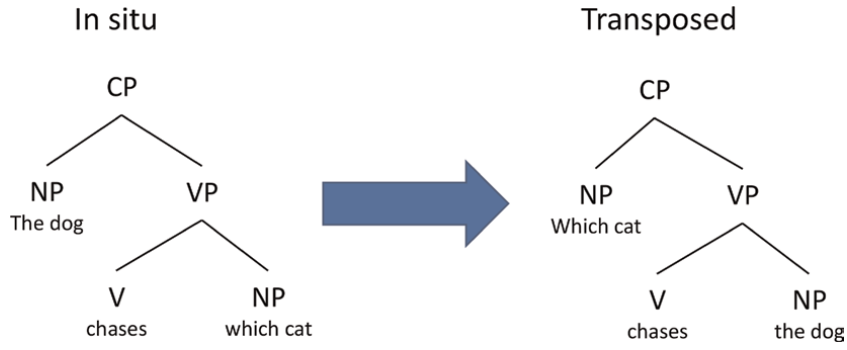

Figure 2.
The dog chases the cat.

The relative strength of the two interpretations can be influenced by context as can be seen in the question sentences (9e) and (9f). But, the duality is still there.

(9e) Which aggressive cat chases the dog?
(9f) Which cat chases the aggressive dog?

4.2 Duality and subordinate clauses

Let us have a look at transpositions in more complex sentences, that contain a main and a subordinate clause. As can be seen in (10), "himself" refers to the subject within the subordinate clause. This is in accordance with ref. [5]. A general rule of their approach implies that all elements have only internal relations, so that "himself" refers to an item of the (subordinate) clause to which "himself" belongs, provided that there is such an item. Nevertheless, in the examples in (10) "himself" always refers to the subject in the subordinate clause.

In general, the free nouns "he," "her," "she," and "him" can refer to everybody, even to those, who are not mentioned. If we restrict ourselves to subjects that are mentioned, then in (10c,d) "he" in the second clause refers to James and so does "himself" since it must refer to "he". In (10e,f), it is not clear whether the "he" in the subordinate clause refers to Bill or James. It depends to whom "He" in the main clause of the second sentence refers. If (main clause) "He" refers to James then (subclause) "he" refers to Bill and the other way around. Since Bill is already the subject in the first sentence, Bill is by preference, but not necessarily, the subject in the main clause of the second sentence. In (10 g,h), there is no context so "he" can only refer to Bill.

(10a) Bill knows that John is proud of himself.
(10b) Bill knows how proud of himself John is.
(10c) Bill meets James. Bill knows that he is proud of himself.
(10d) Bill meets James. Bill knows how proud of himself he is.
(10e) Bill meets James. He knows that he is proud of himself.
(10f) Bill meets James. He knows how proud of himself he is.
(10 g) Bill knows that he is proud of himself.
(10 h) Bill knows how proud of himself he is.

In (11), sentences are given, where "himself" refers to Bill in the main clause, even when "himself" belongs to the subordinate clause. In (11a,b), "himself" belongs to the main clause. If one interprets the subordinate clause in (11c) to begin with "the pictures of himself" then "himself" belongs to the subordinate clause. However, considering the type of sentences in (11a,b), one may assume that the subordinate clause begins with "that are." In that case "himself" belongs to the main clause as well. In (11d,e), it belongs to the subordinate clause. However, there is no item in the subordinate clause to which "himself" can refer. So the reflexive pronoun needs to find its antecedent in the main clause. Notice that this reference precedes "himself."

(11a) Bill finds these pictures of himself.
(11b) Bill knows these pictures of himself.
(11c) Bill recognizes the pictures of himself that are red.
(11d) Bill knows which pictures of himself are red.
(11e) Bill knows that those pictures of himself are red.

If we compare (11b) with (11d) and (11e), then in (11b) the object of "knows" is "pictures," whereas in (11d) and (11e), the object of "knows" is no longer the NP, but the entire subordinate clause.

The sentences in (12) show another complexity. In accordance with the analysis of the sentences in (11), "himself" in both (12a) and (12b) can refer to Bill. This similarly holds for (12c), where "which pictures" is subject instead of object. That the

application of the analysis of (11) applies here as well, is supported by the sentences (12d,e,f). As in the case of (9b), "which cat chases the dog?", the sentences in (12b,c) have dual interpretations, since here "himself" can also refer to John. Although the difference between (12a) and (12d), between (12b) and (12e), and between (12c) and (12f) is only a name, the sentences (12b,c) show duality whereas the sentences (12e,f) have only one interpretation (see also **Figures 3** and **4**). Sentences (12b,c) are like the

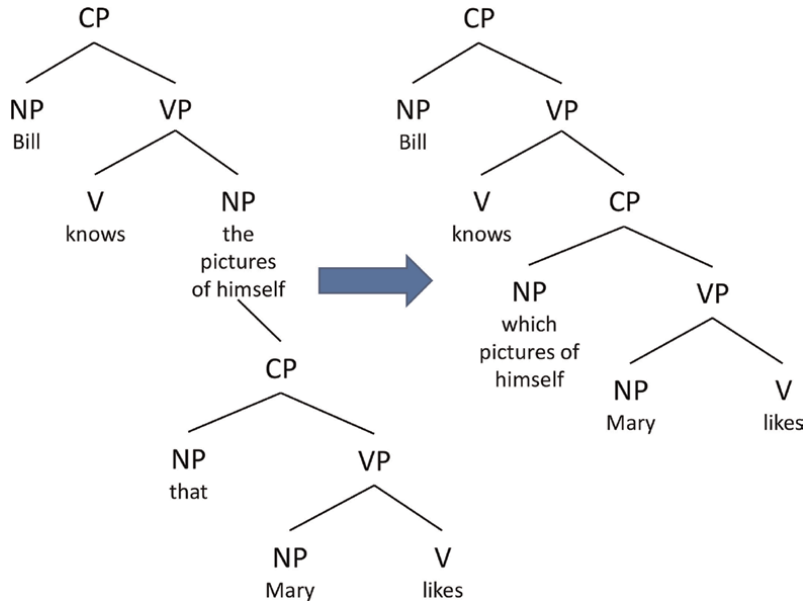

Figure 3.
Reference into the main clause.

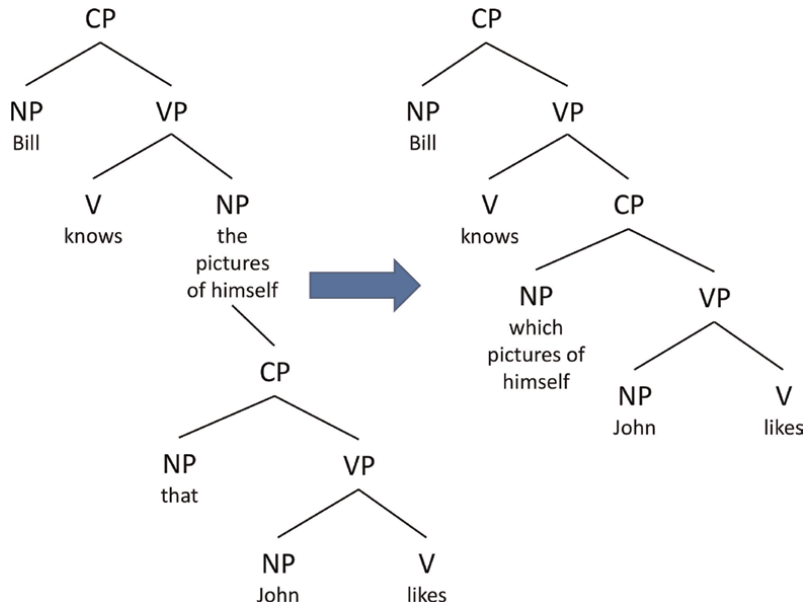

Figure 4.
Duality.

Leddon and Lidz sentence (5), and in (12b) one could say that in one interpretation "pictures" is the object of "knows," whereas in the other interpretation, the object of "knows" is the entire subordinate clause "John likes which pictures of himself."

(12a) Bill knows the pictures of himself that John likes.
(12b) Bill knows which pictures of himself John likes.
(12c) Bill knows which pictures of himself please John.
(12d) Bill knows the pictures of himself that Mary likes.
(12e) Bill knows which pictures of himself Mary likes.
(12f) Bill knows which pictures of himself please Mary.

In sentence (12 g), "himself" refers to John, but in sentence (12 h), there is duality again, although "himself" belongs to the subordinate clause. If one replaces "please John" with "are red," the reference of "himself" to Bill is clear. In all those sentences, the continuation of the sentence is uncertain up to and including "pictures of himself." In a lot of cases, "Bill" is the only possible reference. In other words, "himself" seeks a reference that precedes it. If, in case of a subordinate clause, there is no reference in this part preceding it, a preceding element in the main clause is a candidate.

(12 g) Bill knows that John likes those pictures of himself.
(12 h) Bill knows that those pictures of himself please John.

In the case of duality, the question of preference for one of both references arises.

4.3 Preference

The role of him and her differs from the function of himself and herself. As he or she in a sentence may refer freely to nouns in a context so do him and her. Himself and herself must refer to an element in the sentence. This can be seen in the sentences in (13). In (13a) and (13b), "himself" and "him" belong to the main clause, but there is no reference possible to the subject of the main clause. Therefore himself in (13a) will refer to John in the subordinate clause. If we would add "Ann meets James" the "him" in (13b) could easily refer to James, but "himself" in (13a,c) could not.

(13a) You know the pictures of himself that John likes.
(13b) You know the pictures of him that John likes.
(13c) You know which pictures of himself John likes.

In (14), there are similar considerations. In (14b), "him" refers to Bill since there is no other context. But if we introduce James here, as above, by adding "Ann meets James" before the sentence, "him" will be attached to James, but "himself" in (14a) will not. Sentence (14c) is not acceptable since in principle "himself" will refer to the subject in the subordinate clause, but there is no available reference there. Since "him" is a free pronoun, it does not encounter this problem in (14d). In (14e), the dog rises its tail, and that is allowed.

(14a) Bill knows which pictures of himself she likes.
(14b) Bill knows which pictures of him she likes.
(14c) Bill knows how proud of himself she is.
(14d) Bill knows how proud of him she is.
(14e) Bill knows how proud of himself the dog is.

Especially in the case of duality, but also if the sentence or the context does not give a clear hold, the question of preference for some solution bubbles up. In case of duality without context information, the reading direction may play a role. The interpretation of (9b), for example, tends more to (9a) than to (9c). The influence of reading direction is not restricted to language. It is a general phenomenon. The expressions (15b,c,e) are equally preferred interpretations of the sequence in (15a) if one can lock out the influence of the reading direction [9, 10]. A left–right reading direction supports interpretation (15b) and a right–left reading direction interpretation (15c).

(15a) abaabaaa
(15b) (aba)(aba)aa
(15c) (ab)a(ab)(aaa)
(15d) a(baa)(baa)a

A language has only one given reading direction (generally left-to-right or right-to-left). But language is in the first place a spoken, not a written, means of communication. Besides context, intonation and accent may direct to the interpretation intended by the sender. This neutralizes the linearity of the surface structure.

Since the sentence part "Bill knows which pictures of himself … ." can be finished in several ways, as, for example, in (11d), (12c,f), and (14a), there will be a natural tendency to attach "himself" to Bill and to interpret "pictures" as the object of "knows," although the other interpretation with the object of "knows" as the entire subordinate clause "John likes which pictures of himself" is the only meaning allowed if only reconstruction had its way.

This is a crucial difference in the two sentences (5) and (6) above, repeated here as such.

(5) Bill knew which pictures of himself John liked.
(6) Bill knew how proud of himself John was.

The sentence part "Bill knew how proud of himself" cannot occur in isolation and cannot be finished in several ways, contrary to the "Bill knows which pictures of himself" part. In order to interpret the former part, the interpreter needs to have further information and needs to have the subject of the subclause. Only if that subject is "he," a coreferential interpretation is allowed, whereas any other subject will exclude that.

The comparison of (16a) and (16b) brings the preferential duality phenomenon to awareness. In (16b), one experiences the necessity of a correction between himself and the subject of the subordinate clause since the author of the sentence can only mean self-portraits of Rembrandt, but not in (16a) where the more reading-supported link is between himself and Bill. The comparison of (16c) and (16d) delivers a similar phenomenon.

(16a) Bill knows which portraits of himself have been painted by his brother.
(16b) Bill knows which portraits of himself have been painted by Rembrandt.
(16c) Bill knows which portraits of himself have been stolen by the thief.
(16d) Bill knows which portraits of himself have been stolen by his brother.

The structure of the sentences in (16) is however the same in all cases:

(16) Bill knows [CP Rembrandt/brother painted [NP which pictures of himself].
(16) Bill knows [CP thief/brother stole [NP which pictures of himself].

The preferred interpretation is thus not guided by competence, based on reconstruction, but created by performance in action as high-lighted by Focus theory.

5. Discussion

In the foregoing analysis, we used the principles as formulated by ref. [5]. They argued that due to a filter with a restricted capacity in the communication between a human being and its environment, humans are forced to create substructures. The maximum capacity for languages is five. Apart from the free elements, every element is in principle bound to its substructure. Free elements make connections with elements in the context, in general through memory.

The only rule we used to explain coreference is that " … .self" refers to the subject within the (sub)structure at hand. Sometimes this rule can be broken, but only when there is no fitting element within this part. Then, using a free element is often better than using an anaphor. In the case of duality, there are two solutions, which only means that two different meanings cover the same surface structure. This happens in examples (9b) and (12b,c,h). Moreover we argued that in the latter sentences there will be a preference for a solution with an attachment to the subject in the main clause, since reading the sentence until and inclusive the word "himself" there are many continuations possible which only have an attachment to an element of the main clause. Thus creating a "natural" relationship between both. A predicate at the beginning of a subordinate clause implies a transposition within this substructure and the attachment is to the subject of this subordinate clause by definition.

We formulated a more satisfactory explanation for the findings of Leddon and Lidz based on the assumption [5] that humans built substructures within a longer sequence due to the fact that sentences pass Focus, which has a maximum capacity of 5, 6, or 7 elements. In principle, these substructures are closed so that only relations within these structures can exist. Free nouns can escape this embedding. In the surface structure, duality in meaning can occur. Our analysis explains the preference in case of duality and the preference for some sentences above others, and so it explains the observations of Leddon and Lidz [2]. It looks like in language also, the competence allows more than one interpretation. In these cases, competence looks more like online interaction with the environs.

6. Conclusion

A cognitive psychological alternative explanation is proposed for unexpected exceptional linguistic behavior from a binding theory perspective.

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Chapter 6

Perspective Chapter: Reading Comprehension – A Matter of Skill or Knowledge of the World?

Irina-Ana Drobot

Abstract

The purpose of this chapter is to understand how insights in psycholinguistics could help in the creation of reading comprehension exercises for various language proficiency tests. The author of this chapter has created and adapted reading comprehension questions for students in engineering, therefore the psycholinguistic theory insights will be applied to her experience and to the domain of engineering when it comes to the topic of the text. The psycholinguistic perspective could offer insights regarding how the reading process takes place. For example, how does the interaction between language and thought occur? In order to prepare reading comprehension questions, we should know which types of questions can be helpful in order to improve the students' skills. There are many courses and sites claiming that they can help us read a whole book in only one day or in the shortest time possible. Psycholinguistics could highlight useful skimming techniques.

Keywords: communication, foreign language teaching, psycholinguistics, psychology, engineering, language proficiency test

1. Introduction

We can say that we can truly understand a foreign language we have studied when we can make use of all four skills that are frequently checked in proficiency tests: listening, reading, speaking, and writing [1]. Even foreign language lessons are structured around these four skills [2]. These are the basic forms under which using language can be classified. Other tests can include sections based on multiple choice consisting of vocabulary and grammar. The four main skills are, however, used to check the practical aspects of knowledge of a foreign language. By studying a foreign language, it is expected of students to use it based on the same criteria as their native language, and to show that they understand what they are being told or communicated by various means, as listening and reading comprehension are followed by questions with multiple choice answers, and that they can be part of a dialog in the respective language, as in the case of speaking and writing, meaning that in these two cases students need to address a topic that they are told to speak or write about, precisely.

The present paper will deal with reading comprehension, which was chosen on the basis of several reasons for requiring special attention in a paper dedicated individually to it. One of these reasons is that the Engineering students will need to work with other papers when doing various research projects starting with their lives as students, but, first of all, they will need to go through the courses of lectures, under their form of notes, course lecture support, or textbooks. They will need to work through with the information, and practically they will read them in order to find the needed answer to their questions. Another reason why reading comprehension is considered a special case in this paper is the fact that the readers interact with the written language by creating in their mind a visual image of what they read. Reading is always not only pictured, seen mentally, but also interpreted by the reader, as understanding the message is a process coming through interaction with the text. Nowadays, we are told that we live in a communication culture [3], and entire novels are used by the authors to offer readers an interactive and communicative experience. At the same time, the readers are asked, by some novels, to have a background about other literary works, about certain cultures, about historical events, in order to understand the references that they should be able share with the author, as part of their common knowledge, so that the exchange could be possible. Therefore, nowadays, communication is not simply done through talking. Various media are used, and written communication is as conversational as spoken communication. Since ancient times we have had the example of the art of rhetoric, meaning to use expressive language in order to prompt emotional reactions in the audience, whether they were listeners or readers. Any text can be understood as communicating information that has as a purpose to raise awareness in the readers not only at the level of the acquisition of knowledge, but at the level of their further emotional experiences regarding the topic they have read about.

While listening comprehension can be clearly seen as an example of collaboration and dialog established between the recorded speech or dialog, and the students checking for the answers to the questions, based on multiple choice, in the case of a text the students can feel more left to do the work themselves. They will need to go back to the text a few times in order to be sure they have understood the text clearly.

While reading comprehension exercises can simply mean practicing in order to master them, just like drills, and are not necessarily built for the students' enjoyment and motivation for further action, they do have to address their needs. Thus, according to psycholinguists, language acquisition plays a major role, as well as the way students learn; those that learn with pleasure and motivation learn more efficiently than those with no enthusiasm for learning [4]. In the case of teaching foreign languages for specific purposes, such as, in this case, teaching English for engineering students, the focus of the chosen text should be on a technical and scientific topic. Generally, we could understand reading as "a process" involving the following skills: "experience, prediction, confirmation and correction" [4]. This leads to the conclusion that the students, while reading, are supposed to select the relevant information that they can get from there, and to start making prediction about what the main idea of a certain article is; meanwhile, the teachers' role is to heighten the students' interest in the text they are given to read and to assist them when they are solving the activities related to reading comprehension [4]. The motivation can be provided in the case of a test by the wish of the students to pass, and therefore the text itself may not be as significant from the point of view of capturing their interests, and making them think about it further, regarding the future implication of the topic in their future career and possible research they feel would be important they should do. As an example, a text about anything regarding the environment, such as climate change,

alternative sources of energies, wind and solar energy usage, smart homes, smart cities, noise pollution, flood protection, can be relevant to the current intentions of the engineering students, if they wish to work in the domain, or to apply for further studies, or even start collaborating on a project related to these issues. The personal interest of the students in certain issues can be used during their training in reading comprehension during class, as a genuine interest in the texts could motivate them to work harder on the materials selected by the teacher for them and to make them get better results on the proficiency tests.

The mechanism at work during reading comprehension exercises should be examined, as understanding how the process of understanding a text could help in designing efficient activities by the teacher in order to help students train for this section in foreign languages proficiency tests. To this purpose, examining psycholinguistic theories about the process of doing reading comprehension should be useful. While teachers can work out their way through observing the students in their class in devising ways for training them, a theoretical approach has the advantage that it can already offer some landmarks that have been noticed regarding solutions to their questions. Generally, teachers rely on their pedagogical training, on what they notice when they work together with their students for reading comprehension, various difficulties students can have at times, and how teachers could advise them to go about the text in order to be able to answer the questions correctly. One of the issues of foreign language proficiency tests is that the students have a limited amount of time to complete the entire text. Therefore, they should devise a strategy when they train for every section in order to divide the time efficiently. By training through exercises, students can begin to notice how fast and how slow they are with various sections, and therefore not spend more time than necessary on certain sections. They may be tempted to train by using the methods that are popularly advertised on various Internet websites and on social media, which claim that they can take a course in reading any book, no matter how big, in only a few hours, by skimming and scanning the text. However, such methods may not be helpful for reading comprehension exercises, since the students need to pay careful attention to processing the information and to get the exact meaning of all multiple choice answers, which can differ to a very slightly visible point. We could claim that, in many situations, the multiple choice answers simply test the attention of the students, not necessarily the way they work through the information.

The teachers can search for various strategies that they could share with their students, and these strategies could be devised based on the existing literature review of psycholinguistics, as well as on the strategies given by various trainers for various language proficiency tests with respect to the reading comprehension section. Devising questions about the text in the reading comprehension section is also, in turn, for teachers, a challenging task, as they need to take into account the way that students should work through their way in understanding the text. Ultimately, it is not a simple understanding of the text the proficiency tests have in view for students with respect to the listening comprehension section, but also their ability to work with the information and to make various connections and implications. It is not a simple skimming and scanning of the text for missing information in the questions that such sections of foreign language proficiency tests have in view. Therefore, an active reading should be developed for the students in order for them to be able to pass this section of the proficiency tests. In this case, the teachers' knowledge of Linguistics, Foreign Language Teaching and Psychology should be expected to help to improve the teachers' didactic method, as it offers a complex approach. The issue could be approached

from a variety of perspectives. Yet, the psychological training of teachers, which is considered to be taken for granted in their training and based on their working with students, may also need, besides notions of foreign language teaching and linguistics, simply to make a connection between psychology and linguistics, in order to understand how the process of reading comprehension actually works. The understanding of its mechanism can be the basis from which they could start devising a strategy for training their students and for devising supporting activities for helping students to improve their strategies for this section of foreign languages proficiency tests.

2. Psychology and linguistics: a meaningful way of explaining the reading comprehension process

First of all, a definition of psycholinguistics is needed, in order to situate the context of analyzing reading comprehension from the point of view of this theory. Psycholinguistics can be understood as explaining the psychological means through which our use and understanding of language works while interacting with our mind, as well as the way language is expressed, or produced, and understood by us [5–8].

To put it shortly, the domain of psycholinguistics is a mixture of theories and methods taken from other two sciences, namely psychology and linguistics, helping researchers to form a complete understanding and picture of the way human language works [9]. If we go into further details, we can see how these two domains are combined together under the methodology of psycholinguistics: namely, psycholinguistics researchers use the "experimental methodology and a body of knowledge about processes in perception, memory, attention, learning, and problem solving" which they take over from the field of psychology [9]. They also use the "detailed descriptions of specific languages, rigorous accounts of the shape of grammar, and ideas about the nature of human language" which they take over from the domain of linguistics [9].

Psycholinguistics is, therefore, a science that can be summed up as being psychology and linguistics at the same time [10]. A psycholinguist can be concerned with the following aspects: if he is first and foremost a psychologist, he can be preoccupied with reaching an understanding of and finding explanations for the way various structures and process function at mental level, and that are always at work when we, human beings, start using language [10]. Yet, in order for a psychologist to actually become a psycholinguists, such a specialist needs additional preoccupations, such as having the concern with reasons why our language shows universal features, as well as differences related to certain languages, and which are specific to them, and also the way these specific and universal features influence the way the various languages are processed [10]. If the psycholinguist is concerned with the patterns through which language works, he will also need to deal with those patterns that can be found in the use of language, as well as with finding explanation as to reasons why those patterns occur, as well as with various studies done in the environment of the laboratories, using "highly controlled processing tasks" [10].

The reading comprehension deals with the way students search for a certain piece of information by reading a text, and then they "make a correct and reasonable information output according to the problem after their own thinking processing" [4]. This issue has been studied since 1960 [4]. It is considered a difficult process, since it deals with complex sentence structure and with the understanding of information, together with performing all these operations within a limited amount of time [4]. Vocabulary is considered a crucial item to reading: it could be compared to a key that

grants students access to a door that allows them to get into the reading experience [4]. Vocabulary facilitates the understanding of a text, as words and phrases are a part of any sentence. Without understanding meaning of most individual words, we cannot understand the meaning of the text, and see clearly what the topic is about. We could notice that, "from the perspective of psycholinguistics, the two schema structures that most influence reading are vocabulary and comprehensive experience" [4]. The two, however, are interrelated. Vocabulary implies understanding, starting from a small level, from words to paragraphs and entire texts.

One model about reading comprehension, confirming the usefulness of testing it through the standard, already existing exercises, is that of Goodman [11], which he developed in 1966, which looks at the way we understand and build the meaning of the text as part of the usual and continuous process occurring when we, teachers and students, want to test our understanding of the text we read [12]. Therefore, the reading comprehension exercises could be seen as a natural way of testing the understanding of a text in a foreign language, as the exercises are built on the usual way we all deal with texts in our native language and in other languages we already know. The model developed by Goodman deals with the following: according to this model, readers make predictions, then confirm or contradict their own prediction. Additionally, if readers guess correctly, then they do not need confirmation through hints found in the text [12]. Goodman's model can make us see how asking and answer questions in reading comprehension exercises is our usual way of dealing with any text, in any language. The questions sometimes are about finding hints regarding what will be discussed next, or to make predictions about how the action described there will continue. This model is considered a basic one. Later on, Coady [13] further developed it in 1979: Coady's model referred to the way that readers use various conceptual skills and also strategies, which are combined with their background knowledge in order to be able to reach an understanding of the text that is being read [12]. The background knowledge could refer to knowledge of the topic, or of the foreign language itself, grammar, meaning of words, phrases, sentences.

2.1 How understanding a text works: insights from how we understand words, phrases, sentences, and entire paragraphs

The way we understand language is of relevance to the way we can get a clearer perspective on the way reading comprehension works, as both teachers and students. To this purpose, we could take into account the fact that psycholinguistic research is concerned with the way we understand the meaning of the words, together with their semantics, consisting of connotation and denotation [8], as well as the meaning of the sentences [8]. Denotation refers to the way we can find a word defined in a dictionary [8], while connotation refers to "a word's emotional overtones, presuppositions, and other nonexplicit meanings" [8]. The two of them can only be understood as a combination of meanings, found in connotation and denotation, in order to allow us to completely grasp what a word means [8]. Another aspect of importance is that the connotation of a word may not be the same for different people, and, therefore, "there can be variation in the meaning formed" [8]. An example could be the following, related to how we understand the connotation of the word *snake*, which is, generally, that of danger. On the other hand, a biologist that studies, specifically, snakes, and who is named a herpetologist, is going to see the word snake in a positive way, related to his research [8]. With respect to the domain of engineering, it is clear that the connotations of a word should be shared by everyone, as the domain implies

the existence of one single, shared connotation. In the case of technical, and domain-specific words, connotation and denotation should coincide and have no variations of meaning between them.

What is specific to psycholinguistics is that language is made up of symbols, from which the way we understand it in various media, written or spoken, can start: thus, everything, when we read a text, begins from the way language creates relationships between symbols and whatever it is that they can represent. Symbols can stand for "an idea, a thing, a process, a relationship, or a description" [8].

In the case of a text from the field of Engineering, the symbol and the word should always have a fixed meaning, as the words cannot be assigned changing symbols. Terms need to be specific and fixed at all times, unlike in usual conversation and unlike in general information articles, or even literary texts.

As an extension to the aspect, symbols will be included in the very way the language is structured: thus, the symbols are arranged according to certain patterns, which give them a specific meaning [8]. Additionally, there are several levels for the language's structure: "[...] sounds, meaning units, words, and phrases [...]" [8].

One of the issues with reading comprehension is that learners get with it on uncertain ground. This is because of the following aspects: plenty of new utterances can be continuously created by any users of language [8]. To detail this issue further, we should mention that one of the properties of language is that it is creative, in the sense that we, as speakers, can create new sentences that we have never heard before throughout our lives [8]. In the understanding of the text, the students should be able to reproduce information under the form of a few ideas expressed in new sentences, not only just those present in the text. The reading comprehension questions and multiple choice answers are based on the creation of new sentences and new ways of expressing the ideas in the text.

Therefore, reading comprehension means a higher level of language knowledge than the obvious one given by the usual drills exercises. For engineering students, however, language cannot be as creative with respect to the precise meaning assigned to certain terms. Engineering terms and concepts cannot be called otherwise than their fixed, assigned meanings. In a contrary case, they would mean something else or they would make no sense for the professionals in the domain. From this point of view, there is not much room for creativity in the Engineering text.

The only creativity in the case of reading comprehension exercises for text in the Engineering domain is with respect to combinations of phrases and sentences, which are not the same. One useful exercise for students to train for understanding an Engineering text could be for them to be asked to read the text first, then to say in a few sentences of their own what it is about. A usual exercise is that of telling students to read a text, then to ask a number of questions about it themselves. It could also be useful in this case, as the questions asked would reflect the main ideas of the text.

The utility of these exercises could be explained in relation to the way we understand a wide variety of texts, in our own and in other languages that we have learnt: words and sentences are small levels when it comes to our need to comprehend a text, or simply small units. We need to understand what the meanings of large conversations and written texts are [8]. The domain of semantics refers to the way we can study how meaning is formed in any language [8]. Therefore, the main concern of such a researcher in the domain of semantics would be that of understanding how words, together with sentences, can help us express the meaning we want to communicate to our interlocutors or to our readers [8]. We should note that discourse refers to levels of language that are higher than the sentence, e.g. "conversation, paragraphs,

stories, chapters, and entire works of literature" [8]. The Engineering text can be understood as examples of discourse, and the way students make sense of them can be explained, at the linguistics level of psycholinguistics, through semantics.

Paying attention to the formal and content features of texts can help students for the future, such as in the case where they would need to write a research paper, report, or project proposal. Reading comprehension exercises can be understood as laying the basis of other uses of language, such as discussing about a certain text, asking questions during a conference, or even using the knowledge about the way the texts are structured to write such texts themselves. Engineering texts have the features of the technical texts, which include use of long, complex noun phrases [14], which are the technical terms, passive voice, and objectivity. Passive and active voice, however, are both used and express different attitudes of the writer. Those structures which are passive can be efficient to be used "for *expository* purposes," in the description of procedures and data presentation by the author [15]. As for *active structures*, they "are [...] appropriate for *argumentative* purposes," and they can be best used "in [...] sections where the author is criticizing previous research or advocating a new thesis" [15]. The figurative language is not usually associated with such texts. However, when it comes to the expressivity of the text, of the need to persuade readers that the discovery or issue is of great interest, a few such phrases, in a figurative language, together with some emotional involvement, could be used.

Sentence structure is significant when we use language, and it should be taken into account when teaching reading comprehension. The teacher could draw the students' attention to the way they are formed. We should take into account the fact that sentences are easily formed by anyone speaking orally, yet we also need to be aware of the many rules that stand "behind our creation of these sentences" [8]. Syntax, a domain which is concerned precisely with the way words are used by us speakers, as well as writers, in order to build sentences, is, through its way of presenting rules, a basic field of study that helps us understand how we can speak about a language's structure [8]. Some notions could be presented to students to make them aware of the specific syntax of Engineering texts. Thus, any sentence can be seen as being composed, first of all, by a noun, which is usually a sentence's subject, grammatically, and which, in its turn, can be accompanied by descriptors such as "big" and "fast," and, second, by a verb phrase, which makes up the predicate of a sentence [8]. The verb phrase can include a verb, minimum, and whatever the verb acts on, if anything" [8]. Long noun phrases are specific to technical texts. Such notions about the technical texts' features can serve to provide additional background knowledge for the students about the way they should write such texts in a foreign language.

There is a distinctive way in which psycholinguistics uses grammar. Namely, while usually grammar refers to the way we are supposed to create the structure of our sentences [8], for psycholinguistics it refers to patterns. Thus, we can find in a sentence patterns which are about the way words function and form relationships. The patterns can be found at other levels as well, namely at discourse level, as well as at the level of various words' pronunciation and meaning, taken separately [8]. Two kinds of grammar can be taken into account: prescriptive grammar, which "prescribes the 'correct' ways in which to structure the use of written and spoken language" and descriptive grammar, which aims "to describe the structures, functions, and relationships of words in language" [8]. Descriptive grammar is the one that is the most important to the interests of psycholinguists [8].

Students can improve their knowledge of these patterns in a foreign language through reading exercises.

It is only intuitive for any beginner in the foreign language teaching domain that the reading comprehension process makes use of knowledge of grammar and vocabulary, which can be explained through psycholinguistics. The context in which certain words are used also matters, just as in the vocabulary and grammar sections of the text. In the reading comprehension section, students can find, just like in other sections, words or phrases whose meaning they do not know and for which they cannot search in the dictionary during the test, yet they can guess the meaning from the larger context.

The significance of reading on a practical, everyday life basis should also be considered. Students that are trained for the reading comprehension can immediately see the utility of acquiring this skill, since they also use it in their everyday lives, perhaps without even realizing it. They can read various "signs, billboards, labels, and notices" [8]. What is significant to underline is that all of these include "information that helps us make decisions and understand situations" [8]. This leads us to draw the following conclusion: that "the ability to read is fundamental to our everyday lives" [8], and also that we need to teach and learn various skills related to it. Therefore, the reading comprehension exercises should prepare them to gain skills that they can afterwards apply in a variety of situations: scientific research, general information, popular science articles, news articles, reading reports, and any other situations students may encounter, not only those related to their domain. Engineering students need to have, after all, a basis of general foreign language before they go to the next level, that of foreign language for specific purposes.

2.2 Psycholinguistics insights on how the process of reading works

What processes could we say that are at work during reading from the point of view of psycholinguistics? The minimum could be reduced to the following schema: "perception, language, memory, thinking, and intelligence" [8, 16–19]. This means that readers need, first of all, to recognize letters, then the words that they form, with their meaning. Afterwards, readers need to preserve the meaning of these words in their memory until they read sentences and paragraphs. After they finish reading sentences and paragraphs, the readers will decipher what the author of the text meant to say [8]. This statement about the meaning of the sentence and paragraph in regards to the text read is definitely always taken into account in the reading comprehension exercise, as the questions and the answers that can be selected test precisely this skill in a foreign language, of making sense of the meaning. The Engineering students can need the following aspects in order to do so: knowledge of the foreign language, knowledge, to some extent, related to the Engineering field or at least to the concepts and theories presented there, as well as knowledge of the respective terms, or at least some terms, in the foreign language. The foreign language comprehension tests do not require knowledge of the world, as we could call background knowledge about various areas of Engineering. The text chosen, together with the questions and answers suggested, acts on testing language skills and understanding, offering the needed information, and only requiring of the students to pay attention and interpret the information.

We also need to consider the duration of reading, in order to choose a right length for the text selected for the students' training. The duration of reading can be understood as follows: reading goes on quite fast as a process. We should consider that, usually, an adult reader manages to read as many at approximately 250–300 words every minute [8]. The ability to read and to understand a text can be taken for

granted, yet in order to truly be able to answer the reading comprehension questions the students need to work their way through understanding a text in order to get the correct answer in a foreign language applied to their domain.

The factors that can bring about their influence over the way we understand a text we read [8] can be found in the research by Walter Kintsch, who created his own observations-based model for understanding a text that we read [20–22]. Our active memory tries to preserve as much information as it can when we are reading a text. Yet, we do not preserve the same words that we find in the text we read in our working, or active, memory. Instead, we work out our way through getting the basic ideas we can find in the way the words are grouped. The basic ideas are then kept in a simple, representational shape, in our working memory [8]. This process can explain why students are able to guess from the context, at least approximately, what a certain word means. Some reading comprehension questions include those questions related to the meaning of a certain word or phrase in a particular context.

The language-related skills tested in foreign language proficiency tests can be connected with one another. Reading comprehension includes knowledge of vocabulary, for instance. This is because knowing what individual words mean can help readers understand the entire text [8]. As a result, vocabulary can help when reading a text: those readers with a rich vocabulary are good at reading and understanding a text, since the words make up a text [8] and need to be understood both in themselves, as well as in relationship with the entire text. Not too many unknown words should be found in a text so that it is understood, by making guesses about them starting from their position in a context. Knowledge of vocabulary is a solution to master reading comprehension: from this point of view, those reader with larger vocabulary are at an advantage, since they can get their lexical information faster than those readers that have small vocabulary [8, 23].

How do we guess the meaning of a word from context? When we encounter, as readers, a word that we do not know, and, thus, do not have it "already stored in memory," we are only left with the alternative to understand its contextual meaning, by looking for hints about it in the text [8]. Alternatively, we could search for that word in a dictionary, or simply ask our teacher what it means [8]. How is vocabulary learned? Most people will learn it through indirect methods. This means that they will not search up these words in external sources, such as dictionaries, but instead they will try to guess the meaning from the context [8, 24].

Where does learning vocabulary fit in the process of reading? Taking it step by step, we can notice the following: visual symbols are translated into sounds, and, afterwards, sounds are translated, or simply expected to, form words [25]. The next stage consists of identification of the word and of its meaning. These stages, or steps, make up a process that goes on until we, as readers, get to compose one sentence. We will, of course, form sentences during all the time we keep on reading the text [8].

To detail the process further, there are in fact two processes involved in reading: lexical and comprehension processes [8]. Letters and words need to be identified, and they are recognized through the lexical processes. Additionally, lexical processes activate basic information regarding these words in the readers' memory. As for comprehension processes, their role is to help readers understand the entire text, "as a whole" [8].

The speed at which reading occurs is an aspect that matters for training students for reading comprehension. What happens in the case of reading speed is the following: the movement of our eyes occurs in "rapid sequential movements" [8] which are focused on "successive clumps of text" [8], and not on pages or lines, as we'd expect. Such fixations can be seen as "snapshots" [26], and their length varies [27]. Longer words allow readers to fixate for a longer while than on shorter ones. Less familiar words also lead to the

readers' longer fixation. These words refer to the ones that are less often encountered in the English language. Familiar words also require less fixation time for readers. These latter words are those that are more frequently found in the English language. The fact that the word that occurs last in any sentence lets readers fixate on it for a longer period of time is a phenomenon that has been named "sentence wrap-up time" [27, 28].

The number of words that are fixated should also be taken into account, as well as their type: it can reach as high as 80%, meaning that only this percentage can be fixated by readers from a text. What are these words that are fixated up to a rate of 80%? They can be nouns, or verbs, as well as function words, e.g. the definite article "the," or the preposition "of", which are supposed to support the other words, that carry content [8].

How much does the process of working with fixated words take? We, as readers, can get the information we find useful from a text if we deal with "about four characters to the left of a fixation point and about 14 or 15 characters to the right of it. These characters include letters, numerals, punctuation marks, and spaces [...]" [8, 26, 29].

As far as the reading speed for a text, fast reading is not a solution in the case of reading comprehension exercises. The techniques for very fast reading cannot help [8], since too much information and too many details are missed, and, thus, not kept in mind by the students [30]. If students read at high speed, they will only get a main idea of a text's passage, and not any detailed comprehension of it [31]. In this case, speed reading can be detrimental.

The comprehension is crucial for this skill tested in language proficiency tests, which works as follows [8]: the meaning of the words is obtained from the way they are used in the context of the read text, and this helps readers create a mental model with respect to what the text is about. The mental model is related to what is happening in the real world [32–34]. What is more, every reader creates their own model with respect to the mental representation of the text, reflecting their understanding of it. This mental representation is made up of the text's basic elements [8].

What is needed for mental models formation? It seems that we only need to understand, as readers, what is not said directly, but left for us to understand, just as in the case of allusions or inferences [8].

What does reading comprehension consist of, from the point of view of psycholinguistics? We could sum it up as follows, according to source [8]: one of the skills we need as readers, when we seek to understand a text, is related to understanding what the words themselves mean. We can resort to our memory of vocabulary, or we may simply guess based on the context they are used in. The second skill is related to understanding the meaning as we rely on the main ideas in the text that we are reading. The third skill is related to the way we manage to extract the main and necessary information and details from the text we read, function of the way we intend to use the information we have found out in the text we have just read. The fourth skill is related to making up some mental models which help us visualize in order to understand what we are reading about.

We could apply this process from the point of view of Engineering students studying English for specific purposes, starting from the way they learn their first words in the English language at a general level, and then how they switch on to English for specific purposes. Both types of knowledge are used.

3. Conclusions

Psycholinguistics provides a framework for dealing with understanding how reading comprehension occurs as a process. Judging from the way it works, teachers

can extract those significant aspects and select particularly those exercises for training that they find more useful and justified by the insight psycholinguistics can offer on the process of understanding a text. For Engineering students, such processes have to do with the following aspects: understanding terms, or words, entire sentences, paragraphs, deducting meaning, understanding the text and reformulating, interpreting its meaning and operating with questions and answers. Speed of reading is not significant here, as the text is short enough; rather, special attention to details is advisable. Vocabulary knowledge helps a lot in going faster through reading the text and through understanding it. Vocabulary can help build up an efficient basis for reading comprehension skills. Background knowledge is not the main issue in reading comprehension exercises; it is not even required. The only aspect required is to pay attention to the text and to the nuances of meaning in the questions and multiple choice answers.

We could see how reading comprehension exercises themselves are designed in such a way as to suit psycholinguistics findings about the usual process of reading a text. Text meaning understanding is tested in detail through questions and multiple choice answers.

Knowing psycholinguistics theories can help teachers select those supporting exercises in order to build reading comprehension skills in a way as to improve students' skills.

The way in which reading comprehension can be taught to Engineering students differs from general English students in that features of the technical texts and specific vocabulary should be improved.

The paper has looked at whether reading comprehension is a matter of skill, or knowledge of the world. While the intuitive answer is that it includes both language skills and knowledge about the topic, the paper has narrowed the question down to the teaching of reading comprehension in a foreign language for Engineering students.

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Section 3

Towards a Socio-Cultural-Communicative Implication of Psycholinguistic Research

Chapter 7

Perspective Chapter: How Can Psycholinguistic Researches Respond to Societal Needs

Lingda Kong and Xiaoming Jiang

Abstract

This chapter examines prevailing trends in applied psycholinguistics centered on two pressing real-world imperatives—fostering equitable multilingual development and enabling clinical rehabilitation after language impairment. It first delineates how psycholinguistic approaches illuminate the intricate cognitive mechanisms underlying bilingual language representation, processing, and executive control during code-switching. Persistent challenges in validating assessments of multifaceted proficiency across languages are also discussed. Next, neural correlates of speech-language recovery are detailed, including insights from neuroimaging on how interventions harnessing both cognitive capacities and language networks can optimize outcomes. Additional coverage touches on augmenting naming accuracy in anomia through working memory training protocols. Ultimately, priorities in applied psycholinguistic research are rapidly transitioning from purely theoretical models toward substantively advancing educational accessibility and communication disorder interventions *via* illuminating authentic dynamics of language usage across diverse cultural settings. However, substantial lacunas remain in accounting for individual variability, motivational influences, and societal forces shaping both multilingual attainment and rehabilitation efficacy. Progress necessitates interdisciplinary collaboration integrating psycholinguistic and sociolinguistic perspectives to construct cohesive solutions that equitably benefit all global communities.

Keywords: applied psycholinguistics, multilingualism, code-switching, language assessment, speech-language rehabilitation

1. Introduction

Language, as a profound social phenomenon, propels collective human advancement while being shaped by the prevailing need to address significant issues in societal development [1]. Although sociolinguistic studies have extensively documented regional dialects, style-shifting, code-switching, language accommodation between speakers, and propagation of language change through communities, they lack detailed theories of the cognitive and psychological mechanisms driving these phenomena [2]. However, psycholinguistics can also provide theoretical insights into fundamental questions in sociolinguistics regarding how and why language varies

across social contexts [3]. While richly describing empirical patterns in language variation, psycholinguistics can fill this gap through controlled experiments and computational models examining the perception, production, and processing of various languages [4–6].

In response to pressing real-world needs, contemporary research is increasingly directed toward fostering equitable multilingual development and addressing clinical rehabilitation challenges. Recent research initiatives are directing efforts toward advancing equitable multi-language education and improving communication accessibility for all. Cross-disciplinary approaches are actively addressing longstanding educational barriers through evidence-based policy revisions that promote multilingual inclusion. The advent of technology has facilitated the study of authentic discourse, with computational tools informing teaching strategies that strike a balance between fostering pride in native dialects and meeting the standards of prestigious language varieties. Scientists are dedicated to improving outcomes for individuals with speech-language impairments resulting from stroke or trauma. Neuroimaging techniques quantify residual language network integrity, guiding targeted interventions. Innovative apps are disseminating personalized exercises that maximize cognitive control gains, ensuring the preservation of tangible communication abilities and facilitating fuller participation in desired social roles. Understanding the psychological machinery that underlies expression within complex cultural contexts is increasingly valuable. Equitably fostering multilingual development and clinically rehabilitating speech-language impairments represent two branches of applied psycholinguistics research with profound human impacts in culturally diverse communities.

The remainder of this chapter specifically explores two critical real-world priorities: equitable multilingual development and clinical rehabilitation of speech-language impairments. Psycholinguistic perspectives on the intricate cognitive and neural processes underlying linguistic communication can inform substantial progress in overcoming barriers to accessibility and equity in language environments globally. The chapter summarizes and discusses findings from previous studies using experimental paradigms examining lexical access, syntactic processing, code-switching production, and assessment techniques across multiple languages. It also synthesizes research on neural mechanisms involved in post-stroke recovery and interventions boosting working memory to improve outcomes for language impairments like anomia. A key theme is tailoring treatment approaches based on the assessments of residual neurocognitive capacities on an individual basis. This literature review surveys cutting-edge applied psycholinguistic research while underscoring the need for interdisciplinary perspectives to equitably advance rehabilitation and multi-language development for diverse populations through addressing persisting gaps in the field.

2. Psycholinguistics studies in multilingual situational applications

The main purpose of the field of psycholinguistics is to uncover the universal cognitive mechanisms that govern language development, use, and breakdown [7]. However, psycholinguistics research has predominantly focused on Indo-European languages like English, making it difficult to determine if certain linguistic phenomena are English-specific or more universal. Exploring how code-switch occurs in multilingual environments and how to assess multilingual language can help

determine when and how cross-language interactions shape outcomes [8]. However, before delving into these inquiries, it is essential to clarify how the research methods of psycholinguistics are practically applied in multilingual studies.

2.1 How psycholinguistic research methods apply in multilingual studies

The recognition that most of the world's speakers are multilingual has sparked new areas of psycholinguistic research that examine how multilinguals manage to negotiate the presence of more than one language in the same mind and brain [9–11]. Further examination shows that psycholinguistics tries to explain multilingual processing through various models like the inhibitory control (IC) model [12], which proposes that bilinguals actively inhibit their dominant language (L1) to allow fluent production in the weaker language (L2). The control mechanisms that are in place to control more than two languages are much more variable and malleable than previously thought [13, 14]. Building on this understanding, we will now delve into the specific application of psycholinguistic research methods in the realm of multilingual lexical and syntactic processing.

2.1.1 Measuring lexical processing in multilingual studies

In measuring lexical processing in multilingual psycholinguistics, a common paradigm used to examine relative difficulty in accessing lexical items across languages is picture or word naming tasks. These tasks aim to explore lexical access by prompting participants to name pictures or words in L1, L2, or additional languages (Lx) [15]. The results consistently reveal the co-activation of representations of multiple languages, providing support for models wherein bilingual lexical representations are integrated across languages rather than kept separate [16]. Lagrou et al. [17] used a picture naming task where Dutch-English bilinguals named pictures in their L1 Dutch after reading distractor words. Distractor words slowed reaction times more when they were cognate translations or shared initial phonemes across languages, indicating cross-language activation spread to the non-target language. Other studies have examined how proficiency across languages impacts naming. Pictures with cognate names that overlap heavily across languages are named faster than non-cognates. Ibrahim [18] found that Arabic-English bilingual children showed bigger cognate facilitation effects in their weaker L2 English. They relied more on overlapping first-language representations to aid L2 production. These paradigms also provide insight into semantic and phonological processes underlying new L2 word learning. Comesaña et al. [19] taught adult English speakers new spoken L2 words paired with pictures. In a later naming test, newly learned words interfered more with picture naming for similar L1 words, suggesting lexical integration occurs through extending L1 semantic-phonological processes to incorporate new L2 items. Overall, the extensive utilization of multilingual naming paradigms has been instrumental in unraveling the intricacies of language co-activation and advancing our models of bilingual lexical retrieval. These studies have notably enriched our understanding of the effects of language proficiency, similarity, and interference in semantics and phonology between languages, shedding light on the mechanisms underpinning the acquisition of new L2 vocabulary. However, it is imperative to acknowledge the existing limitations in psycholinguistic research within this domain. One notable gap lies in the need for more nuanced investigations into the dynamic interplay between proficiency levels and lexical processing. Additionally, further examination is imperative around

the dynamics of developing phonological and semantic representations in bilingual mental lexicons. Questions persist surrounding precisely how new L2 lexical items integrate into and potentially restructure existing first-language architecture over time. Investigations delineating emergent bidirectional cross-linguistic influences on the content and form of lexical representations promise more comprehensive models of the bilingual lexicon and complete L2 fluency cultivation programs.

2.1.2 Measuring syntactic processing in multilingual research

In measuring syntactic processing in multilingual processing, a core question is whether and how multilingual activate the syntactic representations of their different languages during production and comprehension. The research utilizes common psycholinguistics paradigms to tap into syntactic processing, including measuring event-related brain potentials (ERPs) during sentence reading and analyzing structural priming patterns in language production. ERPs allow tracking of how multilinguals incrementally analyze linguistic input. Studies measuring P600 effects, an ERP marker of syntactic processing difficulties, find effects emerge for grammatical violations in bilinguals' weaker L2 at high but not lower proficiencies, suggesting co-activation emerges with greater experience [20]. Examining later anterior negativities instead, indexing deeper syntactic repairs, Hartsuiker et al. [21] found native-like ERP patterns were attained in bilinguals' weaker language. This demonstrates their underlying syntactic representations can reach native-level processing capabilities through sustained language exposure. Research also uses structural priming paradigms where speakers tend to repeat recently encountered syntactic structures during production. Structural priming occurs both within a language and across languages in bilingual dialog, indicating abstract syntactic representations shared between languages can be co-activated to aid fluent processing [22]. Additionally, the strength of cross-language structural priming is asymmetric: Priming is greater from speakers' dominant to weaker language. Cai et al. [23] proposed that the observed asymmetry in cross-language structural priming, with stronger priming from speakers' dominant to weaker language, indicates a more significant influence from the firmly established syntax of the first language (L1) that guides the development of processes involved in producing the second language (L2). They clarify the developmental trajectories in attaining native-like processing capabilities across structurally related and distinct language pairings. In summary, these studies contribute significantly to our understanding of multilingual syntactic processing. They shed light on developmental trajectories toward achieving native-like processing capabilities across structurally related and distinct language pairings. Further studies might also consider the impact of cultural factors on syntactic co-activation.

2.2 Code-switching in multilingual environments

Code-switching, or alternating between multiple languages within a conversation, is a common linguistic behavior in many bilingual communities. Psycholinguistic research investigates the cognitive mechanisms enabling speakers to seamlessly integrate words and structures from distinct language systems. Computational models simulate the high-level processes modulating when and where switches occur. Bullock and Toribio [24] proposed an activation threshold mechanism where lexical items from the non-target language receive activation decay, allowing occasional highly activated lemmas to surpass the threshold and

trigger code-switching. This accounts for item frequency and priming influences on switch points. Fricke and Kootstra [25] outlined selection processes where alignment to interlocutors and priming of language schemas jointly predict when speakers shift languages based on contextual factors.

Additionally, individual differences among bilinguals have been shown to modulate the processing costs incurred during comprehension of mixed-language input. Some studies have looked at how code-switching ability impacts processing load. Bilinguals who engage in less frequent code-switching in their daily language show increased activation in frontal cortical regions implicated in cognitive control when asked to comprehend code-switched speech [26]. This suggests those with better interference suppression and inhibition capacities may experience less processing difficulty when having to integrate inputs from alternating language schemas. The proficiency balance between a bilingual's two languages has also been examined regarding switch costs. There is some evidence suggesting balanced bilinguals, with equivalent high proficiency in both languages, may process switches more efficiently than second-language dominant bilinguals [27]. Thus, while early and highly proficient dual language use predicts better code-switching production capability, and dominance in one language over the other may increase integration demands and disruptions when comprehending mixed-language speech. In summary, psycholinguistics research has identified cognitive and linguistic factors that enable fluent code-switching in bilingual communities. Computational models clarify influences on production switch points, such as lexical activation thresholds allowing unintended words to be uttered [24]. These studies delineate the multifaceted interactions between language control capacities and situational constraints that facilitate smoothly fusing elements of two rule-governed linguistic systems within a conversation.

2.3 Multilingual language assessment

Valid assessment of proficiency across multiple languages is critical for research and educational placement of multilingual learners. Psycholinguistics observations offer valuable insights into identifying the key components and employing effective techniques for assessing language proficiency.

Vocabulary knowledge is a robust indicator of overall ability and crucial for comprehension, assessed through Picture Vocabulary Tests. Gariot [28] explored the Peabody Picture Vocabulary Test (PPVT-4) as a tool for assessing vocabulary knowledge in English as a second-language (L2) learner. The study identified reliability concerns for those with limited L2 proficiency, particularly those scoring below 24 items. Additionally, linguistic characteristics, such as phonological similarity, influenced test outcomes. The study suggested caution in comparing PPVT scores across learners with different first languages, emphasizing potential confounding effects of first-language frequency and first-language-second-language similarity. Despite these limitations, the PPVT-4 remains a suitable measure for comparing more proficient L2 learners who share the same first language.

In employing Narrative Production Tasks, Sevilla et al. [29] delved into linguistic patterns associated with Formal Thought Disorder (TD). Analyzing narrative speech from 40 participants—20 with TD, 20 without, and 14 healthy controls—revealed significant differences in the misuse of noun phrases (NPs) for reference. Definite and pronominal NPs showed greater impact than indefinite and non-pronominal (lexical) NPs. These findings underscore TD's specific linguistic profile, offering insights for neurocognitive understanding and potential clinical biomarkers.

Finally, sentence Judgment Tasks present isolated sentences and measure accuracy and reaction times in determining if they are grammatically correct or not [30, 31]. Performance, particularly speed, and N400 ERP components during processing become native-like only at high proficiencies, validating the fine-grained difficulty [32]. In summary, psycholinguistically informed measures, evaluating lexical, phonological, morphological, and syntactic competencies through controlled assessments, contribute significantly to understanding multilingual development. However, challenges such as potential biases and limitations exist. Future research should explore innovative methodologies, address existing gaps, and consider cultural and contextual factors that influence linguistic assessments in a multilingual context.

3. Psycholinguistic research in speech/language rehabilitation

3.1 Neural mechanisms supporting speech and language recovery

Investigating neural correlates of linguistic processes has become indispensable for developing highly effective intervention programs tailored to the neurocognitive needs of individuals with conditions such as stroke-induced chronic aphasia. A compelling illustration of this imperative is found in the work of Hartwigsen and Saur [33], where patients with stroke-induced chronic aphasia underwent intensive speech therapy while being simultaneously mapped with fMRI during language tasks. In a meticulously designed overt picture naming task, participants were required to verbally identify visually presented objects. This methodology allowed for the precise tracking of normalized activation in language regions such as the inferior frontal gyrus (IFG) and its correlation with naming improvements. The findings of this study shed light on the nuanced relationship between targeted therapeutic interventions, neural activity in language-specific regions, and subsequent enhancements in naming abilities. Similarly, Geranmayeh et al. [34] conducted a study involving aphasic stroke patients undergoing speech therapy utilizing a semantic feature analysis approach, all while undergoing fMRI scans during naming trials both pre- and post-treatment. The post-therapy observations revealed increased activation in key language regions, including the left IFG and superior temporal gyrus (STG), as well as in domain-general areas associated with cognitive control and attention during successful naming. This compelling evidence points to the simultaneous normalization of the language network and compensation from broader brain systems as crucial neural mechanisms underlying the observed improvements in speech production. This dual-process phenomenon showcases the intricate interplay between targeted language therapy, neural plasticity, and the engagement of broader cognitive resources, contributing significantly to our understanding of the neuro-functional systems involved in language control.

3.2 Boosting verbal working memory to enhance naming outcomes in anomia therapy

Psycholinguistic perspectives recognize language deficits after neurological damage stem from disruptions to the neurocognitive systems supporting domain-general capacities like working memory and cognitive control alongside language-specific networks. Intervention trials are thus increasingly assessing and reinforcing these resources in tandem to achieve maximal therapeutic gains.

Murray [35] supplemented traditional naming therapies with hierarchical working memory training for patients with anomia using reading span tasks. This approach aligns with psycholinguistic models that emphasize the retention of fine-grained lexical-semantic details through deep encoding strategies to minimize phonological decay during retrieval attempts. Patients were trained to elaborate word meanings and limn vivid mental images between items during span recall. Those receiving this augmented intervention exhibited naming accuracy improvements that persisted significantly longer at 6-month follow-up compared to standard naming therapy alone. This reveals the efficacy of targeting domain-general capacities his study quantitatively confirmed were compromised after stroke to support improved word production. Findings converge with wider cognitive neuropsychological frameworks situating language within interconnected networks managing attention and memory. Strengthening these systems through behavioral training and neural stimulation could optimize rehabilitation outcomes. Future priorities include profiling each patient's residual neurocognitive capacities to guide ideal individualized treatment packages, co-training language and cognitive control.

4. Conclusions

In summary, contemporary psycholinguistics is actively investigating complex issues that profoundly impact linguistic communications in lives, ranging from promoting balanced proficiency in two dialects or languages to addressing challenges in clinical rehabilitation after language impairment. We have outlined existing evidence related to key priorities, including optimizing fluency in both directions (orally or in writing) between dialects or languages, facilitating maximal cognitive-linguistic gains after impairment, and supporting assessment mechanisms that allow for cross-linguistic comparisons. Looking ahead, statistical growth modeling could explicitly quantify how varying patterns of dual language exposure influences developmental trajectories in attaining equivalent and proficient fluency across both languages. Exploring individual variations will help identify the factors that most significantly predict learning trajectories across diverse populations. In addition, advances in neuroimaging techniques such as functional MRI (fMRI), electroencephalography (EEG) and functional near-infrared spectroscopy (fNIRs) could provide insights into the neural mechanisms underlying bilingual language processing and acquisition [36], and more specifically, insights about the impact of inter-personal interactions and cultural/societal changes on the linguistic use. Computational modeling approaches could also help uncover the cognitive and neural processes involved [37]. These interdisciplinary methods incorporating neuroscience and computational science hold promise for gaining a more comprehensive understanding of psycholinguistic phenomena. These endeavors hold the promise of substantial progress, translating foundational psycholinguistic knowledge into genuinely equitable and accessible linguistic environments, enabling all global citizens to communicate effectively in our increasingly interconnected communities.

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Conflict of interest

The authors declare no conflict of interest.

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Chapter 8

Critical Communicative Competence: The Interplay of Cognitive Flexibility, Language Awareness, and Cultural Awareness

Jerca Vogel

Abstract

Changing living and communicative contexts have resulted in individuals assuming multiple and variable identities and facing diverse discursive and linguistic practices. Therefore, in the last decades, critical communicative competence has been established as an essential framework for addressing contemporary challenges. In the chapter, critical communicative competence is analytically explored through fundamental characteristics of critical thinking and a key competence as a complex interplay of cognitive, emotional-evaluative, and actional dimensions, implied on each of three interrelated components of communicative competence: cognitive, linguistic, and contextual. In the cognitive domain, multicultural and multimedia contexts demand cognitive flexibility in schemas and strategies. Critical linguistic awareness is essential in the linguistic domain as it enables a speaker to recognise the constructive and interpretative nature of language. In the contextual domain, critical cultural awareness is a tool for understanding how speakers' choices are influenced by their culture and context. Despite the analytical approach, dimensions and components are considered interrelated and interdependent, and only in interaction, leading to more responsible and sensitive communication.

Keywords: critical thinking, critical communicative competence, cognitive flexibility, language awareness, cultural awareness

1. Introduction

Various and changing living and communicative contexts, which today's societies and individuals encounter due to population fluctuations, social changes, and technological development, have led to the instability of living, professional, and interest environments. As a result, individuals assume numerous and more variable identities than before and, when entering communicative situations in different environments, confront a broader range of discursive and linguistic practices. This process is reflected in re-questioning traditional concepts of languages and cultures, language varieties and discursive patterns, and the relationships between speakers.

Consequently, the communicative demands imposed by new circumstances on individuals and society have also affected the understanding of communicative competence. Therefore, besides the relationship between language and reference, questioning how language reflects the real or imagined world, and the relationship between language and the individual, examining how individuals shape their perceptions of reality based on language, the focus has been placed primarily on the relationship between language and culture/society. Therefore, the essential question has become how text functions in context, with text understood as any linguistic realisation and context as the broadest sociocultural framework in which an individual operates linguistically, demanding a continuous search for knowledge, the development of new skills, and the formation of stances [1].

Due to these new circumstances, as in Ref. [2] asserts, the functional concept of communicative competence, which could be broadly defined as the ability to understand and use information from texts and to create appropriate and effective texts [3, 4], has faced numerous criticisms in Australia since the early 1990s. Sociologists have warned that such a model encourages competitive individualism; post-structuralists and feminist theorists have argued that the emphasis on the individual or personal perspective diminishes the understanding of how discourse shapes social relations; systemic functional linguists have cautioned that due to the emphasis on "experience," personal growth, and literary narrative, students from the most vulnerable groups do not acquire sufficient explicit knowledge of how typical genres, which are expressions of intellectual and political power, work, and they do not acquire strategies for producing them; cultural and media studies have pointed out the systematic omission of visual texts, texts in new media, and texts in new work environments [2]. Therefore, critical communicative competence has been established as the theoretical framework that allows addressing the challenges of contemporary times.

2. From functional towards critical communicative competence

Critical communicative competence is not a homogenous concept. It is defined more narrowly or broadly, emphasising different dimensions and components in various disciplines and geographical areas with different historical and cultural backgrounds [5]. Therefore, in defining it, we will start from the fundamental concepts of critical thinking and competence.

2.1 Critical thinking in communication

As reference [6] noted, critical thinking is a broad and relatively abstract concept. The author [7] categorises its definitions into two groups, aligning with two perspectives on critical communication. The first group, primarily derived from philosophy and rhetoric, views critical thinking narrowly as the skill of analysing, evaluating, and constructing arguments. Therefore, critical thinking emphasises the ability to apply criteria, self-correction or critical reflection of one's thought process, and sensitivity to context [6]. Similarly, the author [8] suggests that one of the most common narrowing concepts of critical communicative competence is its equation with the critical evaluation of information. For instance, in Singapore [2], where critical thinking was at the centre of educational reform as early as 1997, it is commonly associated with innovative and creative thinking and entrepreneurship but less with social and ethical issues.

The second group of definitions, stemming from a broader theory of knowledge and learning, views critical thinking as not just the skill of analysing, evaluating, and constructing arguments but also as a set of mental processes, problem-solving strategies, and creativity [6]. This group defines critical thinking as a permanent characteristic of an individual that incentivises him to approach activities with thoughtful scepticism aimed at deciding what to believe and how to act [9]. The authors of this group additionally emphasise intentionality and goal orientation, exploring assumptions, recognising hidden values, evaluating evidence, assessing the validity of conclusions, identifying and being aware of one's own errors in thinking and listening [6, 10], as well as overcoming egocentrism, omniscience, omnipotence, and invulnerability [11].

Definitions of communicative competence based on this understanding of criticality are thus no longer considered simply as the ability to participate in existing linguistic practice [6, 8] but expand the concept of communicative competence, emphasising that an individual's experience is historically shaped within specific power relations [8].

Therefore, the central consideration is focused on questions about the author‘s intent, the ideologies presented through the text, the societal role conveyed to the reader, and the values and viewpoints advocated or opposed [8]. Nevertheless, these approaches, while not denying the relations of social, cultural, and economic power that are expressed in texts, are focused on individual usage [2]. In Ref., the author [2] attributes the individual perspective to the fact that it arises from a psychological and psycholinguistic definition of communicative competence as an individual process rather than an activity embedded in a broader social context. Consequently, this perspective does not encompass those aspects of criticality that stress that communication is linked to social power and that critical communicative competence involves a critical attitude towards society and its beliefs.

Comparatively, the characteristics of uncritical and critical communication highlighted in the discussions can be illustrated in **Table 1**.

As it seems, separate and partial views of criticality can be transcendent by a holistic view of critical thinking, to which, according to references [4, 6], the following fundamental characteristics can be attributed:

1. Motivation for critical communication stems from an awareness that it leads to deeper understanding, prevents and resolves misunderstandings and conflicts, and enables creative transfer and problem-solving.

2. Sensitivity to the sociocultural context of all participants in a communicative event and the acceptance of others' perspectives, even if they differ significantly from our own.

3. Understanding the complexity of language and communication, acknowledging that in addition to its cognitive dimension, communication possesses an emotional or affective (relational) dimension. The speaker and the listener do not enter emotionally, interest-wise, or value-neutral.

4. Evaluation based on well-defined criteria requires general, sociocultural, and linguistic knowledge.

5. Metacognition is the ability to reflect critically or self-reflect on one's thought process.

Characteristics of functional (non-critical) communication	Characteristics of critical communication
Motivation for personal goal/benefits	Motivation for critical communication
Emphasising the communicative function of language	Understanding the relationship between language and culture/society
Understanding communication as a cognitive process	Awareness of emotional-evaluative and actional dimensions of communication
Sensitivity for individual or personal context	Sensitivity for different sociocultural contexts
Egocentric perspective	Viewing from different perspectives and engaging in different roles
Schematic use of language and discursive patterns	Questioning, problem-solving and creativity in language use
Evaluating based on partial knowledge or schematic criteria	Analysing, evaluating, and constructing arguments based on systemic knowledge about communication, language, context, and relations between them
Participating in existing linguistic practice	Critical reflection on existing practices as a reflection of specific power relations, society, and its beliefs
Understanding, analysing, and using information or discursive patterns	Questioning and verifying information, exploring the author's intentions, underlying assumptions, values
The fundamental guideline is to achieve a personal communicative goal	Taking responsibility for the consequences of one's communicative activities, thus critically reflecting on one's own and others' communication
Effectiveness as a main criterion	Ethicality as a communicative corrective

Table 1.
Characteristics of non-critical and critical communication.

6. In Ref. [4], Sternberg adds ethics and social responsibility, signifying an awareness that speech acts have consequences that speakers have to take responsibility for and that they strive to use language for the benefit of all.

2.2 Dimensions of critical communicative competence

In addition to equating critical communication with critical evaluation of information and discourse, another narrowing in understanding critical communication, according to reference [8], is that it is mainly placed at the cognitive level. Namely, limiting critical communication solely to the cognitive domain fails to explain some essential characteristics, such as the motivation for critical communication, positive attitudes towards it, awareness of its emotional dimension, and readiness for the ethical realisation of discourses and sociocultural language uses that are deemed justified. Such an approach also excludes the inclination to reject expressions that convey social relations that are not accepted. Therefore, another significant aspect in the definition of critical communicative competence is which dimensions constitute it, how they are interrelated and how they interact in communication.

The most widely accepted definition of key competencies has been formulated by reference [12], who defines them as complex systems of knowledge, beliefs, and action tendencies that are built on well-organised knowledge, fundamental skills (strategies), generalised attitudes, and cognitive styles [12]. Thus, competence is

defined as a complex composition of three dimensions: cognitive (knowledge, skills, cognitive styles, and experience), emotional-evaluative (attitudes and beliefs), and actional (i.e. readiness to act by one's own beliefs).

A somewhat different perspective on competence can be discerned from the definitions that served as the basis for understanding communicative competence in language teaching. In Ref. [13], it is defined as the ability of speakers to communicate or use language knowledge in accordance with various psychological, social, and linguistic circumstances. In his definition, the cognitive dimension is primarily associated with skills and less with knowledge, while, on the other hand, he claimed that it is essential not to separate cognitive from non-cognitive (affective and volitional) factors [13, 14]. Compared to reference [13], in Ref. [15], competence is understood as a synthesis of knowledge and skills required for communication. Thus, they expanded the understanding of the cognitive dimension while neglecting the emotional dimension.

On the opposite, the documents of the European Commission follow Weinert's holistic understanding of competence [16], as *The European Reference Framework: Key Competences for Lifelong Learning* defines key competencies as combinations of knowledge, skills, and attitudes related to a specific context that individuals need for personal fulfilment and development, active citizenship, social inclusion, and employment [17]. Critical thinking, creativity, initiative, problem-solving, risk assessment, decision-making, and constructive emotional management are essential in developing and implementing all key competencies [17].

Similarly, the difference between a one-dimensional and a multi-dimensional view of communicative competence is reflected in the analytical definition of its components. All the mentioned models emphasise two central components: linguistic (grammatical and textual) and contextual (pragmatic or sociolinguistic) competence, attributing them to the cognitive dimension since they emphasise the skills required for their performance and, to some extent, knowledge. Linguistic and contextual components are complemented with components related to cognitive processes. Canale and Swain, and Bachman talk about strategic competence, which Canale and Swain [15] understand as an organiser, and Bachman, following reference [18], understands it as a processor or a web of cognitive abilities that enable the use of linguistic and non-linguistic data to understand text formation. Some other models consider cognitive competence either as the ability to organise data [17, 19] or as factual knowledge of the world [20–22], and both relate them to skills required to perform established procedures in predictable contexts.

Because the three core components: cognitive, linguistic, and contextual, are primarily understood and analysed from a cognitive perspective, some authors try to incorporate non-cognitive dimensions into analytical models as additional components. References [19, 22], for instance, discuss the motivation for communication. At the same time, reference [17] includes a "positive attitude towards understanding in one's mother tongue" and a "willingness to engage in critical and constructive dialogue, respect for aesthetic qualities, and a desire to achieve them, commitment or interest in communicating with others" as distinctive competencies.

Nevertheless, based on the essential characteristics of critical thinking, we must view these dimensions as interrelated and interacting throughout the communication process and include them in essential competencies rather than separating them. In doing so, we will rely on Weinert's definition of competence and the areas of criticality defined by Barnett (as cited in [23]) as (1) propositions, ideas, and theories, especially in connection with systematic knowledge; (2) the individual's inner world,

where criticality is expressed through critical self-reflection; and (3) the external world, where critical thinking is expressed through critical action.

Therefore, we will place communicative competence in three dimensions: cognitive, emotional-evaluative, and action-oriented:

- The cognitive dimension refers to all elements that answer the question of what we can do, what we know, and how we reflect and improve our actions based on knowledge, experience, and beliefs. It encompasses cognitive, pragmatic, and language skills and strategies that enable the application of these skills while considering broader cognitive, language, and communication patterns and specific situations. It also includes metaknowledge or knowledge about the world in general and specific topics, language, its rules, genres and systems, sociocultural relations, linguistic diversity, and communication principles. On the other hand, it involves metacognition on one's own or others' language activities, the influence of emotions, biases, preferences, and values, and the appropriateness of evaluation criteria, enabling self-correction or improvement, knowledge transfer to new contexts, independent acquisition of new knowledge, and problem-solving.

- The emotional or evaluative dimension concerns the general emotional orientation and emotional and value-based attitudes towards the subject ("world"), the way it is presented, the circumstances, as well as language in general and its diversity, by which it becomes an expression of individual or collective identity and a carrier of social power. A positive attitude does not mean uncritical acceptance of familiar practices and stances but rather a critical attitude towards established patterns, stereotypes, and prejudices and a willingness to embrace diversity. This attitude is closely linked to an individual's knowledge of language and communication, experience, and the ability for knowledge- and experience-based reflection. Its goal is not only to recognise or raise awareness of one's or others' attitudes, as can be inferred from selected linguistic means, but also to reflect on the legitimacy of such attitudes from an ethical perspective [24].

- From the perspective of the actional dimension, within the concept of critical communication, actions are initiated not only by motivational elements that predominantly prevail in a functional communication model but also stem from individuals' needs, desires, and wishes. Equally important is the moral aspect, which implies a willingness to act responsibly and justly by ethical, social, cultural, and personal norms. A critical speaker strives to promote linguistic practices that they consider ethical and constructive and to change those that express unacceptable relationships [24, 25].

Critical communicative competence can thus be defined as a level of communicative competence that enhances functional and cultural communicative competence with critical thinking. Participants in communication are sensitive to the individual and the sociocultural context; they consider the emotional and evaluative dimensions and are aware of the need for evaluation based on credible criteria, transcending emotional biases, prejudices, and established perspectives. They also self-reflect on their communication (metacognition) and consider their ethical and social responsibility for their communicative actions.

3. Complexity of critical communicative competence

Critical communication is a multi-dimensional activity embedded in the relationship between the real world, language, and society/culture. The cognitive, emotional-evaluative, and actional dimensions are interrelated and realised through three core competencies: cognitive, linguistic, and contextual, as illustrated in **Figure 1**, where the circular diagram depicts the interconnections of core competencies, and arrows represent the realisation of dimensions in each of them.

3.1 Cognitive component

Within the cognitive domain, according to reference [19], the processes of conceptual and logical organisation, as well as the storage of knowledge and experiences, are vital in connecting these knowledge and experiences into new networks, especially when dealing with problem-solving or new communicative circumstances. In this context, cognitive linguistics [26] and the theory of the psychology of communication [27] emphasise that language is not an autonomous phenomenon involving unique, specialised cognitive processes; instead, it is determined by the same cognitive processes found in other non-linguistic domains: memory, conceptualisation, logical reasoning, and perception [26]. This implies that cognitive abilities can be discussed on two levels: general cognitive processes and communicative competencies, through which these processes are enacted in specific ways for understanding and producing texts.

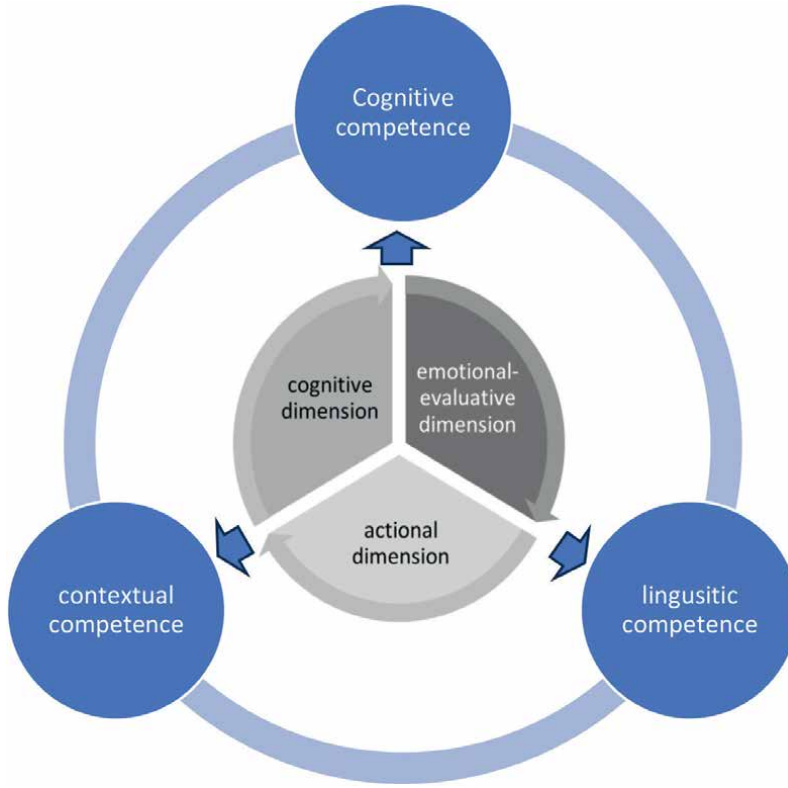

Figure 1.
Interconnections of dimensions and core competencies of critical communicative competence.

3.1.1 Cognitive processes in communication

General cognitive abilities related to communication, as defined by Ule Nastran [27], fall under the broader concept of perception. Perception encompasses information's reception and selection, categorisation and organisation, and primary interpretation. When selecting information to focus on, we are primarily guided by distinguishing essential pieces of information from unimportant ones, ignoring specific messages, and adapting them to our existing cognitive apparatus, typification, and stereotyping. Therefore, the most crucial cognitive process is categorisation based on the principle of similarity or proximity into categories (concepts, representations). These categories are placed within cognitive schemas, determining our prior expectations [27].

While categories could be defined as individual concepts or representations, cognitive schemas are the organisation of knowledge about a particular person, object, situation, event, or the relationship between categories [27]. Schemas determine the characteristics attributed to individual concepts and what we consider accurate, as well as allow us to draw conclusions, explore assumptions and hidden values, assess the validity of conclusions, and extend our understanding and interpretation beyond directly given information. General categories and schemas may contain numerous subcategories based on sample cases, enabling flexible interpretation and, consequently, modifying initial categories (compare [27–29]).

From a communicative perspective, Brown [30] identified not only expectations related to schematic knowledge about specific topics but also those stemming from schematic knowledge about textual genres and their typical context (expected speaker, audience, time, place). Individuals form this knowledge based on their language usage experience and, during communication, invoke the entire discursive event, such as a lecture, and its typical microelements, like an introduction with the announcement of the topic and the presentation of the lecture's structure (see also [28]).

Similarly, Hart [26] defines fundamental cognitive processes and links them with discursive strategies for their realisation. The comprehensive understanding that stems from a schema or scenario with which a speaker has associated a particular scene or event is associated with the structural configuration of the text. Comparing experiences enables framing, enabling the speaker/listener to assume which actors and processes will be given greater importance, how metaphorical meanings and symbols should be understood, and how connotations are assigned to words or texts. The ability to direct attention is the basis for *identification*; that is, the speaker chooses which aspects (features) of a given situation/scene to include in the presentation and how to place them in relation to each other. Finally, the positioning depends on our chosen perspective or our placement in space, time, and a particular role [26]. Thus, it defines the sociocultural context from which we will operate.

3.1.2 Cognitive flexibility as a distinctive characteristic of critical cognitive competence

Rost [29] points out that schemas are not only used for interpreting texts but also for generating or retrieving them. In this process, we summarise and refresh the content by preserving the schematic framework while often modifying specific details, omitting them, or adding new ones to align our understanding with our culturally determined knowledge. From a critical perspective, it is essential to be aware that different cognitive strategies can, in specific contexts, be linked to the emotional-evaluative

dimension. For instance, new information may be suppressed if it is unpleasant, threatening, or conflict with our environment, and thus undermines our belief in our inner strength and integration. At the same time, overly generalised, stereotypical categories can develop, into which all units of a particular general category are classified, regardless of their individuality or other sample cases. Such overly generalised categories are stereotypes [27], which include positive or negative attitudes towards the category [27].

Therefore, from the perspective of critical communication, in today's multicultural society, cognitive flexibility is crucial in all cognitive processes. This is particularly important in categorisation, where static and unchanging schemas can lead to generalisations and evaluations based solely on one's own cultural background and values. Instead, schemas should be open to variations and transitions, allowing for flexibility and consideration of different perspectives and sociocultural contexts. Compared to functional communication, critical communication has changed the fundamental orientation of participants towards the text and each other. In functional reading, the reader's orientation is harmonised with the text, primarily seeking understanding. In critical reading, the readers are oriented towards the text; their primary purpose is to interpret and evaluate it [31]. Recognising excessive generalisation, stereotypes, and prejudices and avoiding their use requires him to change perspectives, reflect on implications and place the data in a meaningful context to analyse attitudes and positions from two aspects: textual and communicative [31].

Regarding communicative strategies, flexibility becomes a fundamental requirement, mainly due to digital communication, which is significantly influenced by multimedia and interactivity. This interaction affects the structure of communicative events, participants' roles, and the interweaving of intentions, discourses, genres, and perspectives [32].

3.2 Linguistic competence

Traditionally, definitions of communicative competence have focused on linguistic processes. These include the formation of the literal meaning of sentences, which links processes of perception and attention direction, decoding words (i.e. recognising words in sound or writing), associating words with reference, constructing the propositional meaning of sentences based on the rules of a given language, and shaping the literal meaning of a text. The latter involves placing sentences within a textual framework and complementing them with data from the co-text using cohesion and coherence, logical reasoning based on given data, and new information [22, 23, 29, 33].

3.2.1 Constructional nature of linguistic activity

Despite discussing linguistic skills, they cannot be observed separated from the cognitive or contextual component. For example, besides cognitive effects in word recognition, Rost [29] and Kranjc [33] emphasise that understanding words does not stop at recognising a word and connecting it to a concept but must also be linked to a specific reference. Due to the polysemous nature of most words, we must decide which of a word's multiple meanings is realised in a particular sentence based on the context or world knowledge. This can communicate the creator's experience, evaluation, and identity, which the reader may recognise, accept, or not [34].

Similarly, constructing propositional meaning is not limited to understanding words and their grammatical connections. It extends beyond that. As Lurija [35] pointed out, polysemy can be present in most sentences, even though we usually

understand them without difficulty based on our linguistic knowledge. Complications arise in complex grammatical constructions requiring substantial transformations, such as nominalisation, prepositional phrases used to express relations between abstract concepts. On the other hand, a sentence's propositional meaning is only part of what the author had in mind. Therefore, readers logically infer the unspoken. In addition, pragmatics has shifted attention from literal towards communicated meaning, as texts are always received within a specific speech situation, which is inferred based on textual and sociolinguistic schemas [34].

According to Hart [26] notes, it is essential to recognise that linguistic encoding is always a construction because the same situation, event, entity, or relationship can be represented in different ways by choosing linguistic elements. Namely, linguistic activity involves continuously choosing linguistic elements [36], which do not always occur at a conscious level, especially in a first language. Therefore, it is reflected and thoughtful choices that can improve an individual's communicative ability. Thus, conscious choices can enhance an individual's communicative competence. Effective language selection depends on the awareness of linguistic choice possibilities, knowledge of the language system, the ability to use various strategies, and considerations of contextual factors, especially the audience [37].

Critical linguistic awareness contributes significantly to developing critical communicative competence as it incentivises multi-dimensional activity at the linguistic level and considers the interplay of linguistic processes with cognitive and contextual aspects [37].

3.2.2 Critical linguistic awareness as a tool for realising critical linguistic competence

The concept of linguistic awareness has been formed in the past few decades, initially referring to the relationship between language use and linguistic knowledge. Donmall, as cited in Ref. [38], defined it as an individual's sensitivity to language and awareness of its nature and role in human life, while in Ref. [39], it is defined as individuals' ability to reflect on, and match, intuitively spoken and written utterances with their knowledge of the language. This tacit knowledge, as stated in Ref. [39], can be made explicit through outward expression ranging from spontaneous self-correction to explicit reflection on the production of utterances. A broader perspective on linguistic awareness was presented by Lier [40], defining it as the understanding of human linguistic activity and the role of language in thinking, learning, and social life, as well as an awareness of the power and control language affords and the complex relationship between language and culture. While his definition emphasised the cognitive dimension of language, it also incorporated the social and cultural dimensions by highlighting the role of language in social life.

However, even such an understanding of linguistic awareness does not facilitate a critical perspective on language in its sociocultural function. As Ochs [41] suggests, for an individual's competent participation in a social group, it is essential to understand how people construct social situations with language and other symbolic tools. In every community, members convey social information using typical communicative and language forms. Therefore, grammar and vocabulary enable participants to recognise the social situation in which communication occurs.

Svalberg [42] thus concludes that the contemporary notion of linguistic awareness, as it has evolved in the last two decades, is not merely intellectual and passive. The development of linguistic awareness fosters engagement with the language, which can be intellectual, focusing on patterns, emotional, emphasising attitudes,

or socio-political, where the emphasis is on effective communication and interaction as social action [42]. Similarly, other researchers have identified components of linguistic awareness. In Ref. [43], authors, for example, describe five domains of linguistic awareness: affective or emotional, social, the domain of power, cognitive, and performance. According to their definitions, the affective or emotional domain pertains to the relationship between the communicator's feelings and cognitive processes. They associate the social domain mainly with the influences of a contemporary, globalising society where issues often stem from ethnic diversity. The domain of power considers language as a tool for manipulation, thus including an awareness of hidden meanings, unspoken assumptions, and rhetorical "traps" characteristic of holders of social power. The cognitive domain encompasses the relationship between language and thinking or cognitive processes, assuming metalinguistic awareness, reflection, analysis, and the students' metacognition about their communication and thinking. The performance domain is mainly related to language use and communicative strategies.

When comparing the descriptions of their components with those in a general definition of key competence, we can observe that the domains of power and performance have singled out and emphasised particular aspects of cognitive and emotive-evaluative dimensions. This means that critical linguistic awareness can be defined as realising through three dimensions [24]:

- The cognitive (intellectual) component of linguistic awareness primarily refers to how we use language, our linguistic skills, metalinguistic knowledge, and our ability to reflect on our own or others' language use.

- The emotional or evaluative aspect relates firstly to one's general emotional and evaluative attitude towards language as a means of communication in a specific speech situation, towards language as a vehicle of societal power, and towards individual linguistic elements, which can be either negative or positive [44]. This attitude is closely linked to knowledge about language and communication and the ability to reflect on them. However, critical communication goes beyond merely recognising the attitude based on the text; it also raises questions about whether such an attitude is justified and ethical.

- The actional dimension means that the individual strives to embody those aspects and characteristics of the linguistic activity or elements to which they hold a positive attitude and attempts to prevent those to which they hold a negative attitude.

As claimed by Clark and Ivanić [45] and as it is evident from the analytical representation of linguistic competence, it is impossible to think critically about linguistic elements without relating them to how they are used in a particular context or independently of social relationships.

3.3 Contextual component

Changes in the concept of communicative competence are closely related to the understanding of context and contextual determinants. Despite, as stated by Kramsch [46], that context was always at the core of communicative language learning, it was reduced in the 1970s and 1980s to one-to-one verbal interactions and perceived as

static and objective. Conversely, the 1990s brought back the importance of context on a much larger cultural scale. At the same time, psycholinguistics and cognitive linguistics define context as a mental structure because we continuously categorise the world around us and ourselves in ways that are socially and culturally determined [47]. As a result, the discussion of communicative competence now leans more towards a socially oriented perspective, upgrading the previously dominant cognitive and individual views of language use and learning [48].

3.3.1 Relationship between language and culture

At the core of understanding contextual competence is the relationship between language and culture, which can be observed from three perspectives suggested by K. Risanger and cited in Ref. [23]: sociocultural, linguistic, and individual or psychological.

- Discussing the embeddedness of linguistic activity into a broader sociocultural context, Lemke [49] emphasised that individuals in their social environment acquire organisational patterns of language use, reflecting established social power and solidarity relationships. In each speech act, a speaker indicates the role they have assumed and their place within the social system through the choice of linguistic varieties. Sociolinguistic competence is realised through the speaker's choices of genres, discursive practices, and communicative patterns. It also involves an understanding of how the social context is expressed, an evaluation of the appropriateness of these choices, and a willingness to either maintain or alter conventions. However, critical competence requires more than mere knowledge and unreflective positive or negative attitudes. It necessitates reflecting on the value systems and social relationships inherent in communicative patterns, and assessing whether the social power dynamics expressed through language are ethically justifiable.

- From a linguistic perspective, the chosen linguistic elements can reflect values, attitudes, beliefs, stereotypes, and even prejudices we express as bearers of a particular identity. Additionally, an acknowledgement of interactivity and inseparability of cognitive, linguistic, and cultural competence in critical communication has changed the understanding of the relationship between neutral and metaphorical expression.

As argued by Gibbs [50] and Leeuwen [51], it has traditionally been believed, dating back to Plato, that the world and its relations are most accurately expressed through non-figurative expressions as better reflecting the real world. In contrast, the figurative or poetic perspective was considered distorted and often undesirable in science, education, and philosophy. In line with this duality, semantics in linguistics deals with the relationships between symbols (signifiers) and elements of the natural world (signified), but the relationship between meaning and context was relegated to rhetoric and pragmatics [50]. However, Gibbs [50] challenges traditional views by suggesting that metaphor, metonymy, and irony are not merely departures from neutral understanding; instead, people conceptualise their experiences in the external world through images and figurative expressions. Therefore, when explaining them, the relationship between signifier and signified must include intention, circumstances, and cultural schemas that offer us keys for interpretation and understanding.

- While understanding the established relations between language and society certainly shapes expectations and influences prevailing choices, it cannot explain why an individual chooses, modifies, or even discards them despite being aware of the conventions. This question can only be answered by considering the specific circumstances in which the speaker and listener enter with their ideas about the world, their roles, their perceptions of each other, and their relationships [52]. As emphasised by Ule Nastran [27], the selection and understanding of patterns can only be interpreted through an individual's pragmatic competence, that is, the interpretation of sociolinguistic and stylistic frameworks based on their knowledge of social conventions and systemic possibilities, as well as considering personal experiences, especially one's viewpoints, motivation, values, beliefs.

The critical speaker will not adopt established patterns uncritically but will be aware that they express their identity through all their language activities. Therefore, they will analyse the relationship between the language they have chosen or will choose and the specific circumstances and try to empathise with the perspective of others.

3.3.2 Critical cultural awareness as a tool for realising critical contextual competence

Speakers' identities that will predominate in a specific situation and language varieties within they will select or interpret communicative patterns, words, or sentences, depending on several contextual factors. In their choices, the critical speaker relies on knowledge of the linguistic elements and the systemic relationships among them, conventional ways of expressing intentions in each context, and their interpretation of the current communicative situation. They are aware that linguistic choices express their identity and are based on their own, secondary, or collective experiences, values, and beliefs [52]. Consequently, they develop a positive attitude towards both formal and informal language variants and socially responsible language use, and have a negative attitude towards offensive, marginalising, and stereotypical representations. Following their attitudes, they are willing to use language to communicate ethically and responsibly and prepare to bear the consequences of their actions. Therefore, the tool for realising critical contextual competence is a developed (linguistic) cultural awareness, which can be—similar to linguistic awareness—discussed within three dimensions [52]:

1. The cognitive dimension of cultural awareness refers to how we use language for identification and the knowledge, thoughts, ideas, judgements, and evaluations of a specific (micro)culture, its linguistic expressions, the identity aspect of language, and sociolinguistic principles.

2. The emotional-evaluative dimension is related primarily to language as a bearer of social power. It involves a positive disposition towards one's own and others' social group and language, including intra-cultural language variants (registers) as an expression of social micro-groups.

3. From the perspective of the activity dimension, they seek to promote intercultural tolerant, argumentative, and emphatic communication while challenging egocentric, non-tolerant, exclusive, and hateful speech.

Critical communicative competence requires rhetorical sensitivity, the ability to adapt communication style to intentions or to others' communicative patterns [27, 53].

"Rhetorically sensitive individuals are more flexible in communication and attempt to balance their interests with those of others. They assume whether a particular form of communication is appropriate, when they can say something and when they cannot, while not concealing their fundamental ideas and genuine emotions" [27].

4. Conclusion

Recognising (social) criticality as an essential trait of communicative competence is, first and foremost, a response to the processes of globalisation and a reflection of the demand for developing "intercultural and inter-ethnical understanding and respect for communication diversity..." [54]. Simultaneously, the understanding of interculturality, on both inter- and intra-linguistic levels, has contributed to acknowledging the diversity of an individual's language identities and the identity dimension of every language activity. This approach has brought attention to the relationship between language and culture, a perspective that Porter and Samovar summarised as "What we are talking about, how we are saying it, how we are seeing it, our inclination or disinclination, how we are thinking and what we are thinking about, are influenced by our culture" [55]. Consequently, Larre [56] suggests that language serves as a bridge between the sociocultural context and an individual's mental activity. It is a cognitive tool individuals employ to make sense of the world, which is why language, culture, and thinking cannot be viewed from a singular perspective.

A critical speaker no longer perceives language merely as a means of communication but recognises it as a system of synonymic or antonymic, same- or different-functional elements that enable the speaker to refer to and comment on the content or context, as well as a mean for express, maintain or change social relations. Therefore, they regarded communication not only as a cognitive but also as an emotional process, where every speech act has consequences and demands responsibility.

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Chapter 9

An Examination of Metapragmatic Comments on Facebook

Jean Mathieu Tsoumou

Abstract

Despite the increasing interest in studying (im)politeness on Facebook, both in Anglo-centered societies and across cultures, very little explicit scholarly consideration has been given to the (im)politeness implications in Coronavirus pandemic-relate discussions. The aim of this paper is to (1) explore the basis on which metapragmatic comments are produced in Covid-related interaction on Facebook and (2) determine the perspectives (i.e., instigator or target) from which Facebook users express metapragmatic comments. The findings show that metapragmatic comments are expressed in order to react to negative attitudes (such as laughs and disregard) targeting Giuliani, indicating the commentators' awareness of the appropriate conduct in a situation of despair such as dealing with COVID-19.

Keywords: metapragmatics, coronavirus, (im)politeness, Facebook, communication

1. Introduction

This chapter examines 1000 Facebook comments posted on Fox News' page in reaction to Giuliani's positive COVID diagnosis in December 2020. Drawing on the argument that metapragmatic awareness is essential in providing emic understanding, description, and explanation of language use [1–8], the chapter (1) explores the basis on which metapragmatic comments are produced in COVID-related interactions on Facebook and (2) determines the perspectives (i.e., instigator or target) from which Facebook users express metapragmatic comments. The main research question here is what drives metapragmatic comments in this interaction.

Despite the increasing interest in studying (im)politeness on Facebook, both in Anglo-centered societies and across cultures [9–14], very little explicit scholarly consideration has been given to the grounds on which metapragmatic comments are produced and framed in Facebook reactions to a COVID-19 positive diagnosis in the context of political turmoil. Specifically, this chapter examines the perspectives from which the commentators evaluate (im)politeness conducts in the reactions to Giuliani's COVID-19 diagnosis. The chapter draws on Sinkeviciute's [7] concept of the *preferred reaction*, which implies that, in the context where (im)politeness manifestations are in order (e.g., in the context of humor behaviors), there is a pattern in terms of preferred reactions. Based on moral order, some humorous behaviors or jocular impoliteness may be seen as offensive or unacceptable. This offensiveness can often be framed from the perspective of the target of the joke to show compassion or from

the perspective of what is morally and socially (un)acceptable. As will be argued in this chapter, the evaluation or assessment of determined behaviors as (un)acceptable presupposes the claim of identity. In other words, the simple fact of evaluating a certain conduct as impolite implies dissociation from the offender (and, in some cases, it implies association with the target). In this sense, the chapter also explores what role communicative behaviors play in the claim of identity as well as in the attribution of identity to others. Following Sinkeviciute's [8] identity framework, the concept of identity is explored—as if it is interrelated to that of face—with the understanding that (im)politeness can be a positive or negative interactional practice that allows individuals to position themselves with respect to others within the comment thread [15]. As Spencer-Oatey [16] puts it, "face is closely related to a person's sense of identity or self-concept: self as an individual (individual identity), self as a group member (group or collective identity) and self in relationship with others (relational identity)".

The remainder of this paper is organized as follows. Section 2 reviews the literature. Section 3 describes the method. The findings are presented and analyzed in Section 4. The last section combines the discussion and the conclusions drawn from the analysis of the findings.

2. A note on metadiscourse and (im)politeness studies

The development of a discursive approach has advanced the understanding of the fundamental role of metadiscourse in the manifestation and evaluation of impolite behaviors [17]. What is often argued is that an exploration of both the speaker's and the recipient's actions is a fruitful way to grasp the dynamic of (im)politeness. Metadiscourse labels such as insults (i.e., in *that is an **insult!***) stand as a way individuals recognize offensive actions and evaluate them as such [1]. The importance of metadiscourse labels in determining how lay participants understand and evaluate social actions is rooted in the idea that any reflection on or the evaluation of some behavior presupposes the understanding of social norms that govern social interaction and the existence of a moral order against which actions are evaluated [2, 4, 6, 18]. The assumption that impoliteness is a social practice stems from the idea that individuals' reactions to transgressions of social norms are grounded on the awareness and understanding of the binary oppositions of social actions, which translates into the difference between good and bad, appropriate and inappropriate, acceptable and unacceptable, republican and unrepublican, divisive and inclusive, etc. Social behaviors that are assessed negatively as unacceptable, unrepublican, and divisive are often taken as a transgression of moral order [4, 5, 19]. Both online and offline (im)politeness studies on political discourse concur that individuals' expectations of politicians' actions tend to be grounded on the "seen but unnoticed" [5]; that is, the idea that behaving politely or understanding someone in a delicate situation is what every member of a society is entitled to know, describe and communicate [13, 14, 20].

2.1 A note on social media and (im)politeness studies

The affordances of social media are continuously shaping and attracting new forms of social engagement in mainly two different ways [1, 13, 14, 19, 21]. On the one hand, the affordances have turned social media into platforms on which individuals turn in order to express their emotional issues (i.e., death, illness, catastrophes,

distrust, breakups, etc.) and achievements (i.e., victories, graduation ceremonies, birthday celebrations, etc. [10, 12, 22]. On the other hand, social media have become a circus of confrontations where exchanges about topics such as politics not only favor the competition of different viewpoints but also attacks and criticisms are commonplace [9, 11]. This is precisely why there has been a growing interest in studying the socio-behavioral changes brought about by the online nature of human interaction on Twitter [23], YouTube [24], blogs [25], WhatsApp [26], and Facebook [1, 11, 13, 14, 20, 21]. At the heart of this interest is the idea that social media interactions revolve around the struggle between politeness—as a set of strategies for maintaining good relations and avoiding interpersonal conflicts [27]—and impoliteness—as the behavior that is face-aggravating in a particular context [28]. Thus, the manifestation of (im)politeness presupposes that online users understand and are aware of the difference between the behaviors that can be considered morally right and those that are seen as morally unacceptable. It is often argued that the desire to claim own ground and/or form a like-minded block is one of the main motives for social media users to act aggressively in political discourse [14, 20]. Conversely, it has also been argued that moral order is the underlying motive why social media users act politely when discussing topics such as health issues [29, 30]. However, recent studies have shown that when political polarization meets emotional issues such as COVID-19, the line between morally acceptable and unacceptable behaviors becomes fuzzy [13, 21]. In this context, this chapter explores metapragmatic comments posted as reactions to a COVID-19 diagnosis in a context of political turmoil.

2.2 Theories of (im)politeness discourse

The relationship between metapragmatic practices and (im)politeness phenomena has been proven to be salient in studies that examine irony, sarcasm, teasing, and mockery [3, 7, 8, 31]. These studies have shed light on the (im)politeness implication of interactional practices and their importance in the cultural contexts in which they have been applied, suggesting that (im)politeness is a socio-interactional phenomenon that can be approached from a discursive perspective [18, 32–34], frame-based perspective [35], face constituting perspective [36, 37], genre-based perspective [38] as well as rapport management perspective [16], among others.

The discursive-based perspective puts the focus on participants' understandings of politeness as they arise in various forms of discourse or social interaction. By focusing merely on describing the uses of impoliteness, the main criticism against the discursive framework is that the theory disregards any predictions, leading critics such as Terkourafi [35] to alarm that the disregard for predictions only leaves the analyst with "minute descriptions of individual encounters, but these do not in any way add up to an explanatory theory of the phenomena under study." Against this, the frame-based perspective draws a line between linguistic expressions and their contexts of use. (Im) politeness thus becomes a product of the co-occurrence of contexts and particular linguistic expressions [35]. Furthermore, face constituting theory is grounded on the ethnomethodological conversation analysis, focusing on the analysis of social practices on which participants' evaluation arises [39]. Thus, (im)politeness accounts for the interactional achievement of individuals in a given conversation. Through interaction, the analysts may identify explicit (im)politeness evaluations made by lay participants. Additionally, the genre-based perspective views discourse as always situated and shaped by genre, providing top-down norms and expectations [38, 40]. Finally, rapport management theory approaches (im)politeness as a system of interpersonal

relations designed to facilitate interactions by reducing potential conflicts and confrontations [16]. This management of harmony-disharmony among interactants is made up of different components such as the management of face needs, the management of sociality rights and obligations, and the management of interactional goals. The merit of Spencer-Oatey [16] is her account of face management as involving "the management of face sensitivities" and her understanding of social rights and obligations as "the management of social expectancies – fundamental entitlements a person effectively claims for himself/herself in interaction with others," and her description of interactional goals as "the specific task and/or relational goals that people may have when they interact with each other."

Central to the theories of impoliteness is the distinction between (im)politeness1—i.e., the understandings of participants by themselves—and (im)politeness2—i.e., the understandings of (im)politeness from a researcher's perspective [2, 6]. Scholars studying (im)politeness1 deal with lay participants' own assessments of discourse as (im)polite [32]. This is why it is often argued that metadiscourse is prompted more by impolite behaviors than polite ones [18]. On the other hand, those studying (im)politeness 2 take as a starting point the analyst's assessment grounded in pragmatic theories [40]. Nevertheless, there seems to be a consensus that any analysis of naturally occurring data should always advance the combination of both (im)politeness1 and (im)politeness 2 in order to, as Garcés-Conejos Blitvich [40] argues, "identify the norms of appropriateness for a given community of practice and then assess a given utterance as perhaps (im)polite against those norms (…). This allows the researcher to capture, in a top-down/bottom-fashion, the realization and conceptualizations of (im)politeness in a given context."

3. Method

This chapter quantitatively and qualitatively analyzes some of the data initially collected and published in previous projects [13, 14]. The 1000 Facebook comments were collected on December 7, 2020, from the Facebook page owned by Fox News. This Facebook page was selected for its uniqueness as a pro-republican, pro-conservative, and pro-Trump news outlet with the likelihood to generate more empathetic and sympathetic comments than offensive ones, since Giuliani is a Republican who, at the time of the data collection process, was operating as the leading lawyer for the Trump campaign's legal team in charge of challenging the 2020-US-November-3rd-election results. Thus, these 1000 comments, which were collected and numbered in chronological order, cover the first 1000 comments posted in the comment thread.

However, it is important to point out that Facebook comments, especially when posted on public pages, are readily available and can conveniently be collected by simply copying the comments from the news outlet page and posting them into a doc. File, the main issue facing the researcher revolved around not just the fact that (1) the person at which the post is directed—i.e., Giuliani—is absent from the conversation within the Facebook thread, (2) the researcher bears no physical contact with the participants but also that the identification and classification of the comments had to be carried out in a fully pen-and-paper fashion, which was time-consuming. Additionally, the issue with respect to ethics was dealt with following the approach taken in previous studies [41–43]. Thus, given that the comments were intended for public display on public platforms, no consent was required from contributors. Nevertheless, I ensured that all the user identity details were removed from the

analysis. Likewise, I employed names unfamiliar with the users' identity to represent both the user and the rank of their interventions within the threads in each corpus.

Furthermore, elsewhere I ([13]:12) explained that "Rudy Giuliani has been in the public eye for countless years, including being the New York City mayor between 1994 and 2001, launching a campaign for US Senate 2000 and for the presidency in 2008." As a personal lawyer to Trump, his positive for COVID-19 added to the countless high-level officials closer to the President to be infected by the virus after Trump himself and his wife had both been infected on October 2, 2020. Thus, political and public health implications and ramifications of this positive diagnosis in the context of the looming presidential election make the data worth a study.

3.1 Procedure and interrater agreement

The unit of analysis adopted in this study is the Facebook comment in its entirety. Regardless of the length, each comment is considered a unit of analysis. This decision stems from the idea that each comment is a proposition that covers what each user wants to convey. Many studies examining Facebook comments focus on each comment as a unit of analysis independently of its length because each comment as a whole purports to capture each user's perception, (pre)conception, and understanding of the ongoing interaction [13, 14, 20, 21, 23].

Following Culpeper [3] and in order to identify metapragmatic comments, two approaches were in order. On the one hand, conventionalized (im)politeness formulae were examined so as to categorize the comments in terms of politeness and impoliteness. Conventionalized (im)politeness formulae are comments directed at Giuliani, whether to wish him well or to curse him. On the other hand, any comment that is used as an evaluation or a response to another comment within the comment thread was considered to be a metapragmatic comment. Metapragmatic comments are unique because they are framed as reactions to comments posted by fellow users reacting to the diagnosis. In other words, metapragmatic comments are reactions to reactions. A meticulous examination of all instances where users hashtag fellow users within the interaction led to determining comments directed at Giuliani's diagnosis and those used as reactions to the comments previously made by fellow users within the thread. All the excerpts are here reproduced as they were naturally uttered by the users with errors and infelicities to keep their naturally occurring forms.

4. Analysis

A metapragmatic analysis aims to determine what the users think and consider to be the appropriate behavior under the circumstances of a positive COVID-19 diagnosis. As will be seen, such appropriateness implies that COVID-19 is no laughable subject matter; as a result, users should show compassion and indignation. In other words, metapragmatic analysis is a way to determine what is at play in the corpus regarding the struggle between politeness and impoliteness.

As shown in **Figure 1**, metapragmatic comments represent 1.6% of the dataset, whereas (im)polite comments represent 98.4%. Despite the statistically low rate, the fact that there are metapragmatic comments presupposes that some reactions within the comment thread may have been evaluated as marked under the circumstances.

What **Figure 1** indexes here is the idea that the interactants preconceive the potential norms of conduct within this interaction in different ways. Each interactant

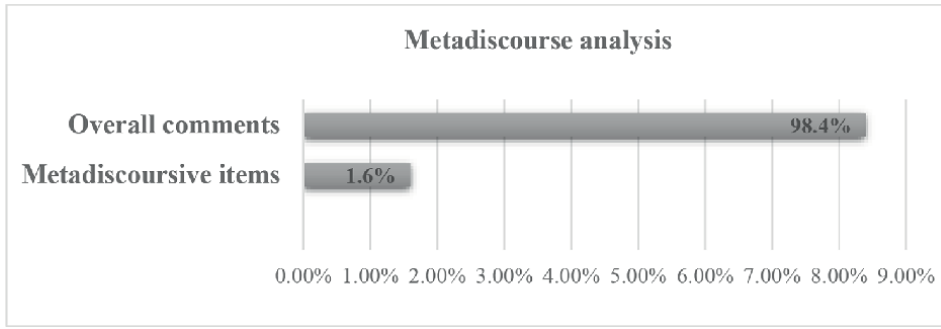

Figure 1.
Metadiscourse analysis.

approaches the interaction as they see fit in their perception of the social norms of the interaction. 1.6% of metapragmatic comments imply not just assessment and reassessment of specific behavior, but also a process of construction, negotiation of what is or what is not appropriate and through this process, the participants seek to establish interactional identities. In other words, *politic behavior*—i.e., the knowledge of which linguistic structures are expected in a specific interaction under specific contextual circumstances [18]—is at the center of the struggle between interactants who, through their social acts, negotiate and establish commonalities and differences.

4.1 Perspectives from which metapragmatic comments are framed

The word *perspective* here refers to how commentators evaluate (im)politeness episodes within the comment thread. In other words, perspective involves the orientations metapragmatic comments take in assessing and conceptualizing what is good or bad. As shown in the upcoming paragraphs, while some evaluations may address the instigators' attitude (e.g., instigator's perspective), others position themselves in defense of the target (target's perspective). The instigators are fellow users who disregard Giuliani through laughter or criticism. The target, on the other hand, is Giuliani. Depending on the perspective a user takes in framing a metapragmatic comment, the understanding and conceptualization of (im)politeness vary and index the users' expectations of what is or what is not appropriate. Quantitatively, as shown in **Figure 2**, 81.25% of metapragmatic comments include comments in which the users question the attitudes of fellow users' reactions to Giuliani's diagnosis. The commonly shared feature in this category includes their poor evaluation of fellow users' attitudes as well as the counterattack targeting fellow users' actions. On the other hand, 18.75% include metapragmatic comments that are framed in defense of Giuliani.

Although all the metapragmatic comments are framed in terms of a negative assessment of impolite reactions to Giuliani's diagnosis, the fact that the vast majority of them (81.25%) revolve around the instigator's perspective (rather than a defense proper of Giuliani) can generate two lines of argument. On the one hand, moral order seems more important than political favoritism or partisanship. Consequently, the impolite behaviors may prompt reactions (and even condemnation) within a group of like-minded individuals. The benchmark of any political ideology is often drawn from the provision of moral order, that is, the expectation of moral normality, which implicitly or explicitly shapes the understanding of what should be obligatory, permissible, or forbidden under the circumstances [14]. Any conduct that transgresses

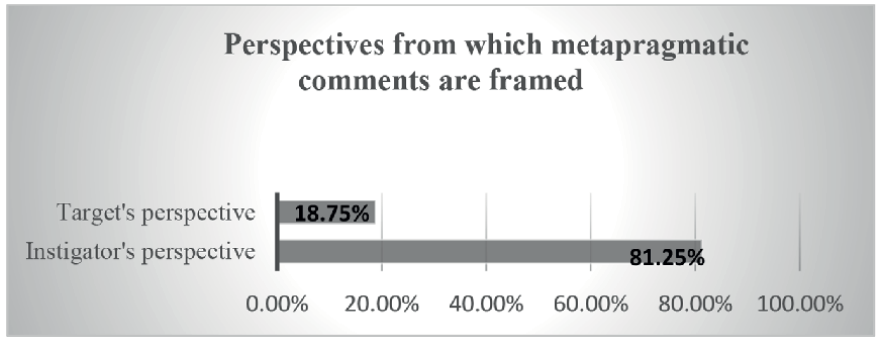

Figure 2.
Perspectives from which metapragmatic comments are framed.

the benchmark and threatens the norms of conduct may generate condemnation and tension within the group. On the other hand, it may also be the case that the users do not condone Giuliani's actions such as his political engagements. As will be seen below, metapragmatic comments tend to focus more on Giuliani as a human being in distress rather than on him being a politician, which in this case contradicts the findings in previous studies where, for example, reactions on the Facebook page owned by CNN are reported to focus more on Giuliani as a politician than on him as a human being [13, 21]. This contradiction may be understandable given that CNN is a pro-democratic news outlet, whereas Fox News is a pro-republican news outlet.

4.1.1 Instigator's perspective

Framing a metapragmatic comment presupposes an understanding of the preceding comments as well as an assessment grounded on the idea that what precedes (or the attitude in the preceding comments) is positively or negatively provocative enough to cause a reaction. This is the case of Nicole (Cf. [1]), who not only expresses her awareness of various participants interacting in the comment thread but also evaluates fellow users' actions as inappropriate and inadequate under the circumstances. Nicole not only draws explicit awareness of the multiparticipant nature of interaction but also she judges some of the interactants to be laughing about Giuliani's diagnosis (*"The **people who** think **this is funny** or are **laughing** about it"*). A closer look at the comment shows that Nicole's comment is mainly focused on fellow users' actions and attitudes. Nicole positions her evaluation against the instigator of impoliteness attitude within the comment thread. In other words, Nicole does not react to comments that wish Giuliani well. She takes issue with anyone laughing. In the process, Nicole counterattacks the instigators (i.e., anyone laughing) through an insulting personalized negative vocative (*"you are sick"*) accompanied by a pouting face emoji (😡). This indexes the level of annoyance and disgust, since Nicole's intervention occurs at turn 599.

[1]

Nicole: The people who think this is funny or are laughing about it are sick.😡

In terms of the claim of identity, it is clear that Nicole's comment dissociates her as a person from fellow users' who find Giuliani's diagnosis laughable. Similarly,

Doris in [2] approaches the interaction by assessing the multimodal aspect of the comments and examining the role of emojis in conveying jocular impoliteness [44]. It appears to be Doris's belief that a positive diagnosis is no laughing matter. Doris' interpretation of the 2.3 K emojis shows that he negatively evaluates their use under the circumstances. This metadiscourse shows Doris' awareness of the multimodal nature of Facebook interaction, exhibiting the understanding that beyond textual communication, users may also resort to imagery (or emojis) to express their point of view about the situation. As for Nicole, who, beyond the poor assessment of fellow users' actions, counterattacked the instigators, Doris takes issue with the instigators. In the process, Doris reposts, and face attacks the instigators by means of a rhetorically personalized negative assertion (*"How are you 2.3 K laughing fools"*) before concluding the comment with a negative expressive and ill-wishing comment (*"I hope you get it"*).

[2]

Doris: How are you 2.3 K laughing fools .... Who put laughing emoji's I hope you get it.

What Doris' comment points to is the contingency of the multimodal nature of Facebook interaction in the production and interpretation of (im)politeness. Doris' understanding of the interaction is not just text-driven but also multimodal-driven. In other words, Doris' perception of what is appropriate or inappropriate is something that should be conveyed both textually and (typo)graphically. This supports Locher et al.'s [9], according to which "[(im)politeness] evaluations are contingent upon expectations, which themselves are intricately tied to norms of appropriateness for the community and activity in question." Thus, the jocularity of the interaction may come not just from textual discourse but also, and more importantly, users may evaluate the jocularity of the interaction through an examination of what the imagery (i.e., emojis) orients to. In other words, the users interpret the textual comments and provide positive or negative evaluations of other typographic messages.

Furthermore, the perspective from which a user evaluates the interaction is crucial regarding whether the commentator shows a degree of appreciation. For instance, the evaluation in Lola's metapragmatic comment below questions the nature of humankind when it comes to laughing at somebody else's misfortune (*"why would anyone laugh?"*). She proceeds by offering a piece of advice (*"just because you may not like him is no reason to be mean. I would rather no one get it. Even if I don't like them"*) before shaming the instigators for the laughter. As was the case with Nicole, Lola does not see the situation to be funny at all. This meta-pragmatic comment, which intervenes at turn 275, deplores the attitude and actions in the preceding comments.

[3]

Lola: Why would anyone laugh? Just because you may not like him is no reason to be mean. I would rather no one get it. Even if I do not like them. Shame on you who thinks this is funny.

As shown in [1] and [3], the label *funny* is frequently used in metapragmatic comments. However, in most cases, the adjective *funny* is not used to convey any appreciation, laughter, or amusement; rather, it is used as a negative evaluative mechanism so

as to suggest that the situation is as serious as no one should find joy out of it. In this process, the claim of identity and the struggle over the appropriate conduct under the circumstances divide the users between those who approach the diagnosis as a laughing matter and those who claim their identity on moral order grounds. This categorization reflects the commentators' uniqueness, characteristics, and linguistic choices that differentiate self from others. For example, Lola socially positions herself (i.e., through the use of "I")—and others (i.e., through the use of "you"). The *self* attached to Lola draws a picture of a politely-driven person who would not laugh at anybody's misfortunes. However, while Lola paints a negative picture of those laughing at Rudy Giuliani's pain, she interactionally fails to keep this face-enhancing identity by lashing out at others at the end of the comment (i.e., *Shame on you who thinks this is funny*). Thus, while in the first part of the comment, Lola projects an image of a reasonable voice guided by compassion and sympathy, the second part, however, turns Lola into an instigator of face attacks. This shift in terms of the claim of identity is consistent with the argument that identity is a social phenomenon co-constructed in the interaction [15]. Consider the following example:

[4]

Debbie: Laughing at people's misfortune and illness is a real mark of dissociative sociopathic behavior.. I cannot fix that type of problem ignorance but I can prescribe medication for it.😜

Debbie's intervention occurs at turn 698, which presupposes an understanding of the preceding comments. Debbie comments on the instigator's offensive behavior by pointing a criticism of fellow users who seem to show disregard for Giuliani's pain. She characterizes this attitude as a "dissociative sociopathic behavior." She then identifies herself through the use of the first personal pronoun ("I"). She describes what she can and cannot do through condescending remarks ("*I can't fix that type of problem ignorance but I can prescribe medication for it*"). Notably, while Debbie appears to react negatively to the seemingly "dissociative sociopathic behavior" of fellow users, she herself becomes an instigator of offensive comments by implicitly insulting others as ignorant. What Debbie seems to perceive as mainstream salient individual identity in the interactional practices is the idea that she is different from fellow users laughing about Giuliani's diagnosis.

Another way users poorly evaluate fellow users' attitude and conduct is through the exploitation of a situated identity. Following Sinkeviciute [8], situated identity refers to "instances in which commentators refer to one's behavior (i) that are primarily related to the ongoing interactional situation and (ii) when the interactants' understanding, perception, (re-)action are thought to be impacted on by interpersonal relationships between the participants." In other words, situated identity manifests itself in relation to the ongoing interaction as well as the interpersonal connection (e.g., level of communication, proximity, relationship history, etc.) [7, 8]. Consider the following example which occurs at turn 449.

[5]

Dee: Look at the sick and twisted in here laughing about his. They will not think it's funny when it happens to them or someone they care about….that is, if they are even capable of caring about anyone. Sure does not look like they are.

Dee provides his opinion of the type of conduct displayed by fellow users within the comment thread, which he describes as offensively laughing reactions in the ongoing interaction. Dee identifies the laugh underneath fellow users' comments and positions laugh as part of the situated phenomenon that has been negotiated throughout the interaction ("*Look at the sick and twisted in here laughing about his*"). Dee proceeds by referring to those laughing using a third personal pronoun ("*they*" and "*them*") as a marker to differentiate himself from others. It should be pointed out that no claim is made about situated identity being different from individual and collective identities. In Dee's metapragmatic comment, the evaluative criticisms are made about fellow users' conduct as opposed to Dee's own conduct, which indexes both collective—portrayed through the use of "*they*" and "*them*"—and individual identity—which is portrayed through the way Dee implicitly portrays himself. This goes along with Garcés-Conejos Blitvich's [15] argument that "(im)politeness, just as identity, is a situated phenomenon that is interactionally constructed and it is thus derived from specific roles and the rights and obligations socially with those within a particular culture." The way commentators express themselves through their metapragmatic comments exemplifies the role (im)politeness plays in identity (co)-construction. The "I" and "we" become adversaries to the "you" and "they." Consider the following example which occurs at turn 93:

[6]

James: Really do not know how people who are reacting to this with laughter can honestly live with themselves. It's not just your own countryman who's come down with #COVID19 but your fellow man too and you all find it amusing. How can you people be so callous…

James here attributes negative evaluation of the conduct of fellow users within interaction. As has been the case for meta-pragmatic comments framed from the instigator's perspective, the implication of James's comments is that no human being should react callously to another being dealing with COVID-19. Just as Spencer-Oatey [16] puts it, "people often regard themselves as having certain attributes or characteristics, such as personality traits, physical features, beliefs, language affiliations and so on. They usually perceive some of their attributes positively (e.g., clever, musical), some of them negatively (e.g., overweight, inartistic) and others neutrally." James's attitude shows his face-sensitivity, as his perception of fellow users' comments here draws a picture of someone who positively sees his own attributes while downgrading fellow users. However, while implicitly self-valuing himself, calling fellow users callous may index deliberate intention to face damage.

What underscores the metapragmatic comments is the implicit expectation of what the preferred reaction in the moment of sickness should be. In [7] below and as has been the case in previous excerpts, it is Teresa's belief, and understanding that no one should be laughing while another being is battling COVID-19. Consider the following example, which occurs at turn 812:

[7]

Teresa: Laughing about someone being sick. I feel sorry for you …

Although Teresa is against laughing while another being is suffering from COVID, she makes a pointing criticism of those supposedly laughing. In the process, Teresa makes use of dissociative elements ("*I feel sorry for you…*") to claim an identity that is different from that of fellow users. From this dissociation, Teresa concludes the comment in a way that simultaneously gives a positive image of self and denigrates or belittles fellow users who have found it humorous in Giuliani's misfortunate. The punctuation suspension that ends this comment seems to suggest that Teresa might have said less than what she intended to.

4.1.2 Target's perspective

Metapragmatic comments that take the target's perspective come to Giuliani's defense. Rather than simply counterattacking the instigators, these comments are framed in a way that shows compassion to Giuliani. Consider the following comment:

[8]

Charissa: Prayers Rudy. We should be praying for every person who is affected by this virus regardless of political affiliation. What is wrong with this world? Why so much hate for someone you probably do not even know!

Charissa intervenes at turn 28. She starts off by sending prayers to Rudy Giuliani. The marker of sympathy and compassion shows that what concerns Charissa is first and foremost Giuliani's wellbeing. Charissa proceeds by suggesting what everyone's attitude should be in regard to the devastation of COVID-19. She uses the first personal pronoun ("we") as a marker of the difference between how human beings (as opposed to animals) should act in the presence of a sick person. What "we" indexes here is that Charissa considers herself as a member of a society that she expects to be compassionate and understanding in life-and-death situations. It seems to be Charissa's observation that the world has gone the wrong way in disregarding one another. She rhetorically questions the attitude of the world (*"What is wrong with this world")*, and she recognizes the hateful message conveyed through fellow users' comments *("why so much hate for someone you probably don't even know!"*). It is Charissa's belief that Giuliani has been unfairly treated for seemingly political reasons. By doing this, Charissa draws attention to the behavior that can be considered inhuman. It is also in this sense that Spencer-Oetay's [16] claim that "people have a fundamental desire for others to evaluate them positively, and so they typically want others to acknowledge (explicitly or implicitly) their positive qualities, and not to acknowledge their negative qualities" can be paraphrased as people (Facebook users who metapragmatically post comments) have a fundamental desire for others to evaluate anyone affected by COVID-19 positively, and so they typically want to acknowledge (explicitly or implicitly) their positive qualities, and not to acknowledge their negative qualities. Consider the following example, which appears at turn 191:

[9]

*Susan***:** *Sending prayers for his health and speedy recovery. No compassionate human should wish this on anyone, no matter if you are a Democrat or a Republican.*

As for Charissa, Susan portrays herself as a compassionate person who wishes fellow users should exhibit the same qualities. However, if one assumes, as Spencer-Oetay's [16] argues, that people regard themselves as having a range of sociality rights and obligations in relation to other people," any communicative acts or interventions (i.e., laughs, well wishes, ill wishes, curses, etc.) within this comment thread are as participatory and valid as Susan's comment. All these comments become the representation of the perception of each individual participating in the interaction. In this regard, Susan's negative evaluation of fellow users here may index an infringing attitude that aims at the face-threatening social rights of fellow users while implicitly attempting to impose upon others her expectation and perception of the circumstances.

Both Charissa and Susan take the perspective of the target (i.e., Giuliani) to formulate their metapragmatic comments. In so doing, they claim an identity that defines them in relation to fellow users who find joy in Giuliani's misfortune. What is a moral order for both Charissa and Susan seems to be the idea that compassion and sympathy are social regularities that every individual should show to someone in distress, regardless of their political affiliation. This is consistent with Upadhyay's [45] study on online news comments in which Upadhyay suggests that commenters on political editorials position themselves as members of in/out groups delineated by political ideology and use overt face aggravation to argue against out-group ideologies and discredit political opponents. Because of the highly political implication of the interaction, other-blaming is a frequent strategy in metapragmatic comments.

5. Conclusion

This paper set out to (1) explore the basis on which metapragmatic comments are produced in Covid-related interactions on Facebook and (2) determine the perspectives (i.e., instigator or target) from which Facebook users express metapragmatic comments. One research question drives the purpose of this paper—i.e., what drives metapragmatic comments in this interaction? The answer to this question is provided as follows.

First, the findings show that more metapragmatic comments are framed from the perspective of the instigators based on the difference between right/acceptable and wrong/unacceptable. At the heart of each metapragmatic comment lies the moral order; that is, the expectation that determined forms of conduct (i.e., compassion toward and understanding of someone in distress) are proportionate with what the participants think is obligatory and permissible in the context of a life-threatening issue. The basis of this expectation is the preconception of what is appropriate and what is inappropriate under the circumstances. In this perspective, the prompter of meta-pragmatic comments is the idea that laughing at someone's illness or joking someone's illness is inappropriate, offensive, forbidden, and inhuman. The struggle between politeness and impoliteness thus supposes that some users find Giuliani's diagnosis an issue akin to compassion. In contrast, others consider the situation a gratifying opportunity to generate laughter and happiness. This is consistent with the findings in previous studies [13, 21].

Second, the findings suggest that all the metapragmatic comments are expressed in reaction to negative attitudes (such as laughter and disregard), supporting the view that commentators are more sensitive and willing to metapragmatically comment on the behavior that they perceive to be impolite than the behavior perceived as polite

such as well-wishing comments [18]. The 1.6% of comments that make up metapragmatic comments all fall within this attitude. In other words, none of the comments with this 1.6% drew attention from the comments designed to show love, express prayers, and support or welshing messages to Giuliani. The patterns are as clear as the users only react if the comments laugh or bluntly show disregard for Giuliani.

Third, the findings demonstrate the commentators' awareness of the ways of what should be the appropriate conduct in the situation despair such as dealing with COVID-19. They describe fellow users' conduct as the type of behavior that falls out of their league. How they see themselves is different from how they see others. The comments that convey a laughing attitude are, for instance, metapragmatically singled out as implicitly discourteous and impolite, pointing to the argument that what is appropriate in the interaction should be anything other than jocularity. However, criticizing others as behaving inappropriately does not prevent metapragmatic commentators from initiating attacks against anyone laughing. In excerpt [3], for example, after addressing fellow users' comments, Lola opts for shaming those laughing. This type of criticism validates Haugh and Chang's [46] conclusion that "criticisms can cause hurt feelings, convey expectations that the target will do something to remedy the fault, pass (unwelcome) moral judgment on others, or display claims to have expertise or knowledge about the target that may be resisted by the latter."

Fourth, the findings also reveal commentators' awareness of the multimodal nature of Facebook interaction. Attention is closely paid to the visual, textual, and typographic elements of the interaction. For instance, the metapragmatic comment made by Doris, rather than evaluating the textual comments, aims the typographic elements, mainly emojis, posted by fellow users. This shows that the commentators are aware that any communicative elements of the interaction (linguistic and nonlinguistic) are equally salient in the production and perception of (impoliteness). Additionally, it has also become clear that Facebook users are as aware of the multiparticipant nature of the interaction (see excerpt 1) as knowledgeable of the fact that the multimodal nature of Facebook plays a substantial role in producing (im)politeness behaviors.

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Chapter 10

Language Use and Linguistic Performance in Peer Counselling within a Religious Tertiary Education Context

Jaelani Jaelani and Ziadah Ziadah

Abstract

Peer counselling practices within religious-based higher education institutions involve intricate interplays of religion, culture, and spiritual values. Drawing data from peer counselling practices within Indonesian Islamic Universities, this study delves into the roles of language use, speech acts, and lexicon selection in establishing a counselling milieu that nurtures and responds to the needs of counselees. The study underscores the significance of understanding the nuances of language and speech acts in religion-centered counselling. Languages like Arabic and regional dialects, such as Base Sasak, not only serve as communication tools but also as cultural and spiritual connectors. Counselors' speech acts, exemplified by "Accomplishing Addressee", "Expressing Empathy and Understanding", "Offering Suggestions" and "Instructions," and so forth, not only disseminate information but also honor cultural and religious tenets, shaping an effective support system. Successful religion-oriented counselling necessitates a tailored approach that respects cultural and religious contexts, ensuring language and speech acts harmonize with local value systems.

Keywords: peer counselling, language use, speech acts, lexicon, religious and cultural dimensions

1. Introduction

In the context of religious tertiary education, peer counselling plays an important role in providing emotional and social support to students. This chapter investigates the use of language and linguistic performance in the context of peer counselling in an Islamic institution di Indonesia, a multicultural country with the highest number of Muslims. The focus of the discussion includes word choices, communication strategies, the use of certain religious expressions, and the religious and cultural dimensions existing in its practices. The main objective of this chapter is to understand the role and impact of language use and linguistic performances in shaping the effectiveness of peer counselling at Universitas Islam Negeri Mataram as the selected study location [1, 2]. Besides, in the loci, peer counselling has special dynamics because it

involves a religious dimension. Therefore, it is important to understand how language use and linguistic performance can influence interactions in this context. Through direct observation, interviews, and content and discourse analysis approaches, this chapter yields valuable insights into the importance of language and effective communication in supporting peer counselling in religious-based higher education institutions.

This chapter also has particular relevance in exploring the dynamics of culture, identity, and religious values in the context of peer counselling in religion-based higher education institutions. In a religion-based higher education environment, the religious dimension plays a significant role in student life, including in peer counselling. Therefore, a deeper understanding of language use and linguistic performance in this context can provide valuable insights for peer counselling practitioners. With a better understanding of language use and linguistic performance in peer counselling, we can improve the quality of peer counselling interactions and provide better support to students. In addition, this research can also open the door for further thinking about how culture, identity, and religious values can influence the dynamics of peer counselling in religion-based higher education institutions. As such, it is hoped that this chapter will provide valuable insights into language use and linguistic performance in peer counselling at faith-based higher education institutions, as well as enrich the practice of peer counselling in this context.

In the context of peer counselling at religion-based higher education institutions, the use of language and linguistic appearance plays an important role in shaping the effectiveness of interactions between peer counselors and students who receive counselling; the use of appropriate language, sensitive choice of words, and effective communication strategies can improve the quality of peer counselling interactions [3]. In the context of religious higher education, the use of certain religious language can also strengthen religious identity and provide depth in communication between peer counselors and students. In addition, linguistic performance can also play an important role in peer counselling. Style of speech and verbal expression can affect the effectiveness of communication and the influence of peer counselors on students [4]. Therefore, an understanding of language use and linguistic performance in peer counselling in faith-based institutions is very relevant and can provide practical guidance for peer counselors.

In this chapter, we will use an observation approach, discourse transcription, and qualitative analysis to collect and analyze data. We will involve participants in peer counselors and students receiving counselling in the context of religious higher education; the data was generated from Islamic University in Indonesia. Through careful analysis, we hope to identify effective patterns of language use, word choice, speech styles, and communication strategies in peer counselling in faith-based institutions. In addition, we will also explore the relationship between language use, linguistic performance, and religious identity in the context of peer counselling. In a faith-based higher education environment, the religious dimension has a strong influence on students' lives, and the use of language and linguistic appearance can be a means of reinforcing religious values and supporting students' spiritual growth [1]. The results of this study are expected to make a significant contribution to the development of effective and rooted peer counselling practices in faith-based higher education institutions. With a better understanding of language use and linguistic performance, peer counselling practitioners can improve their skills in building mutually supportive relationships and facilitating students' personal and spiritual growth.

In addition, this research also has important implications in exploring the dynamics of culture, identity, and religious values in the context of peer counselling. In faith-based higher education institutions, these factors play a central role in shaping students' experiences and supporting them in navigating emotional, social, and spiritual challenges. By considering the religious dimension in peer counselling, practitioners can accommodate the special needs of students in their religious context. Through a holistic and integrated approach, this research is expected to provide valuable insights for peer counselling practitioners, higher education policy decision-makers, and faith-based higher education institutions in developing more effective counselling programs. This research can also provide a foundation for broader future research on peer counselling in religious contexts and enrich our understanding of the role of language, communication, and identity in the formation of effective counselling relationships.

2. Introduction to peer counselling in Islamic-based universities

Peer counselling is a form of counselling performed by individuals with the same background and status, such as classmates or fellow college students. This approach emphasizes the support, assistance, and understanding provided by peer individuals in helping others overcome their personal and academic problems by relying on a self-approach to the Divine or God Almighty by carrying out His commands and avoiding His prohibitions known as the expression الأمر بالمعروف والنهي عن المنكر which means Committee of the Promotion of Virtue and Prevention of Vice. In religion-based tertiary institutions, peer counselling is a very relevant method since it combines religious principles and spiritual values to help others. This approach seeks to understand and provide support by referring to religious values that teach compassion, empathy, forgiveness, and brotherhood. Peer counselors were selected based on a deep understanding of religious values and the ability to provide emotional and social support; they must also maintain confidentiality and ethics in counselling, and respect the counselees' privacy [5].

Religious tertiary institutions, especially in Indonesia, offer a unique educational environment, where cultural, spiritual, moral, and religious aspects play a central role in student life [6]. Peer counselling in religious colleges is becoming increasingly important because of the complexity of the challenges students face in combining academic education with spiritual growth. Therefore, the topic of exploring the reasons for and significance of language use and linguistic performance in the context of peer counselling at religious colleges is relevant and needs further investigation. One of the main reasons for investigating language use and linguistic performance in peer counselling at religious colleges is the importance of holistic counselling support. Peer counselling, which is carried out by fellow students with the same religious background, can provide appropriate support spiritually and morally. Therefore, investigations into language use and linguistic performance in this context can help to understand the specific ways in which peer counselors can address complex religious and spiritual issues.

It is also important to consider the influence of culture and religious norms in peer counselling at religious colleges [7]. Each religious college has distinctive religious traditions and practices, and this can influence the way peer counselling is carried out and accepted by students. This investigation can help identify appropriate language skills and linguistic performance to create a culturally and religiously sensitive

counselling environment. The context of peer counselling at religious colleges also highlights the importance of the spiritual dimension in language use and linguistic performance. Talking about religious and spiritual issues requires empathetic communication skills so that the messages of peer counselors can be well received by students. Investigation of effective language use, and good linguistic performance in this context can increase the depth and quality of the counselling session. The significance of investigations into language use and linguistic performance in peer counselling at religious colleges goes beyond the individual benefits. By understanding effective ways of communicating, peer counselors can build trust and better relationships with students, so that they feel supported in their spiritual journey. This can have a positive impact on the overall spiritual and emotional well-being of students, as well as create an enabling climate for the growth of congregations in religious colleges.

3. Linguistic performances in Islamic peer counselling

The practice of peer counselling at Islamic-based universities involves five main stages in their linguistic performance, namely Introduction, Opening, Core, Re-orientation, and Closing. In the Introduction stage, several speech acts generally occur; the first is Opening Greetings, where peer counselors use the greeting مُ اَلّسلاَ عَلَيْكُمْ (peace be upon you) from Arabic as an opening greeting before starting the counselling session. Then, Self-Disclosure occurs, where the counselor and counselee introduce themselves to create an intimate atmosphere and reduce awkwardness. In addition, Accomplishing Addressee also occurs in this stage, where the counselor and the counselee agree on the names or titles they use to address each other during the counselling session. During the Introduction stage, some counselors also ask where the counselee is from, and if they identify themselves as coming from the same area or regional family, they will switch their language to their regional language. This aims to create a bond and closeness between the counselor and the counselee by using language that is familiar to the counselee. However, afterward, the counselor and counselee returned to using Indonesian to ensure effective communication (will be explained in the next sub-section). The speech acts occurred align with the commissive and assertive classes of acts in Speech Act Theory, where the speaker commits to some future action or states facts or beliefs [8]. The act of switching to regional languages to create a bond and closeness between the counselor and the counselee can be seen as a strategic use of language to foster rapport and trust, which is crucial for effective counselling [9, 10].

Next, there is Ensuring Confidentiality, in which the counselor explains the importance of maintaining the confidentiality of the counselling session. This aims to ensure that counselees feel safe and trust to speak openly about their problems. It means that the Introduction stage serves to introduce counselors and counselees, create a comfortable atmosphere, and explain important aspects of the counselling session, including the role of the counselor, and the principles of openness and confidentiality. At this stage, the peer counselor uses a variety of speech acts to achieve this goal, and the language used may vary depending on the region of origin and the counselee's preferences. Thus, the Introduction stage plays an important role in building relationships and ensuring the successful practice of peer counselling in an Islamic-based university environment.

At the opening stage of peer counselling, there is one speech that acts as the main focus, namely Seeking Pre-Session Information, yet this stage contains some very

important information for peer counselors to understand. The information sought at this stage relates to the current condition of the counselee. The questions that become the leading discussion at this stage focus on several aspects, including the current physical and mental conditions, the counselee's preferred mode of transportation, and the counselee's previous experiences related to peer counselling practices. The importance of pre-session information seeking is based on the desire of peer counselors to understand more deeply about the counselee's condition and background before starting a counselling session. By obtaining relevant information about the physical and mental condition of the counselee, the counselor can identify changes in emotions or feelings that the counselee may be experiencing.

In addition, questions regarding the mode of transportation chosen by the counselee also help the counselor understand the logistical constraints that the counselee may face in attending counselling so that they can have a deeper understanding of the counselee to provide more appropriate solutions or support. Also, information regarding the counselee's previous experience with peer counselling practices is an important consideration in the pre-session information-seeking stage. This prior experience includes whether the counselee has previously attended counselling or been involved in a peer-to-peer guidance program. By knowing the counselee's previous experience, the counselor can develop an approach that is appropriate to the level of experience and needs of the counselee, so that counselling sessions can run more effectively and usefully. This pre-session information-seeking stage is a very relevant initial foundation in building peer counselor relationships with counselees and helps set direction and focus in counselling sessions. The information obtained at this stage provides a more comprehensive picture of the counselee's condition and needs so that the counselor can provide support that is more directed and under the counselee's needs.

In the 3rd stage, namely the core stage, the practice of peer counselling focuses more on the counselor's request to the counselee to tell the problem. This stage is the core of the counselling session, where the peer counselor gives full attention and listens with empathy to understand the problems faced by the counselee. During the core stage, several speech acts occur, including "Expressing Empathy and Understanding", "Offering Advice", and "Instruction". The speech act "Expressing Empathy and Understanding" is carried out by peer counselors to show empathy and understanding of the counselee's feelings, problems, and experiences. In this stage, peer counselors try to validate the counselee's feelings and try to re-imagine what the counselee feels to show that they are truly understood. This aims to create a sense of trust and comfort for counselees so that they feel more open to talking about the problems they are facing. The act of "Expressing Empathy and Understanding" can be viewed as an expressive speech act, where the counselor expresses feelings and attitudes, whereas the acts of "Offering Advice" and "Instruction" are directive speech acts, where the counselor suggests possible courses of action or provides guidance to the counselee [8, 9].

Furthermore, the speech act "Offering Advice" is carried out by peer counselors when it is deemed necessary to provide advice or suggestions to counselees regarding the problems encountered. However, it is important to note that in peer counselling practice, giving advice is not always the main focus, as more emphasis is placed on listening and providing emotional support. Advice is given carefully and based on a deep understanding of the counselee's problems. In addition, there is also a speech act "Instruction", in which peer counselors provide instructions or guidance to counselees regarding concrete steps that can be taken to overcome their problems.

Instructions can be in the form of how to deal with certain situations, techniques for managing emotions, or steps toward positive change. This instruction is delivered to help the counselee reach a better solution. The core stage is the most essential part of peer counselling practice, where the counselee feels heard and supported and can open up to share the problems he is facing. Through a combination of speech acts "Expressing Empathy and Understanding", "Offering Advice", and "Instruction", peer counselors try to provide meaningful and useful support for counselees to face their life challenges.

The 4th stage, namely the re-orientation stage, begins with the counselor's efforts to ensure understanding regarding the suggestions and instructions that have been given to the counselee (Confirming Understanding). At this stage, the peer counselor will ask the counselee to ensure that the counselee comprehensively understands the advice and instructions given. Peer counselors will also ask questions regarding how the counselee responds and feels about these suggestions and instructions. If a positive mutual agreement (mutual agreement) is reached between the counselee and the counselor regarding the clarity and helpfulness of the suggestions and instructions provided, the conversation will proceed directly to the 5th stage, which is the closing stage. In the closing stage, the peer counselor will end the counselling session by conveying a positive impression, hope, and support to the counselee. However, If a negative mutual agreement (mutual disagreement) arises between the counselee and the counselor regarding the suggestions and instructions given, then the seeking post-information stage will occur. At this stage, the counselling session will return to a stage similar to stage 3, with additional leading questions related to the changes desired by the counselee. Peer counselors will try to go deeper to understand what the counselee expects and look for ways that are more appropriate to help the counselee deal with his problems. The Re-orientation stage involving the speech act of Confirming Understanding can be seen as a commissive speech act in Searle's Taxonomy of Speech Acts [11], where the counselor commits to ensuring clarity and understanding; the phenomenon of catharsis, where the counselee experiences a release of pent-up emotions through expressing their pain, also aligns with the expressive function of language in Speech Act Theory [8].

The re-orientation stage is important in the practice of peer counselling, where the peer counselor seeks to ensure that the advice and instructions that have been given have been well understood by the counselee. If there is an agreement, this stage will be the entrance to the closing stage, where the counselling session will end with hope and support. However, if there is disagreement, the seeking post-information stage will provide an opportunity for peer counselors to more deeply understand the counselee's needs and expectations to achieve counselling goals. An interesting point regarding the core and reorientation stages is the negative correlation between the level of familiarity or comfort of the counselee with the counselor with the turn-taking; the emotionally closer the interlocutors, the less turn-taking occurs, and this phenomenon is called catharsis. Catharsis refers to the moment in which a person can let go of past pain by expressing clearly and thoroughly all the pain that is felt [12]. In a religious context, catharsis can be interpreted as a transcendent experience that liberates or cleanses the soul [13]. With this cathartic phenomenon, the core and reorientation stage in peer counselling at the Islamic University in Indonesia becomes more meaningful, since it creates opportunities for counselees to open their hearts and express their feelings more freely and deeply.

The final stage, namely the closing stage, usually consists of three stages of speech acts that aim to give a positive final impression to the counselee. First, the counselor

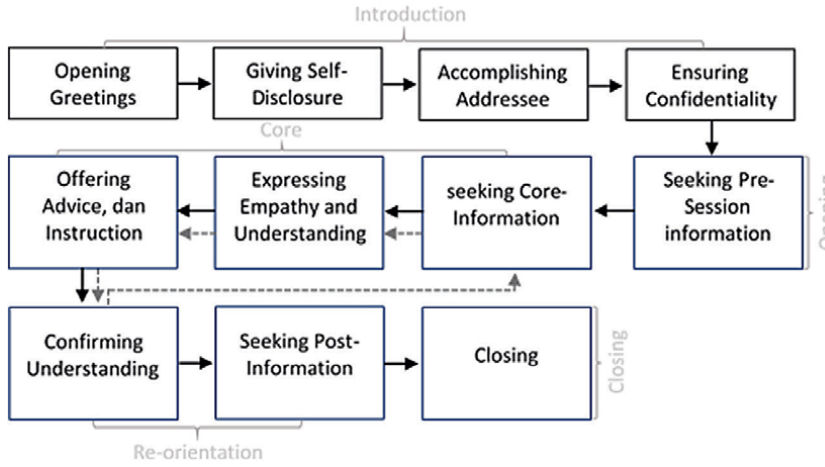

Figure 1.
A flowchart of the practice of peer counselling at Islamic universities in Indonesia.

will remind again that the problems the counselee is facing are a test from God (Reminder). This is done to provide spiritual support and remind the counselee about the deep meaning of the trials he is facing, as well as strengthen ties with the religious values he believes in. Then, in the next stage, the counselor will close the counselling by expressing the hope that the counselee will get better in the future and hope to meet again with the counselee in better condition (Hope). This delivery of hope aims to provide encouragement and enthusiasm for the counselee to continue trying to overcome his problems and look at the future with optimism. The final stage in closing is closing the conversation (Closing Greeting). The closing of this conversation is usually done by using greetings in Arabic, as was done at the opening stage. One example of a greeting used is اَلسَّلَامُ عَلَيْكُمْ. The use of greetings in Arabic gives a polite final impression and strengthens the bond of brotherhood between peer counselors and counselees. This closing stage is an important moment in the practice of peer counselling, where the peer counselor provides the last support and encouragement to the counselee before the counselling session ends. In addition, this stage also reflects the application of religious and spiritual values in peer counselling in a religion-based tertiary institution, where religious values become an integral part of the counselling process. Besides, the Closing stage including the speech acts of Reminder, Hope, and Closing Greeting, serves to provide spiritual support, encouragement, and a polite farewell and can be categorized as expressive, commissive, and declarative in Searle's Taxonomy of Speech Acts respectively [11].

The following is a flowchart (**Figure 1**) of the practice of peer counselling at Islamic Universities in Indonesia.

4. Lexical and language use in Islamic peer counselling

In the practice of peer counselling at Islamic Universities in Indonesia, word choice or lexical use has an important role in creating a counselling environment that is under religious and cultural values in the university environment. The use of certain words may reflect a more sensitive and relevant approach to the cultural, spiritual, moral, and religious aspects that are important to counselees. Based on its function,

there are lexical groupings that cover several categories, namely Lexicon with Islamic Values, Cultural Values, Social Ethical Values, Practical Values, and Learning Values. Lexicons with Islamic values refer to groups of words, phrases, or sentences related to Islamic religious teachings and values. In counselling practice, this lexicon functions as a tool to understand and apply Islamic values in the context of problem-solving. Phrases or words in this group are often taken from Arabic and are generally found in the Al-Qur'an or the Hadith of the Prophet. Some of them have also become part of daily expressions among Indonesian people, regardless of their cultural background.

Some Lexicon with Islamic Religious Values used in peer counselling practice are مُكُيْلَعُ مَالَّسلاُ which is an opening greeting in Islam, مِسْبِ اللهِ الرحمنِ الرحيمِ (In the name of Allah, The Most Gracious and The Most Merciful) which is an opening sentence before starting any form of acts in Islam, *Taqwa* (devotion to Allah), *Tawakkal* (surrender to Allah), *Muhasabah* (self-examination), اَسْتَغْفِرُ اللهَ (forgiveness of sins), الحَمْدُ لِلهِ (praise be to God), إِنَّا لِلهِ وَإِنَّا إِلَيْهِ رَاجِعُونَ (To Allah we belong and to Him, we will return), *Akhirat* (life after death), and *Hikmah* (wisdom in thinking and acting). The use of a Lexicon with Islamic religious values in peer counselling practice aims to introduce spiritual and moral dimensions in the counselling process. By understanding and applying Islamic religious values, counselors can provide support under Islamic teachings and present a positive perspective in dealing with the problems faced by counselees.

Lexicons with cultural values are a group of words that include terms, phrases, or sentences related to cultural values and norms that are lived and held by individuals or groups of people within a certain cultural scope. The function of this lexicon is to understand and appreciate cultural aspects in counselling so that counselors can be aware of the cultural differences and uniqueness of each counselee. For example, in the practice of peer counselling, a Lexicon with Cultural Values can be seen in the use of native language by counselors and counselees when recognizing speakers who come from the same area, regional group, or community group. The use of addressees that are characteristic of a certain area in Indonesia, such as "*Ton*" (an abbreviation of *Semeton* which means sibling in the Sasak language), "*Mbaq*" (as a call for a woman's address), and the use of regional terms such as "*Sarong*" (a term that is more typically used in certain areas for a wide piece of cloth sewn at both ends so that it is shaped like a pipe/tube).

The lexicon with cultural values in peer counselling practices aims to understand the counselee's cultural background, respect the cultural values they maintain, and build good relationships based on respect for diverse cultures. The use of cultural lexicons also reflects wisdom in creating a more friendly atmosphere in the counselling process. In the context of counselling, this lexicon helps counselors respond to counselees' problems and challenges by considering the cultural context that is an integral part of their lives. The use of the lexicon with cultural values in counselling is significant in dealing with existing cultural diversity. Also, by understanding and using the appropriate cultural lexicon, counselors can create an inclusive environment and provide more effective support to clients from diverse cultural backgrounds [14]. This also encourages the growth of mutual understanding and reduces the potential for cultural conflict in the counselling process. In recognizing and applying relevant cultural values, counselors can build stronger relationships with counselees and help them better achieve their counselling goals.

Lexicons with social ethical values are a group of words or phrases related to ethical values and social norms in interactions and relationships between individuals in society. In the practice of peer counselling at the Islamic University, some of the social

ethics practiced include greetings and courtesy, empathy, respecting privacy, respecting each other, not judging, being responsible, listening wholeheartedly, providing positive support, not forcing opinions, and forgiving and forgive; it is a development of the concept of social ethics in public services in Indonesia which was compiled by Bisri and Asmoro [15]. Examples of the use of the lexicon with social ethical values in peer counselling practice are as follows: greetings and courtesy are used as greetings in communication, such as *selamat siang* (good afternoon) when greeting each other. When listening to the counselee's complaints, the counselor shows empathy by saying, "*Saya sangat memahami perasaanmu dan siap mendengarkan keluh kesahmu* (I do understand your feelings and am ready to give all attention)" When talking about personal matters, the counselor respects the counselee's privacy by saying, "*Tidak perlu takut untuk bercerita, apa pun yang kamu ceritakan akan tetap menjadi rahasia antara kita* (No need to be afraid to tell, whatever you tell will remain our secret)." Mutual respect is also upheld, as in the sentence, "*Setiap orang memiliki perasaan dan pandangan yang berbeda, kita harus saling menghormati perbedaan itu* (Everyone is entitled with their views, we should respect each other's differences)".

Furthermore, based on the norm adopted in Indonesia, it is compulsory for counselors to listen to their counselees wholeheartedly and in an unjudged manner. Also, in providing positive support, counselors offer encouragement with phrases like, "*Ada saya disini, yok kita bisa lalui ini samaan* (I am always here for you, and we'll get through this together)" When the counselee is not ready to talk about something, the counselor should not push their point by saying, and the counselor also shows their ability to apologize for any possible counselees' uncomfortable or mistreatment experiences. The use of a lexicon with social ethical values is important in peer counselling practice to create a safe, respectful, and supportive environment in understanding one's feelings and personal experiences. By using this lexicon, counselors can more effectively help counselees deal with problems ethically respond to their needs, and respect existing social values. That way, the relationship between counselor and counselee can run harmoniously and bear positive results in the counselling process.

Lexicons with practical value are words or phrases related to practical values or usefulness in various situations, including in the practice of peer counselling at the Islamic University in Indonesia. These words or phrases are used to facilitate communication between counselors and counselees, and usually, the interlocutors have the same or similar understanding regarding the meaning of the words or phrases used. Examples of lexicons with practical value in counselling conversations are *solusi* (solution), *teknik relaksasi* (relaxation technique), *hetset* (headset), *rileks* (relax), *daring* (online), *target* (target), *fokus* (focus), *efisien* (efficient), *prioritas* (priority), and *emosi* (emotion/anger). These words are often used in the context of counselling to convey ideas, strategies, or plans of action that can help counselees overcome problems or challenges they face. The use of a lexicon with practical value is very important in peer counselling practice. By using the words - words or phrases that are practical and familiar to counselors and counselees, the communication process becomes more effective and efficient. Counselors can provide suggestions, techniques, or strategies that are useful and easy for counselees to understand, so it is hoped that counselees can more easily implement these solutions in everyday life Thus, a lexicon with practical value plays a role in helping the counselee achieve the goal of positive change and development in the counselling process.

Lexicons with learning value are words or phrases related to the process of learning, increasing knowledge, and self-development. In the context of peer counselling practice at Islamic Universities in Indonesia, a lexicon with learning values will

focus on how counselors help counselees understand, reflect on, and learn from experiences and problems encountered. Examples of lexicons with learning values from counselling conversations include self-awareness, reflection, learning from experience, increasing problem-solving skills, self-adjustment, improving coping skills, understanding emotions, developing resilience, increasing independence, and self-acceptance. The use of the lexicon with this learning value helps the counselor to guide the counselee in contemplating and understanding experiences and learning from the problems encountered. By focusing on learning and self-development, the counselee is expected to be able to face the future stronger and wiser. In peer counselling, this lexicon plays an important role in facilitating the counselee's growth and self-understanding and helping them achieve positive changes in their lives.

Concerning languages, in the practice of peer counselling at religious colleges, three languages exist, namely Bahasa Indonesia, Base Sasak (Regional Language), and Arabic. Indonesian is the language of instruction most commonly used in counselling interactions, given its role as a lingua franca in Indonesia. In addition, regional languages are also often heard in the early stages of counselling, especially Sasak, where their use serves as a sign of intimacy between counselor and client [14]. The use of this regional language is especially relevant when the counselor and client come from the same community group so that it can strengthen mutual understanding and become the basis for building better relationships [16]. It does not just stop there, Arabic also has a significant role in peer counselling at religious colleges. The use of Arabic in counselling sessions aims to strengthen the impact and impression of the counselling process itself. In a religious context, the use of Arabic is believed to bring stronger and deeper spiritual values, by emphasizing that every problem faced by humans is a consequence of a violation of religious orders and moral teachings [17].

The use of these three different languages has a distinctive role and function in facilitating counselling interactions between counselor and client. First, Indonesian serves as the main language of instruction in counselling sessions. The use of Bahasa Indonesia allows counselors and clients to communicate easily and understand each other, regardless of their cultural and ethnic backgrounds. Indonesian has a central role in creating an inclusive space and providing an equal platform for counselors and clients to talk about their various problems and personal experiences [18]. In the context of peer counselling, the use of Indonesian also allows counselling messages to be more easily understood and accepted by counselees because this language is the official language that is commonly understood by many people in Indonesia. Second, Base Sasak, which is the regional language, plays an important role in the early stages of counselling, especially when the counselor and client come from the same community group or have a similar cultural background. The use of Sasak language in counselling interactions indicates closeness and familiarity between counselor and client, which can create a climate of mutual trust and help build closer relationships. Local languages can also be a tool for strengthening cultural identity and shared experiences, thereby enabling the counselor to better understand the background and context of the client's life.

Last, Arabic has a special role in peer counselling at religious colleges, especially because of its Islamic-based environment. The use of Arabic in counselling sessions provides a deeply spiritual and religious dimension. In this context, Arabic is used to reinforce counselling messages related to religious teachings and moral values. The use of Arabic confirms the view that all the problems and challenges faced by clients originate from violations of religious teachings, and peer counselling aims to guide them toward understanding and improvement in the context of spirituality

and religion. Thus, the use of Bahasa Indonesia, Base Sasak, and Arabic in peer counselling at religious colleges reflects an effort to create effective and relevant interactions with clients' cultural and religious contexts. The roles and functions of each of these languages help create safe and inclusive spaces, strengthen interpersonal relationships, and provide a deep spiritual and moral dimension in the counselling process [19].

5. Religious and cultural dimensions in peer counselling

Based on previous findings, religious and cultural dimensions play a crucial role in peer counselling practices at Islamic Universities in Indonesia. In previous counselling conversations, it is clear that the use of Arabic as the Language of Religion and Regional Language (Sasak Language) as the Native Language had a significant effect on the interaction and relationship between the counselor and the counselee. Arabic brings a deep spiritual dimension to counselling. Lexicons with Islamic religious values in Arabic embed Islamic religious teachings and values into the conversation, connect each counselee's problems with religious teachings and morality, and assume that the problems encountered are related to actions that are not following Islamic teachings. The use of Arabic is a means of conveying counselling messages related to religious values so that counselors can provide an Islamic perspective in dealing with counselee problems and challenges.

It is significant to note that Indonesia's status as a country with the largest Muslim population in the world influences the religious dimension in the practice of peer counselling at Islamic Universities in Indonesia. Even though Arabic is not a language that is widely spoken in Indonesia, almost all Indonesians, regardless of their background, are very familiar with expressions originating from the Qur'an and Hadith, and are often used by preachers and religious leaders in daily life. This causes many speakers to associate these expressions with belonging to the Islamic Religion. Therefore, the term "Religious Language" is more appropriate to be used as a substitute for "Arabic" in the context of counselling conversations, to emphasize that the use of these expressions is voluntary and has Islamic meaning.

Furthermore, the use of regional languages, especially Sasak, as native languages, has an important role in creating a cultural dimension in the practice of peer counselling at Islamic Universities in Indonesia. In counselling conversations, the use of lexicons with social ethical values that use regional languages helps build a climate of mutual trust and intimacy between counselors and clients, especially when they come from the same community group or have similar cultural backgrounds. Local language also functions as a tool to strengthen cultural identity and find common experiences, so that counselors can better understand the background and context of the client's life. This creates an inclusive space and facilitates deeper interactions, where clients feel valued and understood within their cultural context. By integrating local languages into counselling conversations, counselors can convey messages of social ethics and cultural values more effectively, thereby enabling counselees to respond and implement solutions that are relevant to their cultural and life contexts.

The religious and cultural dimensions in peer counselling practices at Islamic Universities in Indonesia have the goal of creating an inclusive, respectful, and supportive counselling environment. By using Arabic and regional languages, the counselor can strengthen the cultural identity and spiritual values of the counselee, as well as better understand the social-ethical values that apply in religious and cultural

contexts. This creates a strong emotional and spiritual bond between the counselor and the counselee so that counselling becomes more effective in providing assistance and support according to the needs of the client. The use of these languages also reflects the importance of creating effective interactions with clients' cultural and religious contexts, so that the counselling process can take place harmoniously and produce positive results in helping clients achieve psychological and emotional well-being.

6. Islamic peer counselling, language choices, and general clinical counselling

By examining the role of religious language (Arabic as the Language of Religion) and regional language (such as Sasak as the Native Language) in peer counselling in Islamic-based universities in Indonesia, the previous explained findings introduce novel contributions to the field of counselling; these elements bring a unique perspective compared to general clinical counselling. Unlike general clinical counselling, these findings highlight the integration of religious and cultural identity in the counselling process. The use of Arabic as the Language of Religion is more than a linguistic choice; it signifies the spiritual identity of the counselee and helps in framing their problems within a religious context. This connection to spirituality allows the counselee to relate their experiences and struggles to their faith, potentially leading to more meaningful and relatable counselling experiences. In this context, the Arabic language serves as a conduit for expressing the counselee's beliefs, values, and emotions in a manner that aligns with their religious framework. By incorporating the Language of Religion into the counselling process, counselors can create a safe and supportive environment where counselees feel understood and acknowledged in the depths of their spiritual existence. Furthermore, this use of religious language can assist in the process of catharsis, as it enables counselees to articulate their pain and struggles within a familiar religious lexicon. This articulation can serve as a form of release, allowing counselees to let go of emotional burdens and find comfort in their faith.

The use of the regional language Sasak in this context is a unique cultural aspect specific to the Indonesian context. It goes beyond the usual strategies employed in clinical counselling, which often focus on the clinical aspects of communication and rapport-building. By leveraging the cultural ties inherent in the use of a regional language, the counselling process becomes deeply rooted in the local cultural context. Using Sasak serves to establish a sense of familiarity and comfort, as it creates a shared cultural background between the counselor and the counselee. This shared cultural understanding can help to bridge any potential gaps in communication and understanding, fostering a stronger connection between the counselor and the counselee. Moreover, by using a language that is familiar and holds cultural significance, counselors can show respect for the counselee's cultural background, validating their experiences and creating a space where they feel seen and heard. This validation can contribute to a feeling of safety and trust, which are crucial components of the counselling relationship.

Furthermore, the phenomenon of catharsis in this context is indeed multifaceted and extends beyond the traditional psychological concept of releasing emotional tension. It intertwines deeply with the cultural and religious dimensions of the counselling process in a religious-based higher education institution in Indonesia. The use of specific religious and regional languages acts as a catalyst for catharsis by creating a sense of familiarity, understanding, and connection. The religious language (Arabic

as the Language of Religion) ties the counselling process to the counselee's spiritual beliefs, providing a frame of reference that aligns with their religious identity. In this context, catharsis becomes an experience of spiritual cleansing, where the counselee can articulate their pain and struggles in a language that holds deep spiritual significance. Similarly, the use of the regional language (Sasak) allows the counselee to express themselves in a language that is intimately tied to their cultural background. This creates an environment of trust and comfort, allowing the counselee to open up and share their experiences more freely. The cathartic experience, in this case, becomes a liberating experience that connects the counselee with their cultural roots and shared experiences. Therefore, in this setting, catharsis is not just a psychological release but a holistic experience that encompasses emotional, spiritual, and cultural dimensions. It is a process through which the counselee can find liberation and healing by connecting deeply with their cultural and religious background through the use of specific religious and regional languages.

The findings also highlight the unique and context-specific nature of speech acts like "Offering Advice" and "Instruction" in a religious-based counselling setting. In this environment, the choice of language and communication strategies goes beyond generic advice and is intricately tailored to align with the counselee's religious beliefs and cultural values. The speech act "Offering Advice" is performed with a profound understanding of the counselee's spiritual and cultural context, ensuring that the guidance provided resonates with their religious beliefs. This might include integrating references from religious texts, using religious terminology, and framing advice in a manner that reflects the counselee's religious worldview. Similarly, the speech act "Instruction" involves providing concrete steps and guidance that are culturally and religiously appropriate. This might involve suggesting actions or behaviors that are in line with the counselee's cultural norms and religious practices. This level of customization and sensitivity in language use and communication strategies distinguishes this form of counselling from general clinical counselling, which might not incorporate such a deep level of cultural and religious consideration. It demonstrates how the peer counselors in this religious-based higher education institution are adept at incorporating the cultural and religious dimensions into their counselling practices, ensuring that their communication is both relevant and meaningful to the counselees.

7. Conclusion

In peer counselling practices in religion-based higher education institutions, an in-depth understanding of the dimensions of religion, culture, and religious values has a central role. The language used in counselling, including the selection of the lexicon and the performance of speech acts, has a significant impact on the effectiveness of the interaction between the counselor and the counselee. In the context of religion-based higher education, the religious dimension has a major influence on students' lives, and an understanding of the use of language with religious values becomes very relevant. The use of religious languages, such as Arabic, and regional languages, such as Base Sasak, are not only tools of communication but also transmitters of cultural complexity, identity, and religious values. The use of language with religious values brings a deep spiritual dimension to counselling, linking the counselee's problems with religious teachings and morality. This helps the counselor to provide views that follow the beliefs and cultural context in dealing with the counselee's problems.

Besides, understanding the speech acts that occurred also has an important role. Speech acts are applied carefully based on a deep analysis of the counselee's problems. To ensure effectiveness, the language used must be sensitive to cultural and religious values. In its practices, this understanding of language use and linguistic performance helps build an emotional and spiritual connection between counselor and counselee. Choosing the right lexicon and style of language reinforces the counselee's cultural identity and spirituality. In religious-based higher education institutions, religious and cultural dimensions are important elements in counselling, able to provide deeper support according to the counselee's needs. Through an integrated approach that considers religious and cultural dimensions, peer counselling practitioners can improve the quality of counselling interactions. Understanding language use and linguistic performance also opens up opportunities for further development of how culture, identity, and religious values influence counselling practice. Finally, this chapter provides important insights into language use and linguistic performance in counselling at faith-based higher education institutions, as well as makes a valuable contribution to the development of counselling practice in this context.

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This book promotes an understanding of psycholinguistics based on research efforts at the frontiers with state-of-the-art approaches and novel real-world applications. The book addresses issues on how experimental psycholinguistics are applied to educational science, gives an overview on using psycholinguistic methods to validate linguistic theories, facilitates the optimization of language testing, expands the understanding of key concepts in mental health, and describes the association between psycholinguistics and the interpersonal, cultural, and affective nature of human communication.

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