Dynamic approach in measuring foreign language anxiety in the case of interpreting students using the idiodynamic method

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The current research examines interpreting students' language anxiety (LA) and its negative effects on their performance. The literature review includes a brief timeline of LA research from the early studies until the present. These studies are categorized by MacIntyre (2017), within the framework of three primary approaches: the Confounded, the Specialized, and the Dynamic Approaches. The latter, a contemporary approach, employs the idiodynamic method (MacIntyre & Ducker, 2022), a pioneering technique in LA research, which is notably more sensitive and designed to yield deeper insights compared to the LA measurement techniques used in the last decades. Its methodology and several relevant research results are presented, including the author's empirical study about LA, which employs the aforementioned new method as the qualitative component of the research. The empirical study analyses interpreting students' foreign language anxiety (FLA) in a classroom context. Using both quantitative (Foreign Language Classroom Anxiety Scale) and qualitative (idiodynamic method) measurement tools, the research confirmed the need to integrate the results of a scale and a dynamic method. The results of the scale provide a general foreign language classroom anxiety level but by itself; however, on their own, they are overly general and insufficiently sensitive (Chiang, 2010). The results of the idiodynamic method show individual LA outcomes, anxiety-provoking triggers and how students manage LA at a specific task in a particular timescale.

Keywords: measuring language anxiety, interpreting students, language anxiety, language anxiety research, idiodynamic method

1. Introduction

Historically, emotions such as anxiety and enjoyment were not given significant attention in the field of second language acquisition (SLA) and were often undervalued. However, contemporary researchers recognize the importance of these emotions and acknowledge that their examination is crucial in the context of student learning (Botes et al., 2024; Derakhshan & Yin, 2024; Derakhshan et al., 2024; Dewaele & MacIntyre, 2024). English foreign language (EFL) learners, whose first language (L1) is other than English, often experience difficulties during learning English as a second (L2) or third language (L3), especially while performing an oral task (Oya et al., 2004; Said & Weda, 2018; Woodrow, 2006). These challenges may include

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limited vocabulary and lack of fluency, difficulties with grammar and syntax, pronunciation and accent, and struggles to understand spoken language, among others. Such difficulties can result in mistakes, which may be face-threatening and may lead to embarrassment (Williams et al., 2016). Such embarrassing situations can undermine a student's self-confidence, and since self-expression and identity are closely linked, this can ultimately contribute to language anxiety (Tóth, 2015; Arnáiz Castro & Pérez-Luzardo Díaz, 2016).

Interpreting is based on the knowledge of languages and the ability to perceive a certain text in a certain language and almost at the same time perform orally the translation of it in a different language without misinterpreting it. This task is extremely demanding and stressful (Arnáiz Castro & Pérez-Luzardo Díaz, 2016). Since language anxiety (LA) appears especially in the case of oral tasks, interpreting students can also experience it and anxiety during interpreting can hinder the quality of their performance (Besznyák, 2020; Yu, 2023) and it can eventually lead to failure (Ferdowsi & Razmi, 2024). Even the most prominent interpreting students can feel burdened by the cognitive and attention load placed on them (Hansen & Shlesinger, 2007).

Although numerous studies have examined foreign language anxiety (FLA) in general and within the context of language learning, relatively few investigations have focused on the effects of FLA on interpreting students (Wei et al., 2020; Yan & Liang, 2022; Al-Sowaidi & Mohammed, 2023; Yu, 2023). Further investigation is needed, employing not only quantitative scales but also qualitative individual interviews. To address this research gap, the present study examines FLA among interpreting students through a mixed-methods approach, using the Foreign Language Classroom Anxiety Scale (FLCAS) (Horwitz et al., 1986) and the idiodynamic method (MacIntyre & Ducker, 2022), which includes individual interviews.

2. Literature review

2.1. Language anxiety and LA research and approaches

Language anxiety has become a widely recognized emotion that can manifest in various forms and intensities, including communication apprehension (CA), language anxiety (LA), foreign language anxiety (FLA), and foreign language classroom anxiety (FLCA) (Dewaele, 2017). Language anxiety is a type of worry and negative emotional reaction that arises during the learning and use of a second language (L2), particularly in classroom settings where self-expression takes place (Gregersen & MacIntyre, 2014). This form of anxiety is a complex emotion that has drawn the attention of researchers, teacher trainers, and educators worldwide for over four decades. Today, it is the most extensively studied emotional aspect of SLA (Gkonou et al., 2017).

LA is a relatively common but quite unwelcome emotion for language learners. The reason why LA, especially in the classroom context is a popular linguistic topic is because it can have numerous negative effects on students' learning process. It can obstruct the acquisition of the target language, undermine academic achievement, foster a negative outlook toward the language, reduce motivation to engage in communication, generate unhelpful tension among students, and plant self-doubt in learners, potentially driving them to discontinue their studies altogether. The above-mentioned factors are a few of the reasons why LA continues to resonate with researchers in the field of linguistics (Gkonou et al., 2017).

This emotion has gained remarkable interest over the last 40 decades (Gkonou et al., 2017). Research into language anxiety has evolved significantly over the years. Nowadays, researchers view language anxiety differently, as part of linguistics, as opposed to the early stages of research and use new methods to measure this emotion. One prominent researcher in this field, MacIntyre (2017), categorized theoretical and practical studies on LA into three approaches. The first, referred to as the *Confounded Approach*, denotes studies where researchers borrowed ideas about anxiety and its impact on language learning from various theoretical backgrounds without thoroughly examining what anxiety means for language learners. The next, called the *Specialized Approach* focused specifically on identifying, defining, and studying language-related anxiety experiences. A third, relatively new research direction is the *contextualized Dynamic Approach*, which examines anxiety in connection with the complex network of linguistic experiences (MacIntyre, 2017; Piniel, 2024).

2.1.1. Confounded Approach in the research of LA

The vagueness and complexity of anxiety as a psychological process were emphasized in Scovel's 1978 review of LA literature. He showed that studies of its connection with learning a second language have yielded conflicting findings, leaving open the possibility that it may be premature to determine if there is a direct connection between anxiety and the overall process of language acquisition. Researchers at that time used physiological measures to asses LA that had little to do with second language acquisition (MacIntyre, 2017; Horwitz, 2010). Since these tests were created to assess all types of anxiety, for example bug anxiety, which were not related to language learning performance (Horwitz, 2017), these evaluations (psychologically in terms of degree of arousal, behaviorally in terms of people's activities when they are anxious, or through self-report on standardized questionnaires) were not actually about language learning at all (Gkonou et al., 2017).

Another issue was the misinterpretation of Alpert and Haber's (1960) distinction of facilitative (positive, energizing) and debilitative (negative, inhibiting) anxiety. Alpert and Haber (1960) elaborated the facilitating/debilitating model that has had methodological and conceptual implications for SLA and point out that these are distinct dimensions and not poles of an extreme. When reviewing literature Scovel (1978) collected concepts that were previously assumed to be linked to language learning and he found mixed and confusing study results. These confusing results were mostly generated by Chastain (1975) and Kleinmann (1977). Chastain (1975) found inconsistent test anxiety correlations across languages due to inaccurate measures of anxiety which were not consistently connected to language and he did not make a distinction between the facilitative and debilitative anxiety. Although Kleinmann (1977) used various scales and replicated Alpert and Haber's methodology, his results were frequently combined with Chastain's in subsequent studies, further confusing interpretations. In general, these conceptual and methodological flaws underscore the risks of oversimplifying complex constructs, such as anxiety, in SLA research.

Gardner's socio-educational model of second language acquisition established a move towards accepting anxiety as an issue of a language-learning-specific nature. Gardner believed that anxiety stifles motivation for language learning. Thus, he included anxiety and language-specific issues in his more general Attitude Motivation Test Battery (AMTB) even though the model itself was not primarily concerned with anxiety. MacIntyre and Gardner (1991) analyzed

twenty-three LA and other types of anxiety measures. Their results corroborate the contention of Horwitz et al. (1986) that LA is safely separable from other types of anxiety. They also concluded that LA has a negative impact on understanding since it interferes with production, short-term memory loss, and overall second language ability. According to MacIntyre (2017) and Piniel (2024), Gardner's and Horwitz et al.'s work facilitated the shift from imprecise, incoherent constructs of anxiety to specialized, language-based models.

2.1.2. Specialized Approach in LA

Horwitz et al. (1986) revolutionized the understanding of anxiety in SLA and gave rise to the Specialized Approach by addressing discrepancies in previous research and emphasizing the need for a language-specific conceptualization of anxiety. Inspired by Gardner's socio-educational model, they identified foreign language classroom anxiety (FLCA) as a distinct psychological construct affected by common stressors in language learning settings, such as speaking in front of the class, taking tests frequently, and fearing lower grades from teachers or peers. They argued that, rather than being a combination of test anxiety, communication anxiety, or a general fear of being judged, FLCA is a unique factor intimately linked to the language learning process. Horwitz et al. created the 33-item Foreign Language Classroom Anxiety Scale (FLCAS) to implement this idea, which has since served as a key instrument for studies in this field. Across studies, including those involving learners of diverse languages, such as Spanish and Japanese, the FLCAS continuously showed high reliability and validity. The actual test was translated from English into several other languages, such as Hungarian (HFLCAS) (Tóth, 2009), and it was utilized in a variety of settings, such as assessing the language anxiety of interpreting students (ICFLA) (Yan & Liang, 2022). Separating language-specific anxiety from more general personality traits (such as trait anxiety) and transient emotional states (such as situational anxiety), has demonstrated significant associations between FLCA and metrics such as test anxiety, course grades, and expected grades (Horwitz et al., 1986).

In addition, Horwitz et al. (1986) also proposed the concept of situation-specific anxiety, where students are consistently exposed to situations that trigger anxiety, such as presenting before an audience or providing their answers in a language class. Students' anxiety intensifies over time as they start relating those particular situations to negative affect. This has a profound effect on SLA research, as it brings to light the manner in which learners' attitudes towards language lessons can be shaped by repeated negative experiences, which ultimately end up stunting their growth. The FLCAS and underlying models have provided researchers with a firm basis for comprehending and overcoming psychological barriers to language learning, which guides many subsequent studies and encourages teachers to consider taking their students' emotional paths into account. General anxiety is also differentiated from language-specific anxiety, which is a strong predictor of language learning and performance, as indicated by initial research by Horwitz et al. (1986) and MacIntyre and Gardner (1989). Language anxiety refers to linguistic activities, because the factor analyses show that it forms a distinct dimension from general or social-evaluative anxieties (Horwitz et al., 1986; MacIntyre & Gardner, 1989).

Later research examined the particular effects of LA on the input, processing, and output phases of cognitive processing. Anxious learners, for instance, are hindered in time-constrained output tasks or take longer to process information (Bailey et al., 2000; Onwuegbuzie et al.,

1999; MacIntyre & Gardner, 1994). Scales to measure anxiety in each phase were created as a result, recording the subtle manner in which anxiety hinders communication and language learning (MacIntyre, 2017).

Skills-based language concerns, such as reading, speaking, and writing, were also identified and measured. To address these particular concerns, researchers, including Saito et al. (1999) and Cheng et al. (1999), created specialty scales, brushing aside the existing opinion that the above skills of reading were least likely to be anxious-provoking. The construct of language anxiety has also been extended further by research indicating that various language skills can activate various forms of anxiety. New scripts and cultural allusions have been linked to reading anxiety, whereas problems such as the fast-and-fiction nature of native speech can cause listening anxiety. Listening anxiety is further aggravated by learners' perceptions, such as the need to comprehend every word. They are driven by so much pressure because they believe that how well they listen to spoken language reflects how well they communicate (Scarcella & Oxford, 1992). Elkhafaifi (2005) discovered that anxiety impedes listening comprehension, and Sellers (2000) reported that anxious readers have more distracting thoughts, which interfere with comprehension (Elkhafaifi, 2005; Sellers, 2000). Furthermore, Gregersen and Horwitz (2002) illustrated how variation in language capability, such as excellent reading but anxious speaking, can enhance anxiety.

In the specialized approach era, after LA and SLA were related, much experimental research was carried out to determine the relationship between various factors and LA. Besides the ones listed above, perfectionism and hesitation (Gregersen & Horwitz, 2002; MacIntyre & Doucette, 2010), emotional intelligence (Dewaele, 2013), and performance (Steinberg & Horwitz, 1986; MacIntyre & Gardner, 1994) were also linked to anxiety. To conclude this approach, researchers established that all levels of cognitive processing are equally important during the learning process and that LA can be positively correlated with some language abilities, though this also depends on whether the language being studied is an L2 or L3. Overall, performance is at risk of being undermined by LA. The anxiety-performance and anxiety-emotions correlations and the pathways through which students become anxious while performing in L2 are yet to be explored.

Researchers were concerned with the emotional and individual variations of FLL students due to the dynamic and complex nature of anxiety and due to this a new approach had to be introduced (Lowie & Verspoor, 2019; Talebzadeh et al., 2020; Elahi Shirvan & Talebzadeh, 2020; Yu, 2022).

2.1.3. Dynamic Approach in the research of LA

The third research direction examines language anxiety from a contextualized, *Dynamic Perspective*. Gregersen (2020) argues that there are several reasons why LA has a dynamic nature. First, LA fluctuates from moment-to-moment, therefore it can be measured at different timescales. This leads to the fact that LA is not a matter of either/or, but rather a combination of trait, state and situation-type anxiety that might occur in a classroom context (Gkonou et al., 2017). Second, there are different variables such as emotional intelligence (EI), perfectionism and enjoyment, which are interconnected with LA and in constant motion; therefore they mutually affect each other. Third, some contradictory conditions coexist. This means that even

students with high enjoyment of a language are not free from LA (Dewaele & MacIntyre, 2014; Marton, 2024).

The dynamic approach to language anxiety uncovers the implicit, dynamic intricacy of learners' experiences and their interactive mixture of cognitive, affective, and contextual forces. In one of the early dynamic perspective studies, Gregersen et al. (2014) used pre-service teachers' appearances in their L2 (Spanish) and had heart rate monitors to observe their performances. With the application of the idiodynamic method (MacIntyre & Ducker, 2022) tracking changes in perceived anxiety in real-time, the study identified significant anxiety spikes resulting from word forgetting or presentation flow disruptions. High-anxiety individuals, who memorized, experienced it as more difficult, underscoring how preparation strategies can influence anxiety. Surprisingly, even one of the low-anxiety participants mentioned unexpected spikes in anxiety resulting from compound situational stress (e.g., being observed and being recorded). This is an example of how anxiety can arise in otherwise confident individuals when different stressors converge.

Similarly to Gregersen et al.'s study, MacIntyre and Serroul (2015) also investigated dynamic change, in this case, in motivation and introduced the "four horsemen" model, explaining how breakdowns in communication lead to anxiety. When speakers have a breakdown in vocabulary or grammar, an inhibition system sends a threat signal. This leads to self-critical thoughts, bodily symptoms of anxiety (e.g., sweating, trembling), and cognitive intrusions, creating a vicious circle that worsens communication problems. The research also recognizes the intervention of motivation, showing how language learners compare themselves to self-expectations and perfectionism, and thus increase anxiety when they feel that they should be doing better.

Waninge (2015) explored "attractor states" of anxiety, interest, boredom, and neutral attention, drawing on the dynamic systems theory. She conducted interviews with participants who described what they thought when learning languages. Participants reported that anxiety may be a transitory reaction or an automatic state, context- and person-variable. Waninge (2015) emphasized how cognition, motivation, and affect are interconnected and how these mutually interact dynamically, supporting or dismantling learner participation.

Piniel and Csizér (2015) employed a longitudinal analysis to trace anxiety and motivation trajectories over a 14-week L2 writing course. The outcomes were stable trajectories for certain learners (low anxiety and high motivation) and unstable trajectories for others (high anxiety and high motivation). This heterogeneity points towards the non-linear, dynamic nature of learner experience and the dynamic interplay between motivation and anxiety across time.

2.1.4. The methodology of the idiodynamic method (MacIntyre & Ducker, 2022)

MacIntyre introduced the idiodynamic method in LA in 2012, and together with Ducker, they elaborated a practical guide in which they explained how the software works, developed to track and record individual differences in LA (MacIntyre & Ducker, 2022). Thus, this method was created to describe "the complex intraindividual emotional reactions and changes in self-perception, not group averages that occur during brief episodes (typically 5–10 min) of L2 communication" (MacIntyre & Ducker, 2022, p. 1).

There are four steps of this method. The first step consists of a recorded event which is relevant to the research field investigated. There is a software developed for this method called

psychometric study, which is needed for the second step. This software is a video player in which the previously recorded audio or video material has to be uploaded. Afterwards, the subjects of the study rewatch the recordings and rate themselves second-by-second. They rated the anxiety level that they observed and perceived to have experienced during the recorded event in that particular second. The rating can be set on a scale of +10 to -10, depending on the interval the researchers want to have. The subjects ought to press the up and down buttons to rate their anxiety level. After the rating session the psychometric study generates a graph for each participant in an Excel table (see Figure 1).
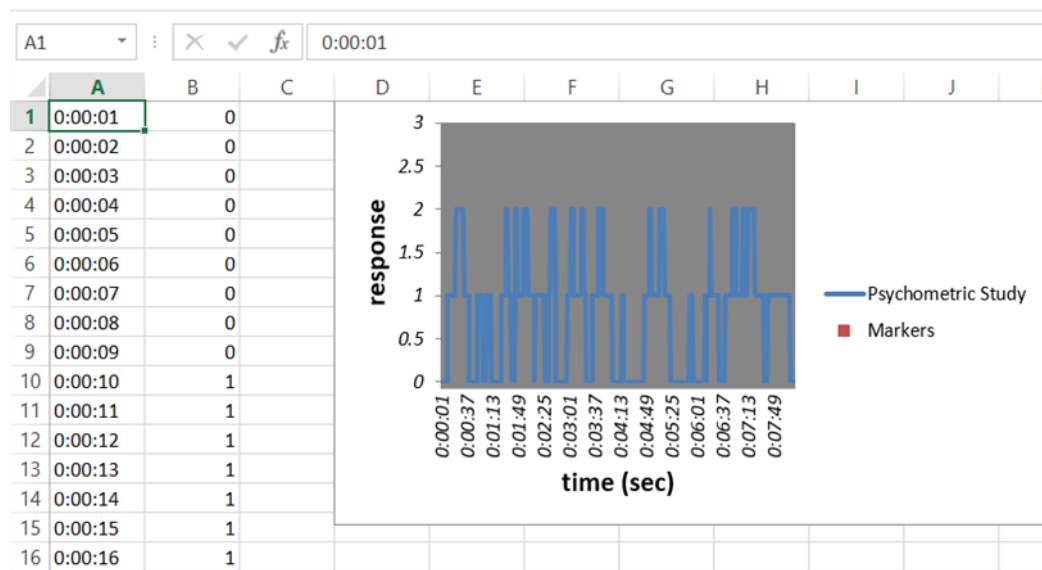
Figure 1. Graph of the self-rating

On the horizontal x-axis of the graph there is the timescale by seconds and on the vertical y-axis is the rating scale set by the researcher. On the very left side of the Excel table, more detailed second-by-second results can be observed.

The third step is called stimulated recall*,* where the video has to be replayed and analyzed together with the graph. The last step is to transcribe the results and analyze steps 1, 2 and 3 (MacIntyre & Ducker, 2022).

The participants of the present study are interpreting students. Their task is extremely difficult and demanding, therefore it is not free from stress. Their task can be characterized as dynamic because they are changing languages, topics and thoughts second by second, thus the above-mentioned method is suitable to observe and analyze their LA.

2.2. Interpreting trainees

Interpreting students are required to possess a foreign language or languages at a high level in order to fulfill their task and since at the time of their training they are still developing their language skills, they can face anxiety (Yan et al., 2010; Yan & Liang, 2022).

The interpretation process has two main parts: understanding the spoken text in a foreign language and producing its translation orally. Both listening (Elkhafaifi, 2005; Bekleyen, 2009) and speaking skills (Sellers, 2000; Li et al., 2020) were found to provoke anxiety among L2

students. Interpreters must conduct a series of complex mental and physical operations in a public setting, or at least in front of an audience (Jiménez & Pinazo, 2001). Several factors can affect the performance of the interpreter, such as technical jargon and foreign accents, which can interfere with the listener's understanding (Munro, 2008).

Skrylnyk (2016) holds the view that the ideal situation for interpreting does not and never will exist. He refers to the factors that affect the interpretation process as stumbling stones (Skrylnyk, 2016: 148) and states that the greater the number of stumbling stones, the more mental effort is needed on the part of the interpreter. He classifies the factors into two categories: circumstantial and professional. Circumstantial are beyond control and unpredictable, making it difficult to defeat and equip students to tackle them as well. They can represent, for example, a faulty microphone or headphones. Both force the speakers to waste energy, attempting to shout or speak low. He also adds to this list noise, fatigue, sickness and stressful work schedule. Pofessional hurdles are predictable and trainable. This category comprises the influencing factors such as "the speaker's accent", "fast utterance rate", "complicated speaker's syntax", "unfamiliar terms", "overabundance of precise information", "necessity to use notes" (Skrylnyk, 2016, p. 149). The above-mentioned factors, whichever category they belong to, distract the interpreters' attention in some way, thus affecting their ability to concentrate (Skrylnyk, 2016).

Concentration is also a key in the process of interpretation. An interpreter should be able to concentrate very intensely for a long time. Only because of this, students should be ready to concentrate, or in case they accidentally lose concentration, to regain their concentration. Skrylnyk (2016) argues that there are four levels of concentration: concentration gain, concentration loss, concentration shift, and concentration regain. He defines them as the process by which humans react to different stressful situations, work and the aforementioned stumbling stones during the interpretation process. In the case of concentration loss the concentration shift should be as short as possible for a smooth concentration regain.

Concentration loss can also happen due to memory loss. Memory is another essential factor in the training of interpreter students. According to Skrylnyk (2016), focus relates directly to working memory (WM), as they both relate to information processing and use in the interpretation process. Memory, although still not fully researched, is a major aspect of cognition. Loftus and Loftus (1988) discusses memory in terms of three stages: sensory register, short-term memory (STM), and long-term memory (LTM). Sensory memory is very brief, lasting seconds, whereas information is passed on to STM, which holds information for 15-20 seconds. LTM, the largest component of the memory system, is technically boundless and holds information for a lifetime. Retrieval can only be achieved in data that are held within the LTM. Working memory (WM), often confused with STM, is larger; it holds but also processes information. While STM holds information passively, WM actively handles and processes it. WM is especially crucial in interpretation, particularly simultaneous interpreting, as it plays a central role in processing information in real time (Nour et al., 2020).

Simultaneous interpreting (SI) is a common type of interpreting practice in addition to consecutive interpreting (CI). The SI, as its name indicates, is a simultaneous translation of an oral text, usually done in an interpreting cabin with technical help, such as a microphone and special headsets. The CI is an interpreting exercise of the kind that kind that mostly occurs

on a stage before an audience. In this case, the interpreting student is permitted to take notes and has to interpret after some time, depending on the speaker. There are several training methods that can result in a successful interpreter, including activities such as note-taking, listening and memory exercises, shadowing, dual-task training, paraphrasing, abstracting, closing, sight translation, digit processing, as well as lag and anticipation exercises (Al-Zahran, 2007). Possessing skills such as anticipation, shadowing, or making one's own note-taking dictionary can ease anxiety to some degree and give confidence to the interpreter. Both SI and CI are highly stressful and although the acquisition of certain skills will lead to successful interpretation, it does not guarantee an anxiety-free experience.

3. The study: Measuring foreign language anxiety with the idiodynamic method

3.1. Pilot study

In the academic year 2022-23, the author carried out a pilot study on FLA in the case of translating and interpreting students (Marton, 2024). This study involved interpreting students (N=26) from Sapientia Hungarian University of Translylvania from Miercurea Ciuc and Târgu Mureș. Participants in Miercurea Ciuc were MA students (N=12), while in Târgu Mureș (N=14) BA students. In Miercurea Ciuc there is no BA interpreting study program, therefore the BA and MA students were on a similar level when it comes to interpreting experience and training. Participating students were of Hungarian mother tongue, learning to interpret from Hungarian to English and Romanian and vice versa. The students were asked to complete an online survey using Google Forms. This form of information gathering was found to be extremely helpful when there was a lockdown due to the COVID-19 pandemic. The questionnaire included demographic questions, interpreting-experience-related questions, the Cambridge Placement Test, and the FLCAS (Horwitz et al., 1986).

The hypothesis of the study that interpreting students whose strength is languages can still experience anxiety was confirmed. All of the participants reported that they had experienced LA in the process of interpreting; at the majority, it manifested as a mental block (N=14) but they also mentioned memory loss (N=4), sweating (N=4) and stuttering (N=3) while three participants had experienced all the options above since this question was a multiple-answer question. In an open-ended question, several respondents (N=10) reported breathing technique as an anxiety-coping mechanism. The results of the English test revealed that most of the respondents (N=20) were at the B2 English level or above. There was a negative relationship between language level and fear of negative judgment and a negative correlation between language proficiency and LA since all participants felt LA. After examining the results of the FLCAS, a negative correlation was found between fear of negative judgment, communication apprehension and LA, but a positive correlation between test anxiety and LA. Therefore, the pilot study confirmed the need for further study in this field with more participants and qualitative part.

3.2. Research aim and research questions

The current research (in the academic year 2023-24) is a continuation of the pilot study. This study aimed to gain deeper insight into the LA of interpreting students. The target group was also the students of Sapientia Hungarian University from Transylvania from Miercurea Ciuc and Târgu Mureș. This study was conducted a year later, therefore the groups had changed. Each year there are 15-20 interpreting MA students in Miercurea Ciuc and about 60 undergraduate students in the BA program. However, students in the latter program only practice interpreting in the second and third years of their studies, which means that there were about 40 students in Târgu Mureș who could participate in this study. Therefore, the total population of the target group was approximately 60 students, of whom 57 participated in this study.

The present study aims to examine the following:

a) Do interpreting students experience language anxiety during their interpreting practice, and if so, how is it manifested?
b) What methods do the participating students use to deal with language anxiety?
c) What types of anxiety can be traced among these students: communication anxiety, test anxiety or fear of negative judgement?
d) How do the qualitative data obtained using the idiodynamic method contribute to the general picture provided by the questionnaire results?

3.3. Research methodology

This study involved a combination of quantitative and qualitative research methods. First, participants (N=57) completed the same structured questionnaire as in the pilot study. This survey, as earlier, was distributed online, through Google Forms.

The questionnaire was completed by 57 respondents, starting with three demographic questions regarding sex, age, and residence. Of the participants, 33 were female and 24 male. The majority (87.7%) were aged 18-25, with five participants aged 26-30 and two aged 31-40. Most participants were from Mureș (N=22) and Harghita (N=19) counties, with others from Covasna (N=12), Brașov (N=2), and Satu Mare (N=2).

The next six questions focused on the participants' interpreting experiences, including whether they had experienced anxiety during interpreting tasks, the symptoms they faced, and whether they had interpreted outside university settings. They were also asked about the strategies used to manage their anxiety. They had both open- and closed-ended questions.

The questionnaire included the Cambridge Placement Test, a 25-item multiple-choice English proficiency test. Scoring 17-19 points indicates a B1 level, 20-21 points a B2 level, 22-23 points a C1 level, and 24-25 points a C2 level.

Next, participants completed the Foreign Language Classroom Anxiety Scale (Horwitz et al., 1986), modified by the author for interpreting tasks. It included 33 statements on communication anxiety, test anxiety, and fear of negative evaluation. The participants needed to rate these statements on a 5-point Likert scale where 1 meant strongly disagree, 2 disagree, 3 neither agree nor disagree, 4 agree and 5 strongly agree. For example, one of the statements was: I don't worry about making mistakes during interpreting practices and it refers to the

individual's fear of negative judgment. This statement then needed to be rated by the participants according to how much they agreed with it. The responses collected through the Google Form were exported to an Excel spreadsheet, and general descriptive statistical analyses were performed, to determine the subjects' anxiety level from the mean value of the responses given, and to explore how the group rated the different statements (calculating the mean value of each statement). Averages ranging from 1 to 1.8 indicated complete disagreement among respondents. Responses falling between 1.81 and 2.60 signified disagreement, while neutral stances were observed within the range of 2.61 to 3.40. The agreement was reflected in the responses ranging from 3.41 to 4.20. Finally, answers scoring between 4.21 and 5 indicated strong agreement among respondents. Nine statements were reverse-coded (2, 5, 8, 11, 14, 18, 22, 28 and 31). For example, statement number 18, which sounds like I feel confident when I speak in my English classes, needed to be reverse coded because if someone answered agree to this, then the high score does not reflect a high anxiety level. This was needed so that a high score would always mean a high anxiety level, in all cases. Thus, all answers given to the above-mentioned nine statements were reverse-coded in an Excel sheet, where all data were already introduced and coded. As mentioned earlier the numbers stand for: 1 strongly disagree, 2 disagree, 3 neither agree nor disagree, 4 agree and 5 strongly agree. So reverse coding meant changing 1 to 5, 2 to 4, 4 to 2 and 5 to 1. The 3, neutral answer, stood the same (Tóth, 2009).

The qualitative phase of the study involved 12 volunteers out of the 57 participants. From these 12 students six students from Târgu Mureș and 6 from Miercurea Ciuc participated in this part using the idiodynamic method (MacIntyre & Ducker, 2022). The six MA students were not the bravest of the program but were willing to help the research. The six BA students were chosen randomly from the classroom. The task started with interpreting an 8-minute, 17-second speech in Hungarian titled "Cenzúrázott egészség" ("Censored Health")2, from the European Commission's Speech Repository, focusing on health, food, and consumers. The participants had never heard the tape before. The task was conducted and recorded using Zoom with the author present in the room with the necessary technical equipment. The recording was then saved and uploaded in the above-presented psychometric study, which was downloaded and prepared. After the interpreting task, students followed with the self-rating phase. The saved video was uploaded to the system, and the rating was set on a scale from 0-3 where 0 meant no anxiety and 3 meant the highest anxiety level. After demonstrating the task to the participants they were offered headphones, and they could rate their anxiety level from second to second. After the rating, the software automatically generated an Excel table with the participant's own graph. This graph, together with the participant's experience and opinions were discussed in the form of individual interviews. These interviews were semi-structured, since there were questions prepared, but just as help. The author allowed the participants to express themselves. The interviews were then recorded and transcribed. These video and voice recordings were used only for the purpose of the research and were anonymous.

After transcribing, collecting and analyzing the interviews, the least and most anxious participants from both groups underwent an in-depth analysis going through the above presented steps 1 (questionnaire), 2 (interpreting and self-rating), and 3 (interviews). They were chosen based on their FLCAS averages since that score shows the participants' general anxiety level.

2https://speech-repository.webcloud.ec.europa.eu/speech/cenz%C3%BAr%C3%A1zott-eg%C3%A9szs%C3%A9g

3.4. Results and discussion

There were in total 57 interpreter students who completed the questionnaire. Of these 57 participants, 38 were BA students from Sapientia Hungarian University of Transylvania from Târgu Mureș and 19 were MA students of Sapientia Hungarian University of Transylvania from Miercurea Ciuc. Eleven students claimed that they had already interpreted in a real-life situation, at an event (e.g. for family, intercultural events, library, crafting activities for German children), the rest of them only experienced interpretation in academic setting during classes. The next question asked participants whether they had ever felt language anxiety or not. Among the participants, 91.2% (N=52) experienced language anxiety. Using a multiple-choice item, the participants were also asked about their symptoms of language anxiety. Mental block was chosen by 36 students, memory problems by 21, stuttering by 14, and sweating by 12. The most commonly mentioned anxiety-coping technique was breathing control, taking a deep breath (N=25): *I try to take a deep breath, focus on a single point or close my eyes and just concentrate on the text.*

From the results of the English test, it turns out that from the participants 17 students were at B1 level or below and 40 were at B2 level or above. According to the Common European Framework of Reference for Languages (CEFR)3 level B2 is already considered a confident, independent user of English and is officially at the upper-intermediate level. Thus, according to the present test, participants on B2 level or above have a good command of the English language; therefore, it can be assumed that their anxiety is not due to language barriers.

The FLCAS results shed light on the types of anxiety participants faced. At the FLCAS there were 33 statements related to three types of anxiety, namely communication apprehension, fear of negative judgement and text anxiety that had to be rated on a 5-point Likert scale. Analyzing the results we found 23 statements out of the total 33 where participants provided neutral mean value answers (2.61 to 3.40) that although valid, were not examined at this part, as they meant "neither agree or disagree" thus could not be interpreted as either positive or negative in terms of participants' type of anxiety. Looking at the statements, there were also no mean values representing the two extremes, "strongly agree" or "strongly disagree" answer options. Therefore, the remaining statements examined were quite limited in number but they helped creating a general overview of participants' type of anxiety. The results of the FLCAS showed no communication apprehension or fear of negative judgment but the group of participants can be characterized as having test anxiety. The drawback of this somewhat limited methodological and largely quantitative test (Strömqvist, 1991) is that it is not sensitive enough (Chiang, 2010). This is why a dynamic approach was needed.

Viewing LA through a dynamic lens (Gregersen, 2020, p. 70) provided a second-by-second anxiety rating and individual results. Except for one student, all the participants felt anxiety during the interpreting task, even those who did not consider themselves anxious in general. Half of the participants claimed that they had a basic level of anxiety (they had no 0 chosen) the whole time which they explained by having trait anxiety. Some had state anxiety which was triggered by different factors such as being recorded, domain-specific vocabulary, failed translation and the speaker's accent. There were some unexpected triggers as well, for

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[3]https://www.coe.int/en/web/common-european-framework-reference-languages/table-1-cefr-3.3-common-reference-levels-global-scale

example the room's temperature. These triggering factors caused energy and concentration loss for the participants. These findings suggest the earlier mentioned dynamic nature of LA (Gregersen, 2020) since trait, state and situation-type anxiety (classroom context) were also present while using a foreign language. Using a scale, researchers could never find these individual dynamic triggering factors or the way participants dealt with them.

After transcribing, collecting and analyzing the interviews as presented above, the least and most anxious participants' results from both groups underwent a side-by-side, in-depth analysis of steps 1 (questionnaire), 2 (interpreting and self-rating) and 3 (interviews). They were chosen based on their FLCAS averages since that score shows the participants' general anxiety level. The least anxious student from the MA group had a mean value of 2.45, while the most anxious student from the MA group had a mean value of 4.18. The least anxious student from the BA group had a mean value of 1.63 and the most anxious student from the BA group had a mean value of 2.84. Their graphs generated by the psychometric study tool (MacIntyre & Ducker, 2022) reflect these students' self-rating of their interpreting performance. The graphs show each fluctuation and all the ups and downs experienced and perceived by participants throughout the process. No two graphs are identical. Figures 2 and 3 below show that even the two least or most anxious students' anxiety levels differ at the individual level.

Figure 2 presents the graphs of the least anxious students from each group. The left graph shows the least anxious student from the MA group and the right one shows the least anxious student from the BA group. They were both at C1 English level and both had experience in interpreting besides the classes. None of them chose number three, which is the peak of anxiety. Their perceived anxiety ranged between zero and two but we can see that the student on the right had less anxiety fluctuation and, therefore, was in a more stable emotional state while interpreting. Their individual state anxiety experienced during the simultaneous interpreting task was triggered by professional stumbling stones, such as retrieving specific terminology, the fact that they were recorded, recalling and pronouncing percentages and dates. The coping mechanisms these participants used to handle such situations were generalizing, rephrasing, explaining, describing, or even omitting some phrases or information. They claimed that they enjoyed the process of interpreting.
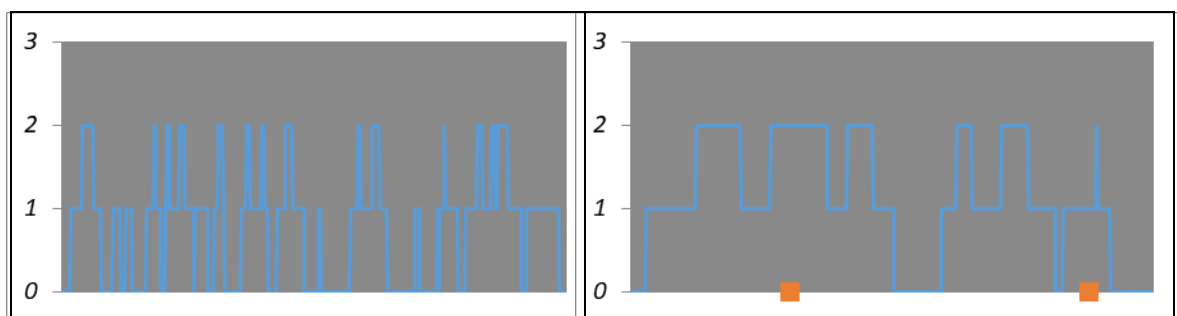

Figure 2. Graphs of the least anxious students from MA and BA groups

Figure 3 shows the most anxious MA student on the left and the most anxious BA student on the right. Their perceived anxiety levels ranged from 0 to 3, but the participant on the left only chose zero at the beginning of the task; therefore, the movement on the first graph was between 1 and 3. This means that this student had a constant feeling of anxiety. The most anxious

students were at A2 and B1 levels and they had never had interpreting experience before besides the classroom context. The BA student on the left enjoyed this task despite her anxiety. The MA student on the right failed in the middle of the recording and wanted to give up. After a short break, she finished the task, but it was not a pleasant experience for her since her anxiety was peeking.
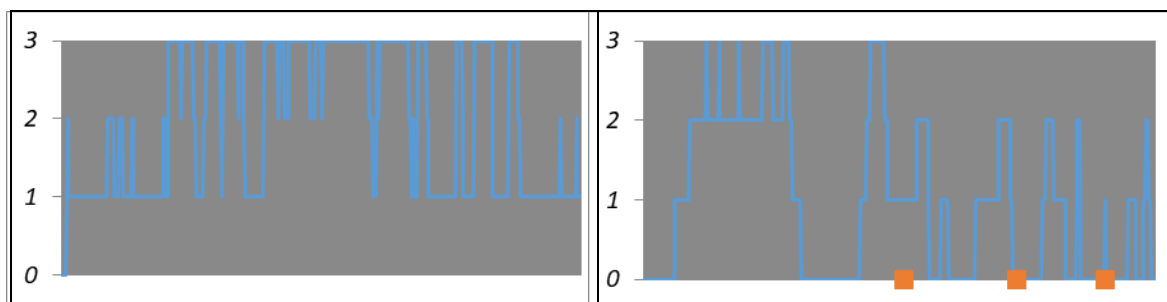

Figure 3. Graphs of the most anxious students from MA and BA groups

4. Conclusion

The main aim of this study was to explore interpreting students' anxiety using mixed methods, introducing the dynamic approach as part of the qualitative research. Moreover, this study also suggests that the dynamic approach to studying language anxiety can provide in-depth, individual-level results that can complete the general results of the scale. The idiodynamic method used in this study is a person-centered system that offers a microscopic view of changes in state (Lu, 2022). It is essential to highlight that although existing measures are not sensitive enough (Chiang, 2010) to tackle individual differences in LA, general data and its measures are also needed for a more holistic image because the idiodynamic method only provides anxiety rates on a certain time scale in a specific situation. Therefore, the idiodynamic method offers an individual anxiety rate and allows a deeper insight into the way learners are triggered and respond to these *stumbling stones* (Skrylnyk, 2016, p. 148).

The study confirmed the hypothesis that interpreting students do have LA, since 91.2% (N=52) of the participants reported that. It mostly manifested in the form of mental block (N=36), memory problems (N=21), stuttering (N=14) and sweating (N=12). Terminology and specific words were the most common anxiety-provoking triggers. They dealt with these unpleasant situations most commonly with breathing control (N=25) but fidgeting and self-motivational talk were also mentioned. A negative correlation was found between language proficiency, communication apprehension, fear of negative judgment and LA but a positive relationship between test anxiety and LA.

Although the results were based on a small-scale study involving 12 volunteer interpreting students in the individual-level analysis using the idiodynamic method, they reflect individual-level differences and fluctuations in their anxiety over time. Thus, performing such analyses might provide a deeper understanding of perceived individual anxiety that might help researchers and interpreting teachers in supporting and assisting students to overcome such negative emotions. The results showed a positive relationship between LA and interpreting students' performance and experience in the domain of interpreting. Further investigation using

the idiodynamic method for interpreting students is needed. Moreover, assessing longitudinal changes and observing differences in LA among interpreting trainees and professionals are also options for further investigation in this field.

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