

Faculté de philosophie, arts et lettres

Foreign Language Anxiety and Enjoyment in L2 German Interaction:

An Idiodynamic Mixed-Methods Study of French-Speaking Learners

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1. Introduction

Speaking a foreign language is rarely a purely linguistic act. For many learners, communicating in a second language simultaneously involves excitement, curiosity, insecurity, fear of evaluation, pride or enjoyment – emotions that may fluctuate continuously throughout interaction. It is widely acknowledged in second language acquisition (SLA) research that foreign language (FL) learning is strongly influenced by a variety of individual differences (IDs), including aptitude, motivation, beliefs, emotions and personality traits (Aslan & Thompson, 2021). Among these variables, emotional dimensions such as foreign language anxiety (FLA) and foreign language enjoyment (FLE) have received growing scholarly attention due to their significant influence on learners' communicative behaviour, engagement and overall language learning experience.

Importantly, such psychological functions do not operate independently from one another. Rather, they interact within a complex and interconnected system (Kozulin, 1990). Similarly, Buck (2005: 198) emphasized the reciprocal nature of psychological processes by arguing that “in their fully articulated forms, emotions imply cognitions imply motives imply emotions, and so on”. This perspective aligns closely with more recent dynamic approaches to SLA, which conceptualize learner emotions not as stable and isolated traits but as fluctuating, context-sensitive phenomena shaped by the interaction of multiple cognitive, affective, social and situational factors.

Within this context, the present study investigates how different psychological functions – including FLA, L2 motivation, language attitudes and speaking comfort – interact with one another to give rise to different learner profiles. Additionally, the study examines the dynamic interrelationship between FLE and FLA during authentic conversations between L2 German learners – who function as representatives of their learner profiles – and a native speaker across topics of varying familiarity. Particular attention is paid to the extent to which topic familiarity alongside other potential factors such as task-driven constraints, topic valence, linguistic difficulties and socio-evaluative concerns shape learners' emotional trajectories during spontaneous spoken interaction.

Research on FLA has long highlighted the debilitating effects FLA may have on learners' communicative performance, language acquisition (MacIntyre & Gardner, 1994), linguistic proficiency (Horwitz, 2001), self-confidence (MacIntyre, 2017) and willingness to participate in

interaction (Arnold & Brown, 1999). More recently, however, the emergence of positive psychology (PP) in applied linguistics has encouraged researchers to also examine positive emotional dimensions such as FLE (Dewaele & MacIntyre, 2014). Current research increasingly suggests that FLA and FLE are not simply opposites on a single emotional continuum. Instead, both emotions may coexist, fluctuate independently or interact dynamically depending on the communicative context and the learner's interpretation of the situation. Consequently, contemporary SLA research has increasingly moved away from static conceptualizations of learner emotions toward more dynamic and situated perspectives.

Despite the growing body of research on FLA and FLE, several important methodological and contextual gaps remain in the literature, such as the overrepresentation of EFL learners and learners of Chinese heritage (L1) – leaving other linguistic and cultural contexts comparatively underrepresented – or the use of traditional questionnaire-based instruments providing largely static and retrospective representations of learner emotions and failing to fully capture the dynamic nature of emotional experiences during authentic communication. Additional limitations include non-diversified contextual settings (mainly formal classroom interactions with teachers), limited analysis on the relationship between more diverse learner variables and FLE/FLA and scarce knowledge on the precise internal and external triggers of FLA and FLE (Zhang et al., 2024a).

To address these gaps, the present study adopts a mixed-methods design combining quantitative cluster analysis, idiodynamic ratings and qualitative stimulated recall interviews. More specifically, it investigates medium-level L1 French learners of German engaged in spontaneous conversations with a native speaker on topics of varying familiarity outside strictly controlled classroom settings. By combining group-level learner profiling with fine-grained analyses of emotional fluctuations, the study seeks to provide a richer and more ecologically valid understanding of how FLA and FLE emerge, fluctuate, and interact during authentic L2 communication, while also contributing to current discussions on the complex interplay between learner variables, emotional triggers and communicative context.

The study is guided by three principal research questions. First, it examines whether distinct learner clusters emerge based on the variables of FLA, L2 motivation, speaking comfort and language attitudes, and how these clusters can be characterized. Second, it investigates whether representatives of these learner profiles behave as expected during spontaneous L2 production or whether situated emotional experiences diverge from questionnaire-based

learner profiles. Third, the study explores whether topic familiarity alone can explain fluctuations in FLA and FLE or whether additional cognitive, linguistic, affective and psychological factors contribute to learners' emotional trajectories.

This thesis is structured into five main chapters. Following the present introduction, Chapter 2 provides the literature review, discussing previous research on FLA, FLE, their interrelationship and measurement, L2 motivation, language attitudes, speaking comfort and task design. Chapter 3 outlines the methodological design of the study, including participant selection, tools, questionnaire design, cluster analysis procedures and idiodynamic methodology. Chapter 4 presents the quantitative and qualitative findings, including the learner cluster analysis, idiodynamic correlation analysis, idiodynamic emotional trajectories, thematic analyses and comparative participant analyses. Chapter 5 discusses the findings in relation to previous theoretical and empirical research, addresses methodological limitations and outlines implications for future research. Finally, the conclusion summarizes the principal findings and contributions of the study.

Artificial intelligence tools were used during the preparation of this thesis for linguistic support purposes, including the shortening and stylistic refinement of selected passages, as well as for assistance in structuring and formalising the coding books and analytical tables.

2. Literature Review

A second language (L2) refers to any language acquired after one's mother tongue, which may also include a third or fourth language. Such languages are typically learned in foreign language contexts rather than acquired naturally (Toyama & Yamazaki, 2021). Contrary to what language learning practitioners traditionally believed and unlike in first language acquisition, extensive research in the field of second language acquisition (SLA) has demonstrated that a successful language learning process is not solely dependant on learners' cognitive factors. Since the 1980s, affective factors have been shown to have an important effect on language learning outcomes as well. Since then, a substantial body of work has focused on the study of psychology and different emotions in the language learning environments (Chin et al., 2024) – such as attitudes toward teachers, boredom, anxiety (Shen, 2021), L2 learners' self-confidence or L2 motivation (Lu, 2022) – yielding a comprehensive understanding of their impact on the learning experience (Shen, 2021).

The body of research on emotions in SLA has let researchers to make the suggestion that emotion and cognition are inherently inseparable (Swain, 2013). What is accepted, at the very least, is that emotions guide cognitive resources, shaping processes such as attention, memory and behaviour (see Schumann, 1994 and Pekrun, 2006). What emerged from the vast body of studies on emotions in SLA was the rising awareness of the existence of a wide range of emotions that have been shown to influence language learning and communication. These include positive emotions (such as enjoyment, love, pride and gratitude) as well as negative ones (including anxiety, boredom, guilt and anger) (Aubrey, 2022).

From all the different emotions that learners can experience during the learning process, foreign language anxiety (FLA) (or foreign language classroom anxiety (FLCA)) has emerged as, by far, the most extensively examined emotion (Chin et al., 2024) – an emotion that does not pertain to the first language acquisition process (Dewaele & MacIntyre, 2014). Yet, over the years, more recent studies have highlighted that not only the negative emotions affect L2 learning journeys and outcomes but that positive emotions such as foreign language enjoyment (FLE) also substantially shape the classroom experience. This has let researchers to not only stress the need to reduce FLA for pedagogical purposes but also to push FLE. As a consequence, many researchers have studied the impact of both FLA and FLE in myriad environments as well as their dynamic relationship (Shen, 2021).

The field, thus, studied the relationship between emotions (particularly FLA and FLE) and foreign language learning extensively, which led to a significant theoretical and empirical development in our understanding of these complex relationships. This literature review synthesizes research on how emotions shape language learning experiences, examining how FLA and FLE interact with different IDs – such as 1) L2 motivation, 2) attitudes toward the target country, the target language and its people and 3) speaking comfort – as well as with different contextual factors such as 4) task complexity (or topic familiarity).

2.1 FLA and FLE in Language Learning

2.1.1 Foreign Language Anxiety (FLA)

As mentioned above, foreign language anxiety (FLA) or foreign language classroom anxiety (FLCA) is the number one most researched emotion in the field of second language acquisition (SLA) as well as the first one to be addressed in the field.

Generally speaking, FLA can be defined as “the worry and negative emotional reaction aroused when learning or using a second language” (MacIntyre, 1999: 27). In other words, FLA refers to the classroom-related apprehension and stress that often emerges during FL classroom tasks such as speaking activities (MacIntyre & Gardner, 1994). MacIntyre (2017: 34) further explained that “[a]nxiety is influenced by internal physiological processes, cognition, and emotional states along with the demands of the situation and the presence of other people, among other things, considered over multiple timescales. Anxiety has both internal and social dimensions”. As such, FLA is a situation-specific form of anxiety in L2 use, involving self-perception, beliefs and fear of negative evaluation (Kasbi & Elahi Shirvan, 2017; see also Horwitz et al., 1986). FLA is influenced by personal factors (e.g. motivation, willingness to communicate, etc.), social factors (e.g. teacher behaviour) and other factors like topic familiarity or linguistic difficulty (Alpert & Haber, 1960).

The field of FLA/FLE research developed after Krashen’s (1985) seminal work on the ‘affective filter’ which highlighted the demotivating role of negative emotions in language learning, thereby prompting further research into FLA as a key driver (Shen, 2021).

Horwitz et al. (1986) considerably advanced the field by developing the foreign language classroom anxiety scale (FLCAS), which has been extensively validated through research (MacIntyre, 1992; Rippengale, 2022). Using Horwitz et al.’s (1986) pioneering scale, many researchers started digging into the linguistic and non-linguistic features impacting FLA. Thus, this scale made large-scale comparisons between studies on FLCA feasible and enabled the generalizability of findings in the field. Since then, extensive research has examined FLCA from diverse angles, including cognition (MacIntyre & Gardner, 1994), production (Matsuda & Gobel, 2004) and individual differences (Liu, 2006), which has led to a more holistic understanding of FLA and its implications for FL studies.

MacIntyre and Gardner (1994), for example, discovered that anxiety can hinder classroom performance and language acquisition while Arnold and Brown (1999) showed that it can even wreck the best of teaching strategies and render even the most promising material inadequate. A review by Horwitz (2001) highlighted the link between FLA and lower achievement in L2 listening, speaking, reading and writing skills. Furthermore, a review by MacIntyre (2017) suggested that a higher FLCAS-score favoured negative social attitudes and behaviours, such as a lower linguistic self-confidence from the part of the learner (Toyama & Yamazaki, 2021). Often, learners experiencing high anxiety disengage from participation (Arnold &

Brown, 1999). However, anxiety can also function as a motivator, prompting learners to invest greater effort when confronted with heightened cognitive demands (Marcos-Llinaïs & Garau, 2009, as cited in Aubrey, 2022).

Studies on FLA thus highlight what Horwitz et al. (1986) had already emphasized in their seminal work: the significance for L2 learners of recognizing, managing and ultimately overcoming this form of anxiety. Building on this foundation, many later studies turned their attention to the development and evaluation of classroom interventions to help reduce FLCA in the classroom (e.g. relaxation strategies (Oxford, 1990), journaling (Horwitz et al., 1986), work in pairs (Koch & Terrell, 1991), teachers' relaxed attitudes (Young, 1990), etc.) (Toyama & Yamazaki, 2021).

Finally, in recent years, positive psychology (PP) has been implemented as a classroom intervention to reduce FLA while boosting positive emotions (Dewaele et al., 2019b; MacIntyre et al., 2019). "Positive psychology has been succinctly described as the scientific and empirical study of what makes life worth living, individual strength, the way by which individuals succeed and flourish, individuals knowing their life virtues, and the state of knowing what goes right in life" (Chin et al., 2024: 2064). In their interventions, scholars suggested L2 teachers should not only focus on students' linguistic knowledge and skills but also tend to their affective and social needs, such as their wellbeing. What started as a FLA reduction strategy, developed into a new study approach which ended up shifting the focus in FL emotion studies from mostly negative to more positive feelings (Toyama & Yamazaki, 2021), as will be further developed in the next chapter.

2.1.2 Foreign Language Enjoyment (FLE)

As demonstrated by the overview in the previous chapter, after years of research primarily centred on negative psychology and its emotions and strategies to mitigate them, scholars in SLA increasingly turned their attention to positive emotions, which had gone unnoticed for a long time (Chin et al., 2024).

With the emergence of positive psychology (PP), the emphasis in the field of psychology shifted to the role of happiness, wellbeing and creativity (Oxford, 2016). This perspective inspired studies on PP's implications across different disciplines including work, education and social life (Wang et al., 2021). In this context, Seligman and Csikszentmihalyi (2000, as cited in Shen, 2021) highlighted a significant gap in the existing SLA literature concerning the

influence of emotions on foreign language (FL) learning outcomes. Specifically, they argued that positive emotions, along with other positive individual and interpersonal factors such as creativity, perseverance, hope, autonomy and enjoyment, had received comparatively limited scholarly attention until then (Csikszentmihalyi, 2014).

Nevertheless, in the field of language learning and teaching, PP was only formally introduced by MacIntyre and Gregersen in 2012 while it only gained ground in 2014 after rebirthing in a publication by Dewaele and MacIntyre, which set out to examine the relationship between the widely established and popular variable FLA and the newly introduced concept of FLE. It was in this study that the authors developed the first prototype of the foreign language enjoyment scale (FLES), which prompted more research efforts in the field. Thus, the emergence of PP in SLA encouraged a more balanced view of emotional experiences, positioning FLE as an essential counterpart to the previously overemphasized FLA, which led to a proper paradigm shift in foreign language classroom (FLC) research from 2016 onwards (Zeng, 2021). The ensuing extensive study of FLE – from various angles as well as in different languages and cultures (Chin et al., 2024) – can be explained by its positive motivational force in the language learning process (see Piniel & Albert, 2018) as well as by its high frequency of experience by L2 learners (see Gregersen et al., 2017).

Dewaele and MacIntyre (2014) first conceptualized FLE as a positive emotional state arising when learners' psychological needs are fulfilled and when the challenges they encounter are appropriately balanced with their linguistic abilities. Later, they define it as "a complex emotion, capturing interacting dimensions of challenge and perceived ability that reflects the human drive for success in the face of difficult tasks" (Dewaele & MacIntyre, 2016: 216). They further explain that "enjoyment arises when we extend ourselves or challenge our limits to accomplish something novel or unexpected, and is distinct from pleasure, which can simply occur whenever our biological needs are met" (Zhang et al., 2024a: 1). Thus, a central element of enjoyment lies in the experience of novelty or achievement, which engages intellectual focus, sharpens attention and provides an optimal level of challenge, thereby fostering psychological development (Boudreau et al., 2018). Furthermore, FLE emerges when learners' can sufficiently meet their psychological (not only biological) needs in the classroom (Botes et al., 2020). As FLA, FLE is influenced by different internal (e.g. age, language proficiency, etc.) as well as external factors (e.g. teacher support, etc.) (Zeng, 2021).

Since 2014, the flourishing and rapidly developing research field of FLE has yielded some important findings: Enjoyment, like other positive emotions such as joy, hope and pride, expands learners' immediate thought–action repertoires (a proposition made by Fredrickson, 1998 in her Broaden-and-Build theory) and contributes to the development of psychological resilience and personal resources, which in turn support both academic success and language learning (Li et al., 2018). Importantly, FLE was shown to be gravely influenced by the teachers' behaviour (Dewaele & MacIntyre, 2016). Moreover, enjoyment helps buffer the lasting impact of negative emotions when challenges arise, thereby promoting resilience and overall well-being (Fredrickson, 2001; Fredrickson, 2004). What is more, FLE has been found to positively influence both learners' overall and domain-specific FL achievement, including writing, speaking and vocabulary. It has also been linked to greater classroom participation by fostering engagement, encouraging strategy use, sustaining motivation and promoting a stronger sense of classroom community. Finally, multiple studies on the dynamics of enjoyment confirmed that FLE fluctuates to different extents, both within and across individuals and these variations can be observed over multiple timescales – from seconds and minutes to weeks and months (Zhang et al., 2024a). In sum, all of this highlights the positive and facilitating power of the PP variable FLE and argues for its broad potential in the FL classroom (Botes et al., 2022a), suggesting that enjoyment ought to be fostered as much as possible during the language learning process.

Thus, FLE provides learners with the emotional resources needed to cope with the challenges of language learning, while simultaneously enabling them to expand their learning capacity by absorbing more input (MacIntyre, 2016, as cited in Chin et al., 2024) – while FLA, on the contrary, limits their cognitive resources which can hinder fluency or academic achievement outcomes (Aubrey, 2022). “Thus, momentary fluctuations in emotions may cause momentary disturbances in cognitive processing” (Aubrey, 2022: 2) – a topic which will be further discussed in the next chapter.

In sum, FLA is a negative, debilitating emotion that disrupts cognition, while FLE is a positive, activating emotion that broadens cognitive capacity and fosters motivation and resilience. How these very different yet related emotions influence and interact with one another will be addressed in the following chapter.

2.1.3 The Dynamic Relationship between FLA and FLE

Positive Psychology in SLA emphasizes the importance of maintaining a balance between positive and negative emotions in the language learning process (MacIntyre & Gregersen, 2012). Its growing prominence within the field has led to the recognition that “learners around the world juggle with both positive and negative emotions which affect their FL performance and progress to various degrees” (Dewaele & Meftah, 2024, p. 2). Consequently, extensive research has examined the nature of these emotions, their interrelationship, their antecedents, and their effects on language learning outcomes, all of which will be discussed in this chapter.

First, the nature of emotions can be explained through the multidimensional model of affect (Linnenbrink, 2007), which conceptualizes emotions along two dimensions: valence (e.g. love as positive, guilt as negative) and activation (e.g. anxiety as high-arousal, boredom as low-arousal). This framework suggests that emotions of both positive and negative valence can be highly activating, such as anxiety or enjoyment, thereby fuelling learners’ motivation, effort and performance (Aubrey, 2022).

Fredrickson’s (1998, 2001, 2004) aforementioned Broaden-and Build theory positions that negative emotions restrict students cognitive resources and thought-action repertoires while positive ones have a facilitating effect on the broadening of their resources and cognitive abilities (Aubrey, 2022). In turn, this means that “[t]his heightened cognitive engagement allows EFL learners with higher levels of FLE to better develop their language skills, especially when tackling challenging tasks” (Wu, 2024: 1). Beyond this cognitive distinction, MacIntyre and Gregersen (2012) highlight that negative anticipatory emotions, such as fear of failure, can restrict learners’ focus to the immediate task, whereas positive anticipatory emotions, like envisioning a desired future self, expand imagination, foster resilience without fear of negative consequences and contribute to overall well-being in language learning (Zhang et al., 2024b).

Regarding the relationship between FLE and FLA, MacIntyre and Gregersen (2012) argued that these constructs should not be understood as opposite ends of a single continuum, despite both belonging to the same dimension of language learning. This position was further supported by Dewaele and MacIntyre (2016), whose analysis of the negative correlation between FLE and FLA demonstrated that the two emotions operate independently. Their findings suggest that FLE and FLA do not function in a ‘see-saw manner’, such that a decrease in

one emotion does not necessarily result in an increase in the other (Dewaele & MacIntyre, 2016). According to the multidimensional model of affect, both FLE and FLA are highly activating emotions and may therefore energize learners in different yet complementary ways (Linnenbrink, 2007). Consequently, these emotions can be understood as distinct but inter-related constructs that co-occur and fluctuate independently through complex and dynamic interactions during real-time communication, thereby influencing language learning in complementary ways. In this sense, FLE and FLA fulfill different functions within the process of FL learning (Zhang et al., 2024a). These findings are consistent with the perspective of Positive Psychology (PP), which posits that reducing negative emotional states, such as anxiety, and fostering positive emotional states, such as enjoyment, constitute separate yet complementary pathways to improving language learning outcomes.

As the literature review above has outlined, FLA was a well established and popular variables in FL emotion research before FLE was discovered and extensively studied. The first researchers to explore the newly developed concept FLE in their pioneering work (Dewaele & MacIntyre, 2014) focused on observing and comparing the negative (FLA) and positive (FLE) emotional experience in the FL classroom. Given the inspirational impact that this study had on the research community, it is not surprising that FLE, which thus debuted as a direct response to FLA, was initially mostly examined in relation to FLA (Botes et al., 2022a). Since then, many studies have focused on the two variables of FLE and FLA in relation (Zeng, 2021; Botes et al., 2022a) and have confirmed a moderate-to-low negative correlation to exist between them (Hung, 2020, Resnik & Dewaele, 2020 and Uzun, 2017, as cited in Botes et al., 2022a; see also, for example, Dewaele & Dewaele, 2017; Dewaele et al., 2017; Dewaele et al., 2019a; Dewaele & Alfawzan, 2018) – while some even discovered a significant negative correlation (Shirvan & Taherian, 2021 and Fang & Tang, 2021, as cited in Yu, 2025).

Overall, this negative correlation suggests that students with higher levels of FLE are more likely to experience lower levels of FLA in the learning process, and vice-versa – an important finding with great pedagogical implications (Botes et al., 2022a). Dewaele and MacIntyre (2014) took this further by highlighting that individual learners may report high levels of both at the same time – a finding which is consistent with the conceptualisation of FLE and FLA (no ‘see-saw’ relationship) outlined above. Students even reported that both emotions “pushed [them] forward to take actions in the process of learning” (Shirvan & Talebzadeh, 2018a: 127). Thus, a learner can experience both anxiety and enjoyment simultaneously,

with moment-to-moment surges linked to, for example, pressure from time limits or competitive goals, in the case of anxiety, and positive feedback or a sense of achievement, in the case of enjoyment (Aubrey, 2022). Based on this, an emerging perspective highlights that enjoyment and anxiety may align or diverge at different points in time (Dewaele & MacIntyre, 2014). This view underscores the possibility of both emotions coexisting, with effective language learners needing to accept and navigate both the ‘joy’ and the ‘pain’ of the learning process (Prior, 2019). In conclusion, “[t]he substantial variation in the strength of [anxiety-enjoyment] correlations between learners suggests that, even when learners are exposed to the same task, they each have unique emotional task experiences” (Aubrey, 2022: 12).

Interestingly, some isolated studies on the relationship between FLE and FLA found differing results than the typically found moderate negative correlation, such as small positive correlations and non-significant findings (see Dewaele et al., 2019c and Dewaele & Dewaele, 2017, as cited in Botes et al., 2022a), but such studies deviating from common results are rare. In addition, Dewaele and MacIntyre (2014) have also concluded that learners experience overall more FL enjoyment than FL anxiety. Moreover, they discovered that different learner variables like multilingualism, L2 proficiency, education levels and age were correlated with higher FLE and lower FLA levels, highlighting the interconnectedness of different learner variables with the relationship between FLE and FLA (Dewaele & MacIntyre, 2014).

Therefore, many research endeavours started taking other variables into account in their analysis of the relationship between FLA and FLE: Li et al. (2018), for example, explored how learners’ enjoyment and anxiety change over the course of classroom activities. They noted that deficiencies in language skills and low motivation may result in learners experiencing different degrees of FLE and FLA (Zeng, 2021). Crucially to the present study, additional factors influencing FLE and FLA include learner beliefs about language learning and their attitudes toward the language, teachers and peers. Positive beliefs and supportive environments enhance FLE and reduce FLA, which in turn increase willingness to communicate and engagement, leading to better outcomes (Botes et al., 2022a; Dewaele & MacIntyre, 2014; Rippengale, 2022). Interacting with native speakers and exposure to linguistic variability fosters more natural language use over time, though initial encounters may provoke fear and insecurity that must be overcome (Pizarro Chacón, 2022). Moreover, task design and preparation affect emotional dynamics: Tasks with meaningful, familiar topics and appropriate cognitive load tend to elicit higher enjoyment and manageable anxiety. Preparing for tasks

aids fluency by reducing anxiety spikes, while unstructured or overly challenging tasks may increase anxiety and reduce enjoyment (Chen, 2023; Dewey et al., 2018). Finally, the teacher's behaviour, such as friendliness and use of target language crucially shapes learner emotions, promoting enjoyment and reducing anxiety (Botes et al., 2020; Botes et al., 2022a). Thus, effective pedagogical strategies to optimize language learning include fostering positive emotions through task variety and learner autonomy, encouraging interaction with native speakers, acknowledging and managing anxiety and supporting learners' self-confidence and emotional regulation skills (Botes et al., 2020; Botes et al., 2022a; Dewey et al., 2018; MacIntyre, 1992; Rippengale, 2022). Finally, many studies identified a positive relationship between FLE and learning outcomes and a negative one between FLA and academic achievement (e.g. Dewey et al., 2018; Dewaele and Alfawzan, 2018; Mierzwa, 2020) (Yu, 2025).

Despite the growing body of research on foreign language enjoyment, several important limitations remain (especially as regard FLE). Existing studies have primarily focused on adult learners of English as a foreign language in university settings whose L1 is predominantly Persian or Chinese, highlighting the need for more diverse learner populations in terms of both linguistic and cultural backgrounds. Moreover, research has mainly examined traditional classroom settings, thereby overlooking increasingly relevant contexts such as online learning environments and other forms of interaction beyond teacher–student or student–student exchanges. In addition, emotions in traditional FL research have often been conceptualized as stable, trait-like dispositions, which has contributed to the predominance of cross-sectional research designs. However, more recent findings suggest that emotions such as enjoyment are dynamic states that fluctuate throughout the learning process in response to expected and unexpected factors (see Spielberger, 1972). This recognition calls for greater methodological diversification, including the use of longitudinal designs, the idiodynamic method, and tools such as the enjoyment thermometer to capture emotional changes across different timescales (Zhang et al., 2024a). As the present study investigates the FLE and FLA of L1 French learners during L2 German interactions with native speakers through idiodynamic software, qualitative interviews, and quantitative data from validated scales, it contributes to addressing several of these gaps in the literature.

In sum, the literature demonstrates that FLE and FLA are distinct but dynamically interconnected emotions that jointly shape learners' motivation, engagement and performance in the FL classroom. While enjoyment tends to enhance cognitive flexibility, self-confidence

and achievement, anxiety can both hinder and, at times, stimulate effort, depending on its intensity and context. Their relationship is influenced by a range of individual, contextual and pedagogical factors, such as proficiency level, teacher behaviour and task design. Building on these insights, the following chapters (2.2) will further examine how these emotional dimensions interact with learner variables and task design in the context of the present study. To lay the groundwork for this analysis, the next section turns to the instruments used to assess FLE and FLA, offering a closer look at how these constructs have been operationalised and interpreted over time.

2.1.4 Instruments of Measurement for FLA and FLE

2.1.4.1 FLA and FLE Scales and Instruments of Measurement

The measurement of emotional experiences in language learning has evolved considerably over the last decades, with researchers developing increasingly sophisticated instruments for its assessment. This section now turns to the most important scales developed for this purpose.

As previously noted, Horwitz et al. (1986) were the first to address the need for a standardized FLCA instrument by introducing the foreign language classroom anxiety scale (FLCAS), thus enabling the comparison and generalisation of findings across studies. Since the authors considered FLA to be closely linked to learners' feelings, perceptions and behaviours in the foreign language classroom, they designed the scale to assess anxiety across three domains: communication apprehension, test anxiety and fear of negative evaluation. The FLCAS comprises 33 items, with 24 positively formulated and 9 negatively formulated statements, rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). Total scores can range from 33 to 165 and the scale has demonstrated high reliability, with internal consistency confirmed by a Cronbach's alpha of .93 (Shen, 2021).

Then, McIntyre (1992) developed a shortened version of the FLCAS in his doctoral dissertation, which was validated by Botes et al. (2022b). This 8-itemed version offers mainly the advantage of being shorter and, thus, being less cognitively demanding on students while also reducing administration time, allowing researchers to integrate more variables into their questionnaires. This represents a significant advantage, particularly as hypotheses and research questions in the social sciences have grown increasingly complex. Such complexity

requires researchers to assess a growing number of variables within a single study as efficiently as possible (Botes et al., 2022b). This development has facilitated more efficient assessment of anxiety while maintaining psychometric rigor.

Several studies also adapted or created scales modelled after the FLCAS, including the English classroom anxiety scale (ECAS; Liao & Wang, 2015), the English classroom speaking anxiety scale (ECSAS; Tang, 2016), the English language classroom anxiety scale (ELCAS; Liu, 2009) and the foreign language classroom anxiety questionnaire (FLCAQ; Young, 1990; Woodrow, 2006), all of which reflect a particular emphasis on speaking-related anxiety. Nevertheless, none of these scales are as widespread or validated as the FLCAS (Toyama & Yamazaki, 2021).

As already mentioned in chapter 2.1.2, to measure FLE, Dewaele and MacIntyre (2014) developed a 21-item foreign language enjoyment scale (FLES) covering aspects such as interest, creativity, enjoyment, self-importance and the influence of teachers and peers in the FL classroom. In 2016, they refined the instrument into a 14-item questionnaire, consisting entirely of positively worded statements rated on a 5-point Likert scale (1 = absolutely disagree to 5 = strongly agree), yielding total scores between 14 and 70. The revised scale demonstrated solid reliability, with an internal consistency coefficient of .86 (Shen, 2021; Zeng, 2021).

Because of the instrument's solid reliability and validity, the FLE scale has been widely adopted in subsequent research, along with shortened or translated adaptations such as, amongst others, the 11-itemed Chinese version by Li et al. (2018, as cited in Zeng, 2021), the 10-itemed Chinese FLE scale by Jiang and Dewaele's (2019) or the 17-itemed English classroom enjoyment scale (ECES) by Jin and Zhang (2018) (Zhang et al., 2024a: 7). Finally, Botes et al. (2021) re-analysed the database of Dewaele and MacIntyre (2014, 2016) and refined the scale to a 9-itemed shortened version of the FLES – the S-FLES – which was confirmed to be valid and reliable (Botes et al., 2021).

Other instruments to measure enjoyment that were not modelled on the FLES were developed as well, such as, for example, the enjoyment thermometer also called enjoymeter (Wang, 2022), quantitative questionnaires (such as in Shirvan & Taherian, 2021), the Q-sorting method which entails ranking 47 enjoyment-related statements on an 11-column grid

from -5 (most disagreement) to +5 (most agreement) (Thumvichit, 2022), qualitative questionnaires and interviews (typically part of a mixed method approach such as in Jiang & Dewaele (2019) for the open-ended questionnaires or in Zhang & Tsung (2021) or Myhre et al. (2023) for the interviews), observation of the FL students' facial expressions, body postures and other physical features (see Talebzadeh et al. (2020) who recorded smiles, laughter and nodding to identify FLE) (Zhang et al., 2024a) or physiological measures such as skin conductance or heart rate measure (Aubrey, 2022; Lindberg et al., 2022; Pizarro Chacón, 2022). Such scales provided objective measures that can complement self-reported data yet often require sophisticated equipment and expertise (Lindberg et al., 2022).

2.1.4.2 The Idiodynamic Method

Traditionally, emotions in foreign language (FL) research were conceptualized as stable, trait-like characteristics, which contributed to the widespread use of cross-sectional studies measuring emotions at a single point in time. More recent perspectives, however, view emotions such as enjoyment as both enduring traits and dynamic states that fluctuate according to changing learning conditions (Spielberger, 1972). Accordingly, FLE may be understood as both a stable disposition (trait enjoyment) and a context-sensitive, momentary experience (state enjoyment) (Jin & Zhang, 2021, as cited in Zhang et al., 2024a). While trait enjoyment reflects a learner's enduring tendency to approach language learning positively, state enjoyment captures the immediate emotional reactions shaped by classroom conditions. This shift reflects a broader understanding of emotions as simultaneously relatively stable and momentarily variable, shaped by the interaction of personal and contextual influences (Zhang et al., 2024a).

Because "emotions can arise and dissipate in an instant" (Zhang et al., 2024a: 6), emotional fluctuations may broaden or narrow learners' cognitive resources and affect speech processing capacities (Aubrey, 2022), as proposed in Broaden-and-Build Theory (Fredrickson, 1998). This recognition, together with the growing influence of Complex Dynamic Systems Theory (CDST) in SLA, highlighted the need for methodologies capable of capturing the dynamic nature of learner emotions (Lu, 2022). CDST conceptualizes language learning as a non-linear and emergent process shaped by the interaction of cognitive, social, and contextual factors (Hiver et al., 2022a; Hiver et al., 2022b). Within this theoretical framework, CDST-oriented research seeks to represent and understand complex systems at multiple levels of

analysis, to identify dynamic patterns of change, and to trace the underlying processes through which such patterns emerge (Hiver et al., 2022a).

Given that the CDST's recently revealed that language learning is a dynamic emotional and psychological process influenced by shifting variables and affective traits that produce moment-to-moment changes in learners' emotions (Gregersen et al., 2014), employing a dynamic method to investigate these fluctuations is both appropriate and necessary. In response to this methodological shift, the idiodynamic method was developed and has increasingly been applied in SLA research (Lu, 2022). This approach involves recording language-learning episodes and asking participants to evaluate their emotions on a second-by-second basis while reviewing their performance via stimulated recall videos – thus capturing learners' emotional fluctuations as they unfold during interaction.

The method has provided important insights into learners' emotional fluctuations during communication (Boudreau et al., 2018; Gregersen et al., 2014), demonstrating that "emotions fluctuate during communication as learners attempt to cope with ongoing communication demands" (Aubrey, 2022: 3-4). Unlike traditional approaches relying on group averages and treating individual differences as statistical noise (Lowie & Verspoor, 2018), the idiodynamic method adopts an idiographic, person-centered perspective that focuses on intra-individual variability over time (Lowie & Verspoor, 2018) as emotional variations are central to the CDST perspective due to their power to uncover the mechanisms driving complex learning processes (Lu, 2022). This approach also addresses the problem of ergodicity by recognizing that individual emotional trajectories may differ substantially from group-level patterns. In other words, data gathered using the idiodynamic method are unique to each individual and may not correspond with the experiences of other learners – a fact that is particularly true for emotions such as FLA or FLE which are known to fluctuate rapidly in authentic interactions (Lu, 2022).

A further strength of the idiodynamic method lies in its integration of quantitative and qualitative data. Using specialized software such as Variable Tester, participants provide moment-by-moment emotional (quantitative) ratings, which are subsequently explored through stimulated recall interviews (Gass & Mackey, 2000). This combination of quantitative and qualitative data allows researchers to gain a nuanced and multi-layered understanding of

learner experiences. In addition, it allows researchers to compare learner patterns horizontally, across different participants, or vertically, by examining intra-individual fluctuations in depth (Lu, 2022).

Despite their advantages, idiographic methods also present notable challenges. First, analyses at the individual level may produce results that differ from those obtained at the group level. According to the ergodic theorems, equivalent results would require that each individual's trajectory follows the same dynamic laws and exhibits equal mean levels and serial dependencies – conditions that are rarely met in practice and often cannot be adequately tested with available data. Second, conventional approaches to generalizability are difficult to apply in idiographic research. To address this, researchers may consider alternatives such as generalizing findings to homogeneous subgroups, across different contexts or across multiple occasions, which provide partial solutions to the issue of broader applicability (Velicer et al., 2014).

Although the idiodynamic method offers clear advantages for SLA and educational research, so far its application remains limited. Nevertheless, the few studies that have employed it in recent years have yielded important insights into SLA and the role of emotions in educational contexts (Lu, 2022): Firstly, the pioneering study by MacIntyre and Legatto (2011) was the first to make use of the innovative idiodynamic method to examine L2 students' WTC. Then, MacIntyre (2012) demonstrated the validity of the idiodynamic method as an innovative tool for capturing rapid shifts within dynamic systems underlying communicative processes. Other studies stressed the usefulness of the idiodynamic method for different research interests, such as learners' anxiety, its causes, its fluctuations (Gregersen et al., 2014), its stability over a period of time, as well as the impact of the interlocutors' familiarity (Shirvan & Talebzadeh, 2017a) and the impact of the topic on FLA (Saghafi & Shirvan, 2020). Further studies also investigated FLE as well as the effect of topic on FLE (Shirvan & Talebzadeh, 2017b) or the transparency of FLE to teachers and peers in the FL classroom (Shirvan & Talebzadeh, 2018b). In conclusion, to draw a more holistic understanding of the inherent complexity of individual language learners, the idiodynamic approach has become a crucial tool in SLA research (MacIntyre & Ducker, 2022).

Interestingly, when the idiodynamic method was first implemented to test the relationship between FLA and FLE at the individual level and to attest its dynamic nature, a generally moderate-to-strong negative correlation emerged at first. Yet, a closer examination revealed that

this pattern varied considerably and was far less uniform than initially suggested: Per-person correlations between FLA and FLE varied dramatically, ranging from strongly negative to nearly zero, indicating considerable individual variation in emotional responses (Boudreau et al., 2018). Therefore, Boudreau et al. (2018) concluded that the idiodynamic approach is particularly well suited to examining affective phenomena, especially discrete emotions such as FLA, given their inherently dynamic and context-dependent nature. However, they also emphasized the value of immediate assessments combined with stimulated recall, as this approach allows participants to draw on their recent memory and provide more accurate reflections on their emotional experiences. This insight was used to inform the present study's design, which will include stimulated recall.

Finally, studies using the idiodynamic method to analyse FLE/FLA fluctuations have identified varying triggers of FLA and FLE. Aubrey (2022), for example, explored the correlation between speaking anxiety, enjoyment and fluency in B2-C1 level learners of English during 3-minute long problem-solution oriented monologues. He identified different reasons for spikes in anxiety and enjoyment, including topic familiarity (see also MacIntyre & Gregersen, 2022 and Nakamura et al., 2021) and personalization of task topic (see Nakamura et al., 2021), alongside other variables such as (inhibited or heightened) fluency, difficulty or ease in retrieving lexis (see also Gregersen et al., 2014), formulating ideas or organizing ideas, (negative or positive) self-evaluation of lexical choices, time constraints, learners' own perception of English skills, emotions (e.g. sense of pride and satisfaction), regret for not having time to express another planned idea, task type or use of pre-planned ideas. Other factors influencing FLE and FLA include audience reactions and learners' self-evaluations of performance, which can generate feelings of enjoyment, pride and satisfaction as well as reduced anxiety, while other factors such as perceived failures intensify anxiety and diminish enjoyment (Gregersen et al., 2014). Especially cognitive-linguistic breakdowns (e.g. word retrieval difficulties) were found to frequently trigger anxiety surges and reduced enjoyment, underscoring the close interconnection between cognitive, affective and linguistic subsystems (see also Gregersen et al., 2014; MacIntyre & Gregersen, 2022; MacIntyre & Legatto, 2011; MacIntyre & Serroul, 2015).

Moreover, emotional shifts are closely tied to interpersonal dynamics (Aubrey, 2022): For instance, Shirvan and Talebzadeh (2018b) observed that learners' FLA fluctuated continuously in response to self-comparisons with their partners and the verbal or non-verbal feedback

they received. In a similar vein, MacIntyre and Gregersen (2022) found that in cross-cultural dyads, anxiety was heightened by difficulties in understanding unfamiliar accents but decreased when interlocutors identified common ground or shifted to more familiar topics. Collectively, these studies suggest that emotions in dyadic tasks often stem from the drive to preserve interpersonal harmony.

In conclusion, SLA research in learner emotions should capture the nuanced, moment-to-moment fluctuations of affective variables and the factors driving these changes, while accounting for both intra- and inter-individual differences among learners. Traditional statistical methods are insufficient for this purpose, as they fail to reflect the dynamic, evolving nature of these variables (Lu, 2022). As this overview has shown, the idiodynamic method appears well suited to capturing the multifaceted nature of human traits from a CDST perspective and can make a meaningful contribution to SLA research, particularly in the study of L2 learners' affective variables such as anxiety and enjoyment.

2.2 Individual Learner Differences Influencing FLA and FLE

The manifestation and effects of emotions in language learning are significantly influenced by contextual and individual factors. For example, Dewaele and MacIntyre's (2014) seminal work consisted of a large-scale project of 1740 FL learners with differing personal characteristics to examine the interrelation between IDs as well as external factors, on the one hand, and FLCA and FLE scores, on the other hand. Each factor had different impacts on either FLE or FLCA, or both – i.e. results did not form clear patterns as in 'what reduces FLCA, heightens FLE' – suggesting that the relationships between internal and external factors and FLE/FLCA remain complex (Shen, 2021).

Of course, a myriad of factors can be considered in their potential impact on FLA/FLE, such as language attitudes L2 motivation, speaking comfort and task design, all of which will be addressed in detail in the following chapters.

2.2.1 L2 Motivation

In the field of SLA, motivation is regarded as one of the most influential affective variables since it represents "a pivotal factor to the success of learning" (Khajavy et al., 2019: 499). It plays a decisive role in shaping how learners approach and persist in language learning, to the extent that it can guide and even determine their overall learning behaviour (Nevid, 2013, as cited in Wu, 2024).

L2 motivation can generally be regarded as a positive learner emotion and has received considerable attention in SLA research with the surge of PP and FLE (Botes et al., 2022a). As stated in chapter 2.1.2, early efforts to examine L2 motivation in FL research can be traced back to different motivational models such as Gardner and Lambert's (1972) distinction between integrative and instrumental motivation, Ryan and Deci's (2000, 2020) exploration of intrinsic versus extrinsic motivation, and Dörnyei's (2009) development of the L2 motivational self system (L2MSS) (Chin et al., 2024).

In this context, the term's definition depends on its conceptualization as embedded in these models. Generally speaking, L2 motivation can be described, however, as "learners' general attitudes toward learning [the target language]", encompassing their intrinsic motivation as well as their practical reasons for the desire to master the language (e.g. career opportunities) (Wu, 2024: 3). Drawing on Gardner and Lambert's (1972) model, L2 motivation refers to "the effort that the students were willing to expend to learn a target language" (Nikitina, 2019: 64). In this context, instrumental motivation refers to "a desire to gain social recognition or economic advantage through knowledge of a foreign language" (Gardner & Lambert, 1972: 14) while integrative motivation is conceptualized as the "language learner's intent to emulate or to "become associated" with native speakers of the target language" (Gardner & Lambert, 1972: 14). Dörnyei's (2005, 2009) model, however, calls for a different characterization of motivation: "Motivation, as defined by L2MSS, was described as arising from three distinct sources which are the individual's aspirations, external expectations, and the learning environment" (Wu, 2024: 3). Finally, within Deci and Ryan's (1985) self-determination theory, motivation is understood as an internal psychological process that sustains intentions and directs behaviour (Zhang et al., 2024b).

Yet, the interest in motivation in SLA research arose before these three very influential models – and thus before the popularity of L2 motivation in SLA was further boosted by the introduction of PP. Motivation research was properly initiated by the research in applied linguistics conducted by the social psychologists Gardner and Lambert (1959): In their study of English-speaking French learners of Montreal, the authors detected that L2 achievements were not only linked to linguistic aptitude, as previously assumed, but also to the intensity of the students' motivation to learn French as well as the purposes they perceived in doing so. This seminal investigation led to a wave of response studies that tested L2 motivation and its link to linguistic achievements across a wide range of contexts and TLs (see Gardner, 2019).

Because of its multifaceted nature, L2 motivation has been the subject of extensive research, leading to the development of numerous models and frameworks aimed at explaining its different dimensions (Wu, 2024). Generally speaking, the scales can be described as belonging to two different phases of motivation research:

The first stage of L2 motivation research is known as the social-psychological period, grounded in Gardner's (1985) socio-educational model (Gardner & Lambert, 1959; Gardner & Lambert, 1972). This model included a 104-itemed Attitudes/Motivation Test Battery (AMTB) which was developed to measure "the student's affective reaction to the classroom environment, the cultural influences on the learner's reaction to acquiring attributes of the cultural community, anxiety reactions when called upon to use the language, and the effort, persistence and satisfaction associated with the process" (Gardner, 2019: 11). In other words, the scale "conceptualised motivation in terms of three core components: motivational intensity, integrativeness, and attitudes toward the learning situation" (Wu, 2024: 1). These dimensions highlight the sociocultural dimensions of language learning and motivation, focusing on learners' attitudes toward the TL, its culture and its community as well as students' aspiration to become part of it (Wu, 2024). A key feature of the model is its distinction between integrative motivation and instrumental motivation (Khajavy et al., 2019; Pishghadam et al., 2021).

In 2004, Tennant and Gardner established and validated a shorter form of the AMTB – the Mini-AMTB – which only consisted of 11-items of 7-point Likert scales. Although the AMTB was extremely successful and widely adopted in applied linguistics and translated in many languages, it was later criticised with the advent of PP due to the fact that it only included anxiety as an independent variable of learners' emotions while positive emotions formed part of the more general attitude dimension, only (Dewaele & Meftah, 2024). Thus, pioneers of the PP perspective started arguing for a more holistic perspective on motivation that includes both positive and negative emotions in its research designs (see Dewaele et al., 2019b), especially since FLE became increasingly recognized as a crucial to understanding L2 motivation (Wu, 2024). Nevertheless, Gardner's (1985) socio-educational model remained deeply influential in SLA and continued to be widely adopted among researchers (Dewaele & Meftah, 2024).

The second phase, known as the era of cognitive-situated theories, sought to expand the socio-educational model which had been criticized for conceptual gaps and vague terminology

(see Dörnyei, 2005, as cited in Khajavy et al., 2019). This period introduced the distinction between intrinsic motivation, driven by internal satisfaction, and extrinsic motivation, shaped by external rewards (see Dörnyei, 2001, as cited in Khajavy et al., 2019), via Ryan and Deci's (2000) motivational model.

Then, Dörnyei (2005, 2009) introduced the aforementioned motivational construct L2MSS – a major advancement in motivation research that unified earlier models. This model broadened the understanding of L2 motivation by integrating emotional dimensions (Papi, 2010; Tahmouresi & Papi, 2021), including enjoyment, alongside traditional motivational elements (Wu, 2024), thus contributing to the affective turn.

As already pointed out in chapter 2.1, emotions have been shown to impact L2 motivation in myriad ways. Zhang et al. (2024b: 2-3) even go so far as to claim that “[e]motion is the fundamental basis of motivation in language learning (MacIntyre & Gregersen, 2012), functioning as an amplifier that provides intensity, urgency and energy to drive the behavior.” While FLE has been confirmed by the literature to effectively promote higher levels of motivation and engagement among language learners (Zeng, 2021), FLA has been found to be mostly negatively linked to motivation:

For example, in their study on the relationship between positive/negative emotions and L2 motivation using the AMTB and instruments linked to Dörnyei's (2009) L2 self system, MacIntyre and Vincze (2017) discovered that a systematic and considerable positive relationship existed between positive learner emotions and motivation while the relation to negative learner emotions remained weak and less systematic (Dewaele & Meftah, 2024). Nearly identical findings emerged from Dewaele and Proietti Ergün's (2020) who, using the Mini-AMTB, discovered motivation to be strongly and positively correlated with FLE and moderately negatively correlated with FLCA. Similarly, Busse and Walter (2013) found that a loss of FLE can trigger a loss of L2 motivation (Dewaele & Meftah, 2024). Furthermore, Dewaele and Meftah (2023) identified a significant positive relationship between positive emotions and motivation at different proficiency levels. In the authors follow-up study (2024), however, they uncovered that motivation increases with higher skill levels (while FLA decreases) – especially between beginner and intermediate level, after which motivation levels stabilise somewhat. MacIntyre et al. (2020: 71) concluded that students “who felt inspired, enthusiastic, proud, excited and interested were more likely to enjoy the course and the teacher. Inspired, determined and enthusiastic learners in both groups were also more likely to score

higher on integrative motivation”. In sum, these findings paint a clear picture of the positive relationship between L2 motivation and FLE as well as the negative one between FLA and L2 motivation – although less consistently.

Beyond the relationship between FLE/FLA and L2 motivation, motivational research in SLA has discovered that motivation is prone to influence and increase other positive learner variables such as WTC, L2 use frequency, L2 achievement (see Alrabai, 2022, Gardner, 1985, Khajavy et al., 2014, Peng & Woodrow, 2010, Yashima, 2002 and Yu, 2011, as cited in Zhang et al., 2024b) and L2 confidence (see Khajavy et al., 2014, Peng & Woodrow, 2010 and Yashima, 2002, as cited in Zhang et al., 2024b). In addition, Dörnyei (2005) highlighted that motivation is more important than pure cognitive skills to achieve long-term L2 learning goals. Motivation has, thus, been found to serve as the catalyst for beginning L2 learning and the sustaining force that drives progress throughout the learning process (Khajavy et al., 2019; Dörnyei, 2005, as cited in Zhang et al., 2024b).

On a different note, many researchers highlighted the important impact that positive FL attitudes have on motivation: Dewaele and Proietti Ergün (2020) “speculated that having positive attitudes toward a target language, in addition to a strong motivation to learn the language, creates the ideal basis for positive learner emotions to emerge in the classroom” (Dewaele & Meftah, 2024: 11). Pan and Zhang’s (2023) study on different learner emotions and motivation uncovered the positive relationship between, FLE, English learning attitudes and cultural interest.

The crucial relationship between L2 motivation and FL attitudes is reflected in the inclusion of several attitude-related scales among the 11 components of the AMTB (Gardner & Lambert, 1972). For example, the Integrativeness Scale of the AMTB, originally consisting of “integrative orientation + interest in Foreign Languages + attitude toward French Canadians” (Dewaele & Meftah, 2024: 2), incorporates learners’ attitudes toward speakers of the TL. More broadly, the AMTB emphasizes the sociocultural dimension of language learning by highlighting the importance of learners’ attitudes toward the TL community and their desire to integrate with it (Wu, 2024). Although this socioculturally oriented conceptualization of motivation has been criticized for placing considerable emphasis on TL attitudes, Gardner (1985, as cited in Nikitina, 2019) later argued that integrative motivation should be understood more broadly as learners’ positive interest in the TL, its speakers, culture and country. He further emphasized that learners’ perceptions and attitudes toward the TL community,

culture, and people – collectively referred to as ‘language attitudes’ – play a central role in additional language learning (Nikitina, 2019). The strong relationship between language attitudes and motivation informed not only the inclusion of both constructs as learner variables in the present study, but also the decision to adopt Gardner and Lambert’s (1972) motivational scale in the methodological design.

In sum, this overview has not only presented the development of the L2 motivation research fields, its most important models and findings, but it has also highlighted the importance that our perceptions of the TL and its people has on L2 motivation and, thus, potentially on learner emotions – a topic which will be addressed now in greater detail.

2.2.2 Foreign Language Attitudes

Language and culture are inherently intertwined: Language serves as a medium for expressing and transmitting culture, while culture shapes the ways language is used and understood. Consequently, representations of culture are an inevitable and integral part of FL education and aid the process of learners’ acculturation (Yu, 2020). By both tradition and necessity, language instruction involves more than teaching linguistic forms; it also engages with the cultural values, practices and perspectives of the TL community. At the same time, learners’ open and positive attitudes toward the TL culture can greatly support SLA, and vice versa. Furthermore, an individual’s worldview, beliefs and underlying assumptions shape how they perceive and interpret the target culture. Such belief systems play an important pedagogical role in FL teaching and learning, influencing how learners engage with cultural content and develop intercultural understanding (Yu, 2020). Thus, learning a L2 does not solely tap into the cognitive and affective faculties of learners. Language learning is essentially a social and cultural process as well.

Yet, the interaction of language learning and culture is not necessarily straightforward or positive. As mentioned just above, research has highlighted that attitudes of a TL, its country and people can affect variables that are central to language learning, such as L2 motivation, positively or negatively. Additionally, studies have also demonstrated that learners’ stereotypes and mental images about the TL community can shape their L2 motivation, either encouraging or discouraging their engagement in language learning (see Gardner & Lambert, 1972, Dłaska, 2000 and Castellotti & Moore, 2002, as cited in Nikitina, 2019), although research on the subject of FL stereotypes and motivation has remained generally scarce (Aslan & Thompson, 2021). Similarly, Zhang et al. (2024a: 7) found that love for the TL can “sustain

language learning efforts in the face of challenges and adversity”, suggesting that positive attitudes can boost the language learning process. Finally, lower FLCA scores have been proven to be associated with higher TL attitudes, suggesting that higher attitudes can reduce FLA (Dewaele et al., 2017). All of this suggests that TL attitudes play a crucial role in reducing FLA, boosting motivation, and thus, helping language acquirement – which makes them a valuable variable for SLA research.

Attitudes and stereotypes do not inherently refer to the same thing: Attitudes refer to “tendencies to evaluate an entity with some degree of favor or disfavor, ordinarily expressed in cognitive, affective, and behavioral responses” (Eagly & Chaiken, 1993: 155). In L2 research, ‘language attitudes’ refer not only to learners’ evaluations of the target language itself but also to their beliefs and feelings about its speakers and the countries where it is spoken (see Dörnyei, 1990, Kormos, et al., 2011 and Al-Hoorie, 2016, as cited in Nikitina, 2019). These attitudes are considered ‘emotional precursors’ of language learning behaviour (Kormos et al., 2011). However, in FL learning contexts, learners often have limited or no direct contact with TL communities, making their language attitudes relatively vague and often stereotyped (Dörnyei, 1990 and Kormos & Csizér, 2007, as cited in Nikitina, 2019).

According to Spencer-Rodgers (2001), “[s]tereotypes is a complex psychological construct that incorporates cognitive, attitudinal and evaluative components” (Nikitina, 2019: 59). Stereotypes are commonly viewed as false and negative mental constructs, yet they can also be positive and accurate. Their defining characteristic lies in their rigidity and resistance to change. Scholars further note that stereotypes influence and direct individuals’ attitudes and behaviours toward the groups being stereotyped (see Greenwald & Banaji, 1995; Lippmann, 2012). In other words, “stereotypes embed attitudes toward the stereotyped entity” (Nikitina, 2019: 63; see also Greenwald & Banaji, 1995; Lippmann, 2012). In addition, stereotypes can shape behaviour and motivate action which, once more, links TL attitudes to L2 motivation (Nikitina, 2019). In this context, we describe stereotypes (also called ‘mental representations’) as “evaluative mental images and beliefs about a target language country held by language learners that have the potential to influence the learners’ L2 motivation” (Nikitina, 2019: 59).

However, and as mentioned above, only few studies on L2 motivation have considered country stereotypes explicitly. Nikitina (2015) found that students generally held positive stereotypes of TL countries. Her correlational analysis further revealed a significant positive link

between country images and learners' integrative motivation. Furthermore, several studies (e.g. Gardner et al., 1999; Csizér & Dörnyei, 2005; Csizér & Kormos, 2008; Kormos et al., 2011; Nikitina, 2019) confirmed these findings by uncovering that positive language attitudes are directly linked to L2 motivation, especially the integrative orientation. Finally, Nikitina (2019) highlighted the importance for future studies to focus on more advanced language learners since the highly overstudied beginners are often very enthusiastic as they begin learning the new language and, thus, have higher L2 motivation levels – a gap that is addressed in this study via the medium-levelled student pool.

Only few studies have investigated the relationship between FL stereotypes and FLE/FLA: Dewaele et al. (2017) found that better FL attitudes are associated with a reduced FLCA score as well as a heightened FLE score. Similarly, Özer and Yetkin (2022) discovered a negative strong relationship between the two factors, indicating that favourable FL attitudes help students to overcome FLA while negative attitudes can fuel FLA, or vice-versa FLA can fuel negative FL attitudes. Furthermore, Dewaele et al. (2023) discovered that FLE can positively impact learners' attitudes towards the FL. Other studies found a similar positive relationship between FLE and positive attitudes (see De Smet et al., 2018, Dewaele et al., 2019c, Dewaele & Dewaele, 2017 and Jiang & Dewaele, 2019, as cited in Dewaele et al., 2023; Hussain et al., 2011, as cited in Özer and Yetkin, 2022; Dewaele and MacIntyre, 2014) while others (see Dewaele et al., 2017 and Dewaele & Proietti Ergün, 2020, as cited in Dewaele et al., 2023; Karagöl & Başba, 2018, as cited in Özer and Yetkin, 2022) found attitudes towards the FL and FLCA to be negatively correlated. Unfortunately, all of these study designs only investigated students' attitudes towards the TL, not the TL culture or people, thereby missing out on the possible effect that the variables can have on learner emotions or vice-versa.

As this overview has shown, research on learner emotions and language attitudes remains scarce, highlighting the need for further research in this field, especially on FLA. In addition, the few studies that investigate this relationship focused solely on learners' attitudes towards the FL while disregarding their attitudes towards the TL culture or community – showcasing that the impact that 'learning attitudes' have on learner emotions and, thus, the language learning process, need to be studied in more depth as well as more holistically. The present study will address this gap by including both FLA and language attitudes – alongside the importantly linked variable L2 motivation – as learner variables.

2.2.3 Speaking Comfort

One of the most widely studied variables in second language research in recent years is willingness to communicate (WTC). WTC is defined in SLA as “a readiness to enter into discourse at a particular time with a specific person or persons, using a L2” (MacIntyre et al., 1998: 547). Unlike L1 WTC, L2 WTC is conceptualized as both a relatively stable trait and a situationally fluctuating state, reflecting learners’ readiness to initiate and sustain communication in the target language under particular contextual conditions (Peng, 2025). Importantly, L2 WTC has been shown to be closely associated with affective variables such as FLA, FLE, self-perceived communicative competence, L2 confidence, L2 motivation and context-dependent variables such as topic or the interlocutor – all of which contribute to learners’ subjective experience of speaking in the L2: Lower FLA, higher self-perceived communicative competence, higher motivation, higher FLE and higher L2 confidence are associated with higher WTC, and vice-versa. Moreover, WTC is higher when the interlocutor was familiar or very friendly, which is akin to earlier findings (see chapters 2.1.1 and 2.12) about the positive value of teacher’s friendly and relaxed disposition. Similarly, greater WTC is associated to familiar, interesting or personally relevant topics (Peng, 2025).

While WTC provides valuable insight into learners’ readiness to engage in L2 interaction, the present study does not aim to examine L2 German learners’ WTC per se, but rather their experienced comfort or discomfort during L2 speaking. Willingness to speak does not necessarily entail a sense of ease while speaking; learners may, for instance, choose to participate in L2 interaction despite feeling tense, self-conscious or uneasy. Conversely, learners may feel relatively comfortable in certain speaking situations yet refrain from initiating communication for reasons unrelated to affect (e.g. task demands or social norms). To capture this experiential dimension of L2 oral interaction, the present study introduces the construct of speaking comfort, defined as the degree of ease or unease experienced by learners during spoken interaction in the L2, whether in general, with peers or with native speakers.

Nevertheless, given that speaking comfort operates within a conceptual domain closely related to that of WTC, it is hypothesized that it will interact with a similar set of affective and motivational variables. This hypothesis is examined by embedding the construct of speaking comfort within a broader investigation of individual learner variables clustering, including L2 motivation, FLA and attitudes toward the target language, its speakers and the target culture.

2.2.4 Task Design, Task Complexity and Topic Familiarity

The language learning experiences that students go through and their related emotions to these experiences, including FLE and FLA can be considerably affected by the task design – including the task complexity as well as the topic familiarity.

As for task design, in SLA, emotions in L2 speaking have been explored from both task-based language teaching (TBLT) and L2 psychology perspectives (Aubrey, 2022). The latter approach has been accounted for multiple times in this literature review, focusing on the diverse internal affective variables that students may exhibit during the FL learning process, either as trait emotions or short-term state emotion. The TBLT, on the other hand, with its pedagogical orientation, treats tasks as core learning units that promote meaningful communication and facilitate language development through use (Ellis et al., 2020, as cited in Aubrey, 2022).

Research in TBLT shows that task design and implementation strongly influence learners' emotions. Tasks with familiar content and elements of learner control (e.g. choice of own pictures for photo-description tasks) often boost enjoyment, confidence and autonomy, though such control can also raise anxiety alongside enjoyment (Nakamura et al., 2021, as cited in Aubrey, 2022). In a similar vein, anxiety was found to decrease when interlocutors shifted to more familiar topics (MacIntyre & Gregersen, 2022). Similarly, Gregersen et al.'s (2014) study – which combined idiodynamic anxiety ratings with physiological data (heart rate) to examine learners giving presentations – showed that anxiety fluctuated sharply in response to presentation topic (i.e. topic familiarity), alongside other factors.

Implementation factors further shape emotions (Aubrey, 2022): Pre-task planning (i.e. planning content and language to be used) may lower anxiety by reducing cognitive load while boosting confidence and enjoyment (Skehan, 2018) but can restrict spontaneity, especially for more experienced learners and, thus, provoke anxiety (Boudreau et al., 2018; Bui & Teng, 2018; Gregersen et al., 2014). Task repetition, on the other hand, helps ease anxiety through practice (Bygate & Samuda, 2005) but risks boredom if overused (Kim, 2013). This indicates that spontaneous tasks (see Segment 2 and 3) can lead to higher FLA levels compared to pre-planned tasks while repeated tasks (see Segment 1) can reduce FLA. Thus, task design and task implementation interact with learners' personal interests and experiences to influence emotions such as enjoyment and anxiety: As for task design, familiar or personally relevant

content can enhance enjoyment, while predictable discourse patterns reduce anxiety by facilitating smoother speech (see also Dewaele & Pavelescu, 2019; MacIntyre & Wang, 2021) (Aubrey, 2022). For this purpose, this study adopted different task types for the second phase of the study, which vary in topic familiarity as well as repetition, starting with a very familiar topic that is frequently repeated in L2 use (i.e. introduce yourself), followed by a monologue about a familiar topic of their choice (i.e. recent trip or experience) and finished off by a monologue about a less familiar topic with least chance of repetition (i.e. right to vote vs. obligation to vote).

Building on gaps identified in previous research, the present study adopts a research design which address several methodological and contextual limitations in the current FLA/FLE literature. First, whereas the majority of existing studies have focused on English as an L2 and predominantly examined Chinese EFL learners in university settings, this study investigates L1 French learners of German as an L2, thereby contributing to the underrepresented body of research on less frequently studied European target languages and learner populations. Second, because traditional questionnaire-based approaches such as the FLCAS and FLES provide only static, retrospective snapshots of learner emotions, the present study combines established quantitative scales with dynamic methodologies, namely the idiodynamic method, in a mixed-methods approach. In doing so, it captures the moment-to-moment fluctuations of FLA and FLE during authentic interaction, rather than simply reducing emotions to averaged group scores. Moreover, by integrating stimulated recall interviews, this study allows qualitative data to complement quantitative findings as well as graphic results, providing a richer and more ecologically valid understanding of learners' emotional experiences. Third, by examining emotional dynamics during interactions with native speakers outside strictly controlled classroom contexts, the study also responds to calls for more diversified interaction types and contexts than the typical classroom context and learner-teacher interaction (Zhang et al., 2024a). Moreover, the analysis of interactions between different individual learner variables (i.e. L2 motivation, language attitudes, speaking comfort etc.) further deepens discussions on possible relationships between these variables (see discussion above). Finally, the qualitative analysis of FLE/FLA triggers complements the field's idiodynamic findings of internal and external triggers identified so far.

2.3 Research Questions and Hypotheses

Due to the fact that this study constitutes an exploratory approach to cluster profiles according to different learner variables, the first research Question (RQ1) is ‘How many clusters emerge based on the learner variables FLA, L2 motivation, speaking comfort and FL Attitudes, what are the clusters’ composition and characteristics?’

After identifying the clusters, one representative per cluster will perform an L2 spoken task with different degrees of topic familiarity and with a native speaker. Based on this interaction, the representatives will rate their FLE and FLA fluctuations based on the idiodynamic approach. Based on the cluster profiles, different hypotheses as to their FLA and FLE fluctuations will be formulated. Therefore, our second research question (RQ2) is ‘Do representatives of clusters behave as expected (see hypotheses) while topic familiarity decreases or do self-reported profiles diverge from situated behavior during L2 production?’

Finally, after the idiodynamic rating, the representatives will conduct a post-hoc interview to explain the reasons behind their emotional fluctuations with the help of stimulated recall. In this context, the third research question (RQ3) emerges as ‘Does topic familiarity emerge as the sole and reliable factor contributing to FLA and FLE fluctuations in L2 speaking situations with natives? If not, what (other) factors contribute to learners’ emotional trajectories?’

3. Methodology

3.1 Participants

The study targeted L1 French university students of German (L2) with at least a B1 level in German, initially focusing on participants from Belgium. Due to limited responses, recruitment was later expanded to other French-speaking regions, including France and La Réunion. The original sample consisted of 82 participants; however, after excluding incomplete questionnaires ($n = 6$) and participants whose first language (L1) was not French ($n = 7$; 2 with German L1 and 5 with other L1s such as Spanish or Portuguese), the final sample comprised 69 participants.

Participants’ ages ranged broadly, with most born between 2002 and 2007 ($M = 2004.8$). Specifically, the age distribution was as follows: 2 participants did not report their year of birth; 1 born in 2008; 13 in 2007; 6 in 2006; 9 in 2005; 8 in 2004; 7 in 2003; 8 in 2002; 4 in 2001; 3 in 2000; 1 each in 1999, 1998 and 1990; 2 in 1995; and 1 in 1989.

The sample included 48 female, 19 male and 1 participant identifying as divers. Most participants were monolingual French speakers ($n = 62$), while a minority ($n = 7$) reported French as a dominant language alongside another language (e.g. Vietnamese, English, Chinese, etc.). Regarding nationality, the majority were French ($n = 46$), followed by Belgian ($n = 12$) and other or dual nationalities ($n = 11$), such as, for example, Canadian, Austrian, Ivorian or French-Vietnamese.

Participants were enrolled at a variety of universities, with the largest groups from the Université de Strasbourg ($n = 25$) and Université de Lorraine Nancy ($n = 15$). Other universities represented included UCLouvain ($n = 9$), Université Sorbonne, Paris ($n = 8$), Université catholique de Namur ($n = 3$), Université de Grenoble ($n = 2$), Université of Picardy Jules Verne ($n = 2$), Université de la Réunion ($n = 2$), Université Catholique de Louvain Saint-Louis Bruxelles ($n = 1$), Université de Macao ($n = 1$) and Université de Nantes ($n = 1$).

All participants provided contact information to ensure follow-up participation in the second phase of the study if selected. The inclusion criterion of B1-level French proficiency was confirmed by distributing the questionnaire via language instructors, who ensured that participating students met the minimum proficiency requirement.

3.2 Tools

The mixed-methods questionnaire comprised 35 closed-ended items, four open-ended questions and three thermometer-type scales (see Appendix 8). The instrument began with eight socio-demographic items designed to elicit participants' learner profiles (items #1-8). This was followed by the short version of the foreign language classroom anxiety (FLCA) Scale developed by MacIntyre (1992) to investigate L2 German learners' "worry and negative emotional reaction aroused when learning or using a second language" (MacIntyre, 1999: 27) (items #9-16).

Next, the questionnaire addressed the domain of stereotypes, which are defined as "evaluative mental images and beliefs about a target language country held by language learners that have the potential to influence the learners' L2 motivation" (Nikitina, 2019: 59). Stereotypes are closely related to language attitudes. As Nikitina (2019: 61-62) notes, "[i]n L2 research, "language attitudes" encompass not only attitudes held by language learners toward a target language itself but also their attitudes toward—and beliefs about—speakers of this

particular language and countries where this language is spoken”, suggesting that FL attitudes towards not only the language but also the country and its speakers may impact learners’ L2 motivation. Accordingly, and in recognition of the fact that language learners’ attitudes toward a TL country may be vague due to limited cultural exposure (Dörnyei, 1990; Kormos & Csizér, 2007), the research instrument incorporated three thermometer-type scales to measure learners’ more general attitudes toward the German language, German people and Germany (items #22–24). Items #17–19, which consisted of three open-ended questions adapted from Nikitina’s (2019) study, were not included in the subsequent analysis, as their examination would have exceeded the scope of the present master’s thesis.

In addition, speaking comfort among L2 German learners was examined through four closed-ended items (items #20 and #40–42) and one open-ended question (item #21), based on Schmid and Dusseldorp (2010). In this paper, speaking comfort or discomfort is understood as the degree of ease or unease experienced by learners during spoken interaction in the L2, whether in general, with peers or with native speakers.

Finally, the measures of L2 motivation used in this study were grounded in the model proposed by Gardner and Lambert (1959, 1972). Specifically, the instrument assessed three components: (1) general motivation, referring to the degree of effort learners were willing to invest in learning the TL (items #26, #27, #29, #30, #32 and #37); (2) instrumental motivation, which captures learners’ perceptions of the TL’s practical value and their intention to use it for pragmatic purposes (items #31, #33, #36, #38 and #39); and (3) integrative motivation, reflecting learners’ desire to learn the TL in order to communicate with its speakers and to understand their culture and way of life (items #25, #28, #34 and #35). Finally, some of the established scales were adapted to fit the context of the present study.

Additional tools used in this project include the statistics tool IBM SPSS Statistics (version 29.0.1.0(171)) (IBM Corporation, 2023), Microsoft Excel, Google Forms, Buzz (version 1.4.4) for the transcription of the post-hoc interviews with time stamps (Williams, 2026) and the Variable Tester (version 2) for the idiodynamic ratings (Hsu, 2026).

3.3 Method

3.3.1 Survey

First, the questionnaire developed based on relevant literature, was made available online using Google Forms. Data collection via the survey began in December 2024. The questionnaire link was initially distributed at Belgian universities. Due to a limited number of responses, the survey was subsequently disseminated more widely in France and La Réunion, particularly during January 2026. The data collection phase concluded in mid-February 2026.

3.3.2 Quantitative Statistic and Qualitative Close-Reading of Sample

After the collection period ended, the dataset was exported and cleaned in Microsoft Excel. Incomplete responses and inconsistent entries were reviewed and removed where necessary. Quantitative data were then imported into IBM SPSS for statistical analysis. Qualitative responses remained in Excel and were reserved for potential later stage in-depth qualitative analysis, which did not occur.

The questionnaire elicited several affective and motivational constructs: FLCA, speaking comfort (or discomfort), TL attitudes and L2 motivation – where L2 motivation was initially conceptualized as a single multi-item construct encompassing general, integrative and instrumental dimensions. However, subsequent analytical evidence (see chapter 4.3) indicated that it was methodologically more appropriate to treat integrative and instrumental motivation as separate constructs rather than combining them into one overarching L2 motivation variable.

Using IBM SPSS Statistics (version 29.0.1.0(171)) (IBM Corporation, 2023), the statistical analysis began with reliability testing using Cronbach's alpha for all multi-item scales (FLCA, integrative motivation, instrumental motivation, general motivation, L2 motivation, speaking comfort and TL attitudes) to ensure the internal consistency of the constructs. After confirming acceptable reliability levels, mean scores were calculated for each construct per participant. Then, these composite scores were used for subsequent analyses.

To identify groups of learners with similar affective and motivational profiles, a hierarchical cluster analysis was conducted using Ward's method and squared Euclidean distance. A hierarchical approach was chosen because no predefined cluster structure was assumed.

Several clustering scenarios were tested to determine the most appropriate model. Initially, different combinations of constructs were examined, including:

- FLCA
- Overall L2 motivation
- Integrative and instrumental motivation separately
- Speaking comfort
- Attitudes

To determine the most appropriate clustering solution, four different models were tested using varying combinations of constructs. Specifically, the analyses differed with regard to:

1. Whether motivation was treated as a single L2 motivation construct or as two separate constructs (integrative and instrumental motivation).
2. Whether attitudes were included in the model or excluded due to moderate reliability scores.

To further evaluate the suitability of each model, exploratory factor analyses (EFA) were conducted for all four combinations using the Kaiser criterion (eigenvalues > 1).

Based on statistical robustness, variance explained and interpretability of the cluster profiles, a five-variable model was retained as the final clustering solution. Following validation, each participant was assigned to either Cluster 1 or Cluster 2 in the dataset.

To compare the two clusters, case summaries were generated and descriptive statistics (means and standard deviations) were calculated for all variables. As normal distribution could not be assumed, non-parametric tests were conducted. Differences between clusters were examined using the Mann–Whitney U test. Moreover, bootstrapping was performed to retrieve the mean scores for each variable per cluster, as well as to confirm cluster stability.

Finally, individual cases within each cluster were manually reviewed to identify particularly illustrative learner profiles. These cases were selected for further qualitative exploration in the second phase of the study. Unfortunately, due to the limited number of participants in Belgium, only few learner cases were eligible for the second part of the study since it had to be carried out in person. Nevertheless, from this limited pool, the most representative of individuals for their respective cluster were invited to take part in the idiodynamic study.

3.3.3 Idiodynamic Study

The procedures of the idiodynamic study were piloted in a mock interview conducted prior to the main data collection. While the linguistic configuration differed from that of the actual study, the overall communicative structure remained comparable. Specifically, the test participant's first language (L1) was German and their second language (L2) was French; consequently, the interview was conducted in French, whereas the idiodynamic rating and post-hoc interview were carried out in German. The physical setting was identical to that of the main study.

This pilot phase provided valuable insights into potential procedural issues, allowing for adjustments to be made prior to data collection. For instance, the recording setup was modified to ensure horizontal rather than vertical filming, and a timer was introduced to facilitate more precise time management during the interview.

The idiodynamic study was conducted in person in March 2026 in a quiet room at the Arts and Languages Library in Louvain-la-Neuve, Belgium, ensuring a controlled and distraction-free experimental environment. The two cluster representatives participated sequentially. The study comprised three main phases: an interaction in the TL (German), the idiodynamic rating of learner emotions and a subsequent post-hoc stimulated recall interview.

At the outset, participants were provided with an information sheet and consent form, which they read and signed. They were then briefed on the overall procedure and study guidelines. It was explained that the interaction phase would be conducted in German, while all remaining communication, including the post-hoc interview, would take place in French, their L1. Participants were further informed that their performance would not be assessed or graded and that the study should be understood as a learning-oriented opportunity rather than an evaluative task. The respective roles within the study were also clarified: The observer was responsible for video recording the interaction and documenting relevant non-verbal behaviour, the interviewer moderated the interaction, managed timing and conducted the follow-up interview, and the interviewee participated in the conversation and completed the idiodynamic ratings.

Following this, the interview phase was conducted and video-recorded by the observer. The interviewer adopted a supportive and relaxed interactional style, as previous research suggests that a positive affective climate can help reduce FLA (Young, 1990) and enhance FLE

(Zeng, 2021). The interview consisted of three sections representing varying degrees of topic familiarity. First, participants were asked to introduce themselves (high topic familiarity; approximately 1 minute). Second, they discussed a recent personal experience or a recent holiday of their choosing (moderately high topic familiarity; approximately 2 minutes). Finally, participants were invited to comment on a political issue, namely the right vs. duty to vote (relatively low topic familiarity; approximately 2 minutes). The overall duration of the interview was carefully monitored and limited to a maximum of five minutes in order to avoid excessively long recordings, which could increase participant fatigue and complicate the rating process during the subsequent idiodynamic phase of the study.

In the second phase of the idiodynamic study, participants were first provided with a definition sheet outlining the two constructs under investigation, namely FLA and FLE, whose fluctuations were subsequently measured using the idiodynamic rating software Variable Tester (version 2) (Hsu, 2026). To ensure reliable understanding of the constructs and task instructions, the definitions were made available in German, French, and English, allowing participants to consult the language with which they felt most comfortable.

Participants were then familiarized with the software through a short practice session using a sample video. Variable Tester (version 2) enables users to watch a video recording while simultaneously rating a selected variable on a second-by-second basis along a scale ranging from -5 to +5. Ratings are adjusted through '+' and '-' controls, allowing participants to indicate both gradual and more pronounced emotional fluctuations over time. In the absence of participant input, the cursor automatically returns progressively toward the neutral midpoint (0). Once participants indicated that they felt comfortable using the software, they were asked to rewatch their recorded interviews and, during a first viewing, continuously rate their fluctuating levels of FLA. The same procedure was subsequently repeated to assess fluctuations in FLE.

Subsequently, the idiodynamic data files were extracted and processed in Excel to generate a combined emotional timeline graph illustrating second-by-second fluctuations in FLA and FLE during the interview. This visual representation was then used by the interviewer to prepare targeted post-hoc questions aimed at eliciting potential explanations for notable peaks, dips and overall patterns in the participants' emotional trajectories.

In the third phase of the study, a stimulated recall interview was conducted and video-recorded. During this phase, participants were asked to reflect on and explain fluctuations in their emotional experiences with reference to both the emotional timeline graph and the original interview recording. The interviewer facilitated an open and reflective discussion, encouraging participants to connect specific emotional changes to corresponding interactional events. In addition, semi-structured, open-ended questions were used to support recall of thoughts and feelings associated with observed emotional shifts. This procedure allowed for a detailed qualitative exploration of the factors underlying moment-to-moment emotional variability during the interaction.

3.3.4 Transcription of Data

Audio data from the two post-hoc interviews were automatically transcribed using Buzz (version 1.4.4) (Williams, 2026), a transcription software powered by OpenAI's Whisper model. The program enabled automatic speaker identification and time-stamping of the recordings, thereby providing a structured overview of turn-taking during the interviews. The resulting transcriptions were subsequently checked and manually corrected to ensure accuracy before being exported into a text format for further qualitative analysis.

3.3.5 Correlation Analysis and Descriptive Statistics

In a subsequent step, correlation analyses were conducted for both participants' idiodynamic datasets using SPSS, employing Spearman's rho (ρ) as the non-parametric measure of association. Separate analyses were performed for each of the three interview segments to account for potential variation across task conditions.

In addition, descriptive statistics, including mean, median, and standard deviation, were calculated using Microsoft Excel to provide a summary of central tendency and dispersion for the relevant variables.

3.3.6 Qualitative Analysis of Idiodynamic Interview

First, the idiodynamic graphs were analysed qualitatively on a segment-by-segment basis, with particular attention given to fluctuations in FLA, FLE and the intra-segment relationship between both emotional constructs for each participant. After identifying general patterns and tendencies within each individual dataset, a comparative per-segment analysis was conducted to examine similarities and differences in emotional trajectories across participants during authentic communicative tasks with a native speaker and across topics of varying familiarity.

Subsequently, the transcribed post-hoc interviews were analysed manually to identify self-reported factors (i.e. codes) associated with peaks and dips in FLA and FLE. To ensure systematic and transparent analysis, an inductive, bottom-up coding scheme was developed based on participants' explicit explanations of their emotional experiences with the help of OpenAI (see coding books in Appendix 1 for Participant 1 and Appendix 4 for Participant 9). These codes were then organised into broader thematic categories for each participant to facilitate subsequent intra- and inter-individual comparisons. This qualitative procedure, situated within a thematic analysis framework, aimed to identify recurring internal and external triggers of emotional fluctuations.

Finally, the distribution and use of themes were examined across individual segments in order to assess the extent to which specific emotional triggers varied according to topic familiarity. Per-segment thematic findings were then compared both between participants and to each participant's questionnaire-based profile.

Finally, the findings from the quantitative and qualitative analyses were then synthesised to provide an overall comparative interpretation of the participants' emotional dynamics and the external and internal triggers behind their emotional behaviour.

4. Analysis and Results

4.1 Reliability Analysis

As noted above, the questionnaire used in the first part of the methodology initially revealed four constructs for analysis: FLCA, speaking comfort, attitudes and L2 motivation.

Internal consistency was assessed for all constructs using Cronbach's alpha to ensure the reliability of the constructs. FLCA demonstrated excellent reliability ($\alpha = .905$) and speaking comfort also demonstrated good internal consistency ($\alpha = .858$). The construct of attitudes, however, only achieved moderate but still acceptable internal consistency ($\alpha = .681$), possibly due to the fact that the construct only consisted of three items. Removing the item with the lowest consistency of the scale increased alpha only marginally ($\alpha = .691$) and therefore the full scale was retained.

Finally, L2 motivation as a combined scale (encompassing general, integrative and instrumental motivation) achieved a satisfying internal consistency ($\alpha = .780$). Nevertheless, after

checking the consistency of all composite constructs (i.e. general, integrative and instrumental motivation separately), general motivation was discarded for lack of internal consistency ($\alpha = .592$) while instrumental motivation ($\alpha = .818$) showed good reliability. Integrative motivation, however, only yielded an acceptable score ($\alpha = .661$). Removing the least consistent item, however, slightly reduced the internal consistency of the construct ($\alpha = .659$), so all items were retained.

Due to these unclear results as to which approach was the more consistent (i.e. the L2 motivation construct as such or the two sub-categories of integrative and instrumental motivation as separate constructs), initially both possibilities were retained in the following analysis. Additionally, due to the rather low internal consistency score of the attitudes construct, its impact and relevance in the cluster analysis was also to be tested.

Thus, six possible constructs were retained for the cluster analysis, of which four to five would be included in the final model, depending on the results:

- FLCA
- Speaking comfort
- Attitudes
- Motivation:
 -) either L2 motivation
 -) or instrumental motivation and integrative motivation

In a next step, mean scores were calculated for each construct and added to the dataset.

4.2 Cluster Analysis

Because no predefined grouping of learners was assumed, a hierarchical cluster analysis using Ward's method was conducted. Several clustering scenarios were tested to determine the most meaningful and statistically robust solution.

To determine the most appropriate clustering solution, four different models were tested using all possible combinations of constructs. Specifically, the analyses differed with regard to (1) whether motivation was treated as a single L2 motivation construct or as two separate constructs (integrative and instrumental motivation) and (2) whether attitudes were included in the model or excluded due to moderate reliability scores.

Scenario 1: Four Constructs (FLCA, L2 Motivation, Speaking Comfort, Attitudes)

Using the four composite constructs (Mean_FLCA, Mean_Mot, Mean_SpCom, Mean_Attitudes), a three-cluster solution emerged ($n = 28$, $n = 26$, $n = 15$). Although the distribution was somewhat uneven, it was acceptable.

Scenario 2: Excluding Attitudes

When attitudes were excluded from scenario 1 due to slightly lower reliability, a two-cluster solution emerged ($n = 45$, $n = 24$). However, the clusters were unevenly distributed.

Scenario 3: Separating Integrative and Instrumental Motivation

When motivation was divided into integrative and instrumental subscales (Mean_MotInte, Mean_MotInst), together with FLCA, speaking comfort and attitudes, a three-cluster solution emerged ($n = 48$, $n = 6$, $n = 15$). This solution was highly imbalanced.

Scenario 4: FLCA, Integrative Motivation, Instrumental Motivation, Speaking Comfort

When attitudes were removed from scenario 3 but integrative and instrumental motivation were kept separate (as in scenario 3), a two-cluster solution emerged ($n = 46$, $n = 23$). Although not perfectly balanced, this solution was more interpretable than scenario 3.

Thus, the results showed a consistent pattern: All models that included the attitudes construct produced three clusters, which were unevenly distributed and less interpretable. In contrast, models excluding attitudes yielded a two-cluster solution with a more balanced distribution of cases.

4.3 Factor Analysis

To further evaluate the suitability of each model, exploratory factor analyses (EFA) were conducted for all four combinations using the Kaiser criterion (eigenvalues > 1).

Scenarios 1 and 2 yielded a single factor with eigenvalues above 1 (eigenvalue = 2.25 for scenario 1 and 1.86 for scenario 2), explaining only 56.23 and 62.07 of the variance, respectively. In contrast, Scenarios 3 and 4 produced two factors with eigenvalues above 1 (scenario 3: eigenvalue = 2.41 for Cluster 1 and 1.08 for Cluster 2; scenario 4: eigenvalue = 2.00 for Cluster 1 and 1.08 for Cluster 2), accounting for 69.89% (scenario 3) and 76.98% (scenario 4) of the variance explained, respectively. Thus, scenario 4 indicated a clearer two-dimensional structure. In conclusion, given its greater variance explained and interpretability, scenario 4 was first selected as the final clustering model.

4.4 Scenario Profiles and Cluster Comparison

As discussed above, scenario 4 yielded the highest proportion of explained variance and was therefore initially retained as the most statistically robust cluster solution. To allow for a more detailed examination of the resulting learner profiles, case summaries based on Ward's hierarchical clustering method were used for this two-cluster model (see Table 1). In addition to the four variables included in the clustering scenario (i.e. FLCA, speaking comfort, integrative motivation and instrumental motivation), the variable 'attitudes' was incorporated into the case summaries in order to assess its potential discriminative contribution across clusters.

The case summaries revealed that the two clusters differed most substantially with regard to FLCA (Cluster 1: $M = 2.04$; Cluster 2: $M = 3.74$), speaking comfort (Cluster 1: $M = 2.09$; Cluster 2: $M = 3.70$) and language attitudes (Cluster 1: $M = 6.82$; Cluster 2: $M = 7.74$), whereas the motivational variables showed comparatively limited differentiating power (see Table 1). In addition, given the strong discriminative contribution of the 'attitudes' variable, scenario 3 was ultimately selected as the final cluster model, as this solution had incorporated attitudes directly into the clustering procedure itself.

TABLE 1: CASE SUMMARIES FOR SCENARIO 4

Case Summaries						
Ward Method		Mean_FLCA	Mean_Attitudes	Mean_MotInte	Mean_SpCom	Mean_MotInst
1	N	46	46	46	46	46
	Mean	2.0408	6.8188	2.3478	2.0870	1.7043
	Std. Deviation	.54839	1.53913	.91663	.67745	.76331
2	N	23	23	23	23	23
	Mean	3.7446	7.7391	2.1522	3.6957	1.5217
	Std. Deviation	.69544	1.20586	.62495	.83583	.45423
Total	N	69	69	69	69	69
	Mean	2.6087	7.1256	2.2826	2.6232	1.6435
	Std. Deviation	1.00502	1.49301	.83127	1.05512	.67812

Consequently, the cluster analysis for Scenario 3 was rerun in order to assign all participants to either Cluster 1 or Cluster 2 based on scenario 3's clustering.

4.5 Cluster Comparison for the Final Model

Finally, using case summaries for scenario 3 (see Table 2), the final two-cluster solution ($n = 54$; $n = 15$) revealed distinct learner profiles, which were compared across the constructs of FLCA, attitudes toward the target language, integrative motivation, instrumental motivation and speaking comfort as follows:

TABLE 2: CASE SUMMARIES FOR SCENARIO 3

Case Summaries						
Ward Method		Mean_FLCA	Mean_SpCom	Mean_Attitudes	Mean_MotInte	Mean_MotInst
1	N	54	54	54	54	54
	Mean	2.2060	2.2315	6.7469	2.3704	1.7148
	Std. Deviation	.65659	.74740	1.42298	.85056	.71702
2	N	15	15	15	15	15
	Mean	4.0583	4.0333	8.4889	1.9667	1.3867
	Std. Deviation	.63010	.75514	.78545	.69351	.44379
Total	N	69	69	69	69	69
	Mean	2.6087	2.6232	7.1256	2.2826	1.6435
	Std. Deviation	1.00502	1.05512	1.49301	.83127	.67812

FLCA

(1 = very anxious – 5 = not anxious)

- Cluster 1 reports higher levels of anxiety (M = 2.20) compared to Cluster 2 (M = 4.06).
- Because lower scores indicate greater anxiety, Cluster 1 can be considered moderately to highly anxious, whereas Cluster 2 falls into the low-anxiety range.

Attitudes

(1 = very low – 10 = very high)

- Cluster 1 reports lower attitudes (M = 6.75) toward the German people, country and language than Cluster 2 (M = 8.49).
- While Cluster 1 still demonstrates moderately positive attitudes, Cluster 2 shows clearly high and more favourable attitudes toward the target language community.

Integrative motivation

(1 = very motivated – 5 = not motivated)

- Cluster 1 shows slightly weaker integrative motivation (M = 2.37) than Cluster 2 (M = 1.97).
- Both groups fall within the mid-to-high motivation range, although Cluster 2 demonstrates somewhat stronger integrative orientation.

Instrumental motivation

(1 = very motivated – 5 = not motivated)

- Cluster 1 (M = 1.71) shows slightly lower instrumental motivation than Cluster 2 (M = 1.39).
- However, both clusters display generally high instrumental motivation, indicating that pragmatic goals play an important role for learners in both groups.

Speaking comfort

(1 = not comfortable – 5 = very comfortable)

- Cluster 1 reports substantially lower speaking comfort ($M = 2.23$) compared to Cluster 2 ($M = 4.30$).
- Cluster 1 therefore falls within the mid-to-low range of speaking comfort, whereas Cluster 2 demonstrates high levels of speaking comfort.

4.6 Bootstrapping Analysis

To assess the stability and validity of the identified cluster solution, a bootstrapping analysis was conducted for the variables FLCA, language attitudes, integrative motivation, instrumental motivation and speaking comfort. Mean scores (M) and confidence intervals (CI) were examined for each variable across both clusters in order to determine the extent to which the variables effectively differentiated the two learner profiles.

The results indicate that FLCA clearly distinguished between the two clusters. Cluster 1 displayed a substantially higher mean FLCA score ($M = 2.04$, $CI = .31$) than Cluster 2 ($M = 3.74$, $CI = .57$). Importantly, the confidence intervals did not overlap (Cluster 1: 1.88–2.19; Cluster 2: 3.46–4.03), suggesting a robust separation between the clusters with regard to anxiety levels.

Similarly, speaking comfort emerged as a strong discriminating variable. Cluster 1 demonstrated considerably lower speaking comfort ($M = 2.09$, $CI = .39$) than Cluster 2 ($M = 3.70$, $CI = .67$). Again, the confidence intervals showed no overlap (Cluster 1: 1.89–2.28; Cluster 2: 3.34–4.04), indicating that speaking comfort effectively differentiated the two clusters.

Language attitudes also contributed to cluster differentiation, although less strongly. Cluster 1 reported less favourable attitudes ($M = 6.82$, $CI = .92$) than Cluster 2 ($M = 7.74$, $CI = .98$). While a slight overlap between the confidence intervals was observed (Cluster 1: 6.37–7.30; Cluster 2: 7.26–8.25), the overlap remained minimal and acceptable, suggesting that attitudes nevertheless played a meaningful role in distinguishing the clusters.

By contrast, neither integrative nor instrumental motivation effectively differentiated the learner groups. For integrative motivation, Cluster 1 obtained a mean score of 2.35 ($CI = .51$), whereas Cluster 2 displayed a mean of 2.15 ($CI = .51$). The substantial overlap between the confidence intervals (Cluster 1: 2.10–2.61; Cluster 2: 1.90–2.41) indicates that integrative

motivation did not meaningfully separate the clusters. A similar pattern emerged for instrumental motivation. Cluster 1 obtained a mean score of 1.70 (CI = .41), compared to 1.52 (CI = .38) for Cluster 2. Again, the confidence intervals overlapped considerably (Cluster 1: 1.51–1.92; Cluster 2: 1.90–1.72), suggesting that instrumental motivation did not function as an effective clustering variable, due to the fact that both learner groups obtain moderate-to-high (instrumental and integrative) motivation scores.

Overall, the bootstrapping analysis supports the validity of the two-cluster solution primarily through the variables FLCA, speaking comfort and, to a lesser extent, language attitudes. In contrast, integrative and instrumental motivation showed limited discriminative power. The mean scores derived from the bootstrapping analysis were subsequently used throughout the study to describe the variables FLCA, language attitudes, integrative motivation, instrumental motivation and speaking comfort.

4.7 Cluster Interpretation

Taken together, the results suggest that the two clusters differ primarily in terms of affective variables and attitudes rather than motivational orientation. Cluster 1 can be characterized as a group of learners who experience relatively higher levels of anxiety and lower speaking comfort. Although they still hold moderately positive attitudes toward the target language and demonstrate fairly strong motivation, their affective profile indicates greater difficulty engaging confidently in speaking situations.

In contrast, Cluster 2 represents a more confident and positively oriented group of learners. These learners report substantially lower anxiety, considerably higher speaking comfort and more positive attitudes toward the German language and its associated culture. While both clusters demonstrate strong instrumental and integrative motivation, Cluster 2 shows slightly stronger motivation overall.

Overall, the primary distinction between the two clusters lies in learners' emotional experience of language use, particularly anxiety and speaking comfort, along with their attitudes toward the target language community. Cluster 1 may therefore be described as a more anxious and less comfortable learner profile, whereas Cluster 2 represents a more confident, comfortable and positively oriented learner profile.

4.8 Identification of Cluster Representatives

In a subsequent step, case summaries were used to identify suitable learner profiles to represent the two clusters in the idiodynamic phase of the study, which was conducted in person in Louvain-la-Neuve, Belgium. The purpose of this in-depth profile analysis was to select participants whose characteristics most closely reflected the defining features of their respective clusters. However, due to the limited number of participants residing in Belgium ($n = 13$), the pool of potential candidates remained relatively small. More specifically, only $n = 10$ participants were eligible representatives of Cluster 1 and only $n = 3$ of Cluster 2. Consequently, the representativeness of the selected participants was constrained by the limited sample available. Furthermore, although the participants whose profiles most closely matched the characteristics of each cluster were contacted first, limited participant responsiveness often made it necessary to recruit second- or third-choice candidates. As a result, the final representatives selected for the idiodynamic analysis did not fully reflect the most prototypical profiles of their respective clusters.

For Cluster 1, Participant 1 was selected for the idiodynamic study. Although assigned to the more anxious and less comfortable cluster, this participant only partially reflected the cluster's overall profile. Compared to the cluster means, the participant displayed lower levels of anxiety (3.00 vs. $M = 2.04$), slightly higher speaking comfort (2.50 vs. $M = 2.09$) and notably more positive attitudes toward the target language (8.33 vs. $M = 6.82$), thereby aligning more closely with Cluster 2 on these dimensions. In addition, both integrative motivation (1.50) and instrumental motivation (1.40) were relatively strong and resembled the generally elevated motivational tendencies observed across Cluster 2. Overall, Participant 1 therefore represented a comparatively more positive and less anxious profile within Cluster 1, illustrating a degree of overlap between the two learner groups.

Nevertheless, during the idiodynamic phase of the study, the participant reported currently experiencing higher levels of anxiety and lower speaking comfort than at the time of questionnaire completion. The participant explained that the questionnaire had been completed approximately one year earlier, during a period of more frequent exposure to and use of German. According to the participant, the subsequent reduction in L2 exposure had led to increased anxiety and reduced speaking comfort, thereby bringing their current profile more closely in line with the characteristics typically associated with Cluster 1.

For Cluster 2, Participant 9 was selected as the representative learner. Overall, this participant can be considered a relatively representative case of the cluster, although some deviations from the cluster averages were also observed. The participant reported relatively low anxiety levels (3.13), which corresponded to the low-anxiety profile characteristic of Cluster 2 ($M = 3.74$), albeit at a somewhat higher level. Similarly, their speaking comfort score (3.00) exceeded that of Cluster 1 and was therefore consistent with the more confident profile of Cluster 2, although it remained below the cluster average ($M = 3.70$). With regard to language attitudes, the participant demonstrated moderately positive attitudes (6.33), slightly lower than the Cluster 2 mean ($M = 7.74$) but nevertheless indicative of a generally favourable orientation toward the TL, TL community and TL culture. Finally, both integrative motivation (2.25) and instrumental motivation (2.40) fell within a moderate-to-high range, although they remained somewhat lower than the average motivational levels observed in Cluster 2 overall.

Taken together, Participant 9 reflected the general tendency of Cluster 2 as a relatively confident and moderately motivated learner with positive language attitudes, while simultaneously representing a less prototypical and less extreme case of the cluster, particularly with regard to speaking comfort and attitudes.

4.9 Hypothesis on Representatives' Behaviour

As mentioned in chapter 2.3, RQ2 required hypotheses to be formulated regarding the representatives' emotional fluctuations during an L2 spoken task with a native according to increasingly less familiar topics based on their cluster profiles. Drawing on the participants' affective profiles and the increasingly less familiar topic (and thus more difficult task) of the three speaking parts, a set of directional hypotheses is formulated regarding intra- and inter-individual variation in FLA and FLE during the idiodynamic interviews.

First, consistent with research on task-induced affective variation, it is expected that task complexity will systematically influence learners' emotional responses. As task difficulty increases, FLA is expected to rise (H1) and FLE is expected to decline for both participants (H2). Specifically, the self-introduction is anticipated to elicit the lowest levels of FLA and highest FLE, whereas the political discussion is expected to generate the highest FLA and lowest FLE, with the personal experience task falling in between.

Second, differences between the two selected learners are expected to emerge based on their contrasting affective and motivational profiles. Participant 1, originally classified within the more anxious Cluster 1 and currently reporting increased anxiety due to reduced L2 exposure, is expected to exhibit higher overall levels of FLA (H3) and lower overall levels of FLE across the interview compared to Participant 9 (H4), who represents a relatively more confident and positively oriented Cluster 2 profile.

Third, the two learners are expected to differ in their affective responsiveness to task demands. Participant 1 is hypothesised to show stronger reactivity to increasing task difficulty, reflected in a steeper increase in FLA and a more pronounced decrease in FLE across the three speaking segments. In contrast, Participant 9 is expected to demonstrate comparatively attenuated affective shifts, with more moderate changes in both FLA and FLE as task demands increase (H5).

Finally, idiodynamic data are expected to reveal differences in intra-individual variability. Participant 1 is anticipated to display greater moment-to-moment fluctuations in both FLA and FLE, particularly during cognitively demanding or linguistically challenging moments. By contrast, Participant 9 is expected to show more stable affective trajectories, characterised by fewer and less extreme fluctuations over the course of speech production (H6).

4.10 Idiodynamic Interview

4.10.1 Correlation Analysis and Descriptive Statistics

After conducting the idiodynamic study with the two selected participants as described in chapter 3.3.3, correlation analysis and descriptive statistics of idiodynamic ratings were performed to describe the two learners' emotional fluctuations during the spontaneous conversations with a native along increasingly less familiar topics. For Participant 1 (Cluster 1), the correlation analysis using Spearman's rho (ρ) revealed a consistently weak negative relationship between FLA and FLE across all three interview segments (see Table 3). In Segment 1 (self-introduction), a very small negative correlation was observed ($\rho = -.041$), indicating that higher levels of FLA were associated with slightly lower levels of FLE; however, this relationship was not statistically significant ($p = .666$) (see Figure 1). A similar pattern emerged in Segment 2, in which the participant narrated a personal experience (i.e. a recent holiday). Here, FLA and FLE were again weakly and negatively correlated ($\rho = -.097$), with the relationship remaining non-significant ($p = .302$). In Segment 3, which required the participant to comment on a political issue, the negative association between FLA and FLE increased

slightly in magnitude ($p = -.172$), yet remained small and statistically non-significant ($p = .117$).

Taken together, these findings indicate a consistently weak inverse relationship between anxiety and enjoyment, suggesting that increases in FLA are associated with slight decreases in FLE, or vice-versa. However, the small effect sizes and lack of statistical significance across all segments indicate that this relationship is limited in strength and should be interpreted with caution.

Descriptive statistics further contextualise these findings. Mean scores for both FLA and FLE remained low across all three segments (see Table 3), indicating generally low emotional intensity. Notably, FLE exceeded FLA only in Segment 2, whereas FLA was marginally higher in Segments 1 and 3. In addition, FLA mean scores showed a slight decrease across segments, while FLE displayed a non-linear pattern, peaking in Segment 2 before declining in Segment 3. Median values were consistently zero across all measures and segments, suggesting that the participant's emotional experience was frequently centred around a neutral baseline.

Finally, relatively high standard deviations – particularly for FLE in Segment 2 (see Table 3) – indicate substantial moment-to-moment variability despite low overall intensity. This pattern suggests that Participant 1 experienced noticeable fluctuations in their emotional state during the interview, characterised by intermittent peaks and dips, as also illustrated in Figure 1.

TABLE 3: DESCRIPTIVE STATISTICS OF IDIODYNAMIC INTERVIEW FOR PARTICIPANT 1

Participant 1	Segment 1		Segment 2		Segment 3	
	<i>Anxiety (FLA)</i>	<i>Enjoyment (FLE)</i>	<i>Anxiety (FLA)</i>	<i>Enjoyment (FLE)</i>	<i>Anxiety (FLA)</i>	<i>Enjoyment (FLE)</i>
Mean	.35	.23	.3	.37	.25	.14
Median	0	0	0	0	0	0
Standard Deviation	.74	.58	.7	1.05	.62	.56
Spearman's ρ	-.041		-.097		-.172	

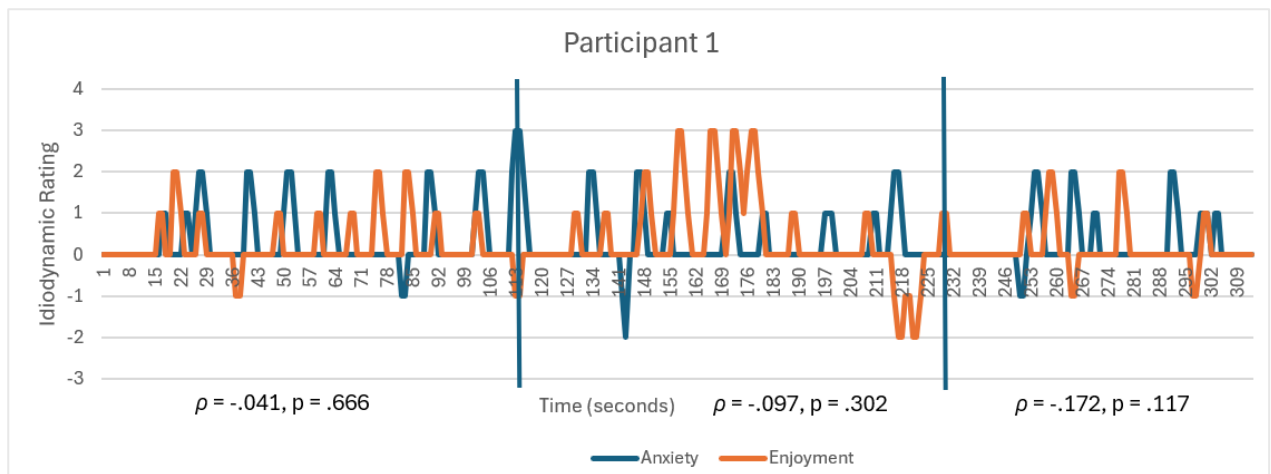


FIGURE 1: PARTICIPANT 1'S JOINT EMOTIONAL TIMELINE GRAPH WITH 3 SEGMENTS

For Participant 9 (Cluster 2), the correlation analysis revealed a variable relationship between FLA and FLE across the three interview segments (see Table 4). In Segment 1, a small-to-moderate positive correlation was observed ($p = .232$), indicating that higher levels of FLA were associated with higher levels of FLE. However, this relationship did not reach statistical significance ($p = .074$) (see Figure 2). In Segment 2, the relationship between FLA and FLE shifted direction, yielding a negligible negative correlation ($p = -.053$), suggesting that higher FLA was associated with slightly lower FLE, or vice-versa. This relationship was not statistically significant ($p = .543$), either. In Segment 3, a stronger negative correlation emerged ($p = -.420$), indicating that higher levels of FLA were associated with lower levels of FLE. This relationship was statistically significant ($p < .001$).

Taken together, these findings indicate a dynamic and context-dependent relationship between anxiety and enjoyment. While FLA and FLE appear to co-occur positively in the initial segment – although not significantly –, their relationship becomes increasingly negative as task demands rise, with anxiety more clearly – and statistically significantly – undermining enjoyment in the most cognitively demanding condition.

Descriptive statistics further support this interpretation. Overall, mean values for both FLA and FLE remain relatively low. However, they show greater fluctuation compared to those of Participant 1 (see Table 4). Mean FLA scores exceed mean FLE scores in Segments 1 and 3, with the difference being particularly pronounced in Segment 3. In contrast, FLE slightly exceeds FLA in Segment 2, where enjoyment reaches its highest level – which remains, however, quite moderate. Notably, FLE is low in Segments 1 as well as Segment 2 (although

higher than in Segment 1) and decreases to a negative mean value in Segment 3, indicating a not exactly linear decline in positive emotional experience under increased task demands. Median values are generally centred around zero, but reveal elevated FLA in Segments 1 and 3, as well as a negative median for FLE in Segment 3, further pointing to increased discomfort during the final task. In addition, standard deviations are relatively high – exceeding those observed for Participant 1 – particularly for FLA across all segments and for FLE in Segment 2. This indicates substantial moment-to-moment variability, with pronounced emotional peaks and dips throughout the interview. Specifically, FLA appears to fluctuate strongly across all segments, while FLE shows its greatest variability in Segment 2 (see Table 4).

TABLE 4: DESCRIPTIVE STATISTICS OF IDIODYNAMIC INTERVIEW FOR PARTICIPANT 9

Participant 9	Segment 1		Segment 2		Segment 3	
	<i>Anxiety (FLA)</i>	<i>Enjoyment (FLE)</i>	<i>Anxiety (FLA)</i>	<i>Enjoyment (FLE)</i>	<i>Anxiety (FLA)</i>	<i>Enjoyment (FLE)</i>
Mean	1.6	0	.32	.47	1.62	-.83
Median	1	0	0	0	2	-1
Standard Deviation	1.8	.69	1.85	1.1	1.06	.92
Spearman's ρ	.232		-.053		-.42	



FIGURE 2: PARTICIPANT 9'S JOINT EMOTIONAL TIMELINE GRAPH WITH 3 SEGMENTS

Crucially, readers need to bear in mind that learners' FLA and FLE ratings are shaped by their understanding of these constructs, their interpretation of their emotional experiences and their ability to use the computer software. Although participants received clear definitions of the target emotions and completed practice sessions with the rating software prior to the task, the ratings should nevertheless be interpreted cautiously (see Aubrey, 2022).

4.10.2 Qualitative Analysis of Idiodynamic Graphs, Post-Hoc Interviews and Segment-Based Emotional Fluctuations and Triggers

4.10.2.1 Description of Idiodynamic Graphs

Section 1: Description of Participant 1's Idiodynamic Graph

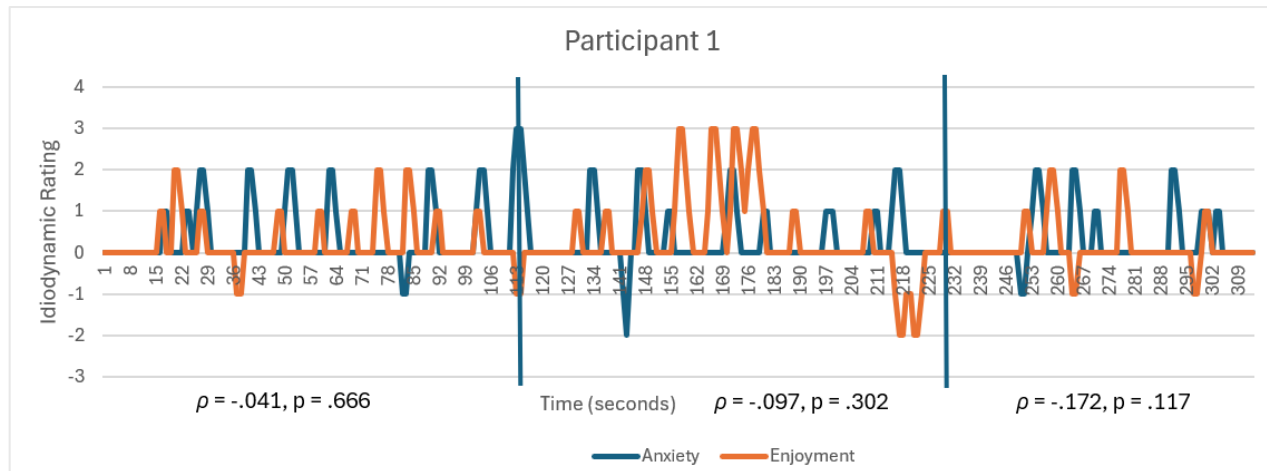


FIGURE 1: PARTICIPANT 1'S JOINT EMOTIONAL TIMELINE GRAPH WITH 3 SEGMENTS

Based on the provided graph (Figure 1) for Participant 1, the fluctuations in FLE (orange line) and FLA (blue line) across the three segments are described below:

Segment 1 (Seconds 1–113)

- **Enjoyment (FLE):** The 12 fluctuations of Segment 1 primarily range between 0 and +1. There are three peaks reaching +2 (around seconds 22, 78 and 85). Two dips reach -1 at approximately second 36 and 113.
- **Anxiety (FLA):** The 10 fluctuations are stronger than FLE in this segment, reaching a peak of +2 six times. A single dip to -1 occurs around second 85 while the biggest peak (+3) is found at the very end of the segment at second 113.
- **Fluctuations of FLA and FLE:** Peaks in FLA are largely accompanied by peaks in FLE, although they only overlap perfectly a few times (i.e. between 15-29, between 89-92 and between 100-106). The bigger peaks in FLA (+2) are accompanied by smaller peaks in FLE (-1), while the three bigger peaks in FLE (+2) are accompanied by a small peak in FLA (around second 22), a neutral FLA (around second 75) or a small drop in FLA (around second 82).

Segment 2 (Seconds 114–231)

- Enjoyment (FLE): This segment contains 12 fluctuations and the highest emotional intensity. FLE reaches a maximum peak of +3 four times (between seconds 155 and 183). It also experiences its lowest points, with two dips reaching -2 toward the end of the segment (around seconds 218 and 225).
- Anxiety (FLA): FLA has fewer and lower fluctuations in this segment: The 9 fluctuations mainly range between +1 and +2, with a single dip of -2 at approximately second 148.
- Fluctuations of FLA and FLE: Peaks of FLA and FLE largely co-occur, although they are not always perfectly simultaneous. The single dip in FLA (-2) in Segment 2 is accompanied by a neutral FLE, while the two dips (-2) in FLE are accompanied by, first a small peak in FLA (+2) and then a neutral FLA.

Segment 3 (Seconds 232–310)

- Enjoyment (FLE): The amplitude of fluctuations (only 6) decreases compared to Segment 2 and 1. FLE reaches a peak of +2 twice (around seconds 260 and 281) and a drop of -1 twice (at approximately seconds 267 and 295).
- Anxiety (FLA): The 7 FLA fluctuations consist of three +1 (around seconds 267, 295 and 302), three +2 (around seconds 253, 267 and 288) and a single dip of -1 (at approximately second 253).
- Fluctuations of FLA and FLE: At first, both emotions are neutral in Segment 3. Then, a small drop in FLA (-1) is mirrored by a small peak in FLE (+1). Then, a small peak in FLA (+2) nearly co-occur with a small peak in FLE (+2), followed by a peak in FLA (+2) that is mirrored by two drops in FLE (-2 and -1). Then, a small peak in FLE (+2) occurs while FLA remains neutral. Finally, a small increase in FLA (+2) is followed by a small drop in FLE (-1) and then FLA and FLE co-occur in the same trajectory (+1). In conclusion, although co-occurrences still exist, they are now accompanied by some mirrored fluctuations.

TABLE 5: SUMMARY OF DIFFERENCES BETWEEN SEGMENTS FOR PARTICIPANT 1

Metric	Segment 1 (Highly Familiar)	Segment 2 (Moderately Familiar)	Segment 3 (Least Familiar)
Amplitude	Moderate-high range for both (+1 - +2) with a single -1 dip for each and a +3 peak for FLA.	Highest amplitude: FLE ranges from -2 to +3. FLA ranges from +2 to -2 (once)	Moderate-high range for both (+1 - +2) with three -1 dips (1 for FLA, 2 for FLE).
Peak Intensity	FLA reaches its maximum (+3) once .	FLE reaches its maximum (+3) four times.	Intensity stays moderate, peaking at +2 for both.
Frequency	High; 22 total fluctuations (12 FLE, 10 FLA).	High; 21 total fluctuations (12 FLE, 9 FLA).	Lowest; only 13 fluctuations (6 FLE, 7 FLA).

Based on the data outlined above, some tentative interpretations about the reasons behind Participant 1's affective peaks and dips can be formulated:

- Segment 1 – Initial Performance Pressure or Linguistic ‘Warm-Up’: While the participant was discussing a familiar topic, the moderately high frequency and intensity of FLA peaks (+2 and +3) suggest initial performance pressure or linguistic ‘warm-up’ anxiety despite the topic familiarity. Nevertheless, FLE occurs in slightly heightened forms as well (between +1 and +2, typically) and both emotions typically co-occur, suggesting that the very familiar topic still leads to enjoyment of the task.
- Segment 2 – Emotional Volatility and Peak Engagement: This was the most emotionally intense section. The occurrence of four +3 FLE peaks indicates this was the most enjoyable phase, yet the two FLE dips to -2 and the four +2 FLA peaks suggest communicative frustrations persists. Nevertheless, both emotions typically co-occur simultaneously, suggesting that engagement with the task is high.
- Segment 3 – Familiarization with Task or Boredom: The marked decrease in the frequency of fluctuations (nearly half of Segment 1 or 2) and the reduced amplitude compared to Segment 2, suggest an emotional ‘plateau’ or a familiarization with the task. Given the low topic familiarity, these findings could also be interpreted as boredom or disengagement with the topic and task.

Section 2: Description of Participant 9's Idiodynamic Graph

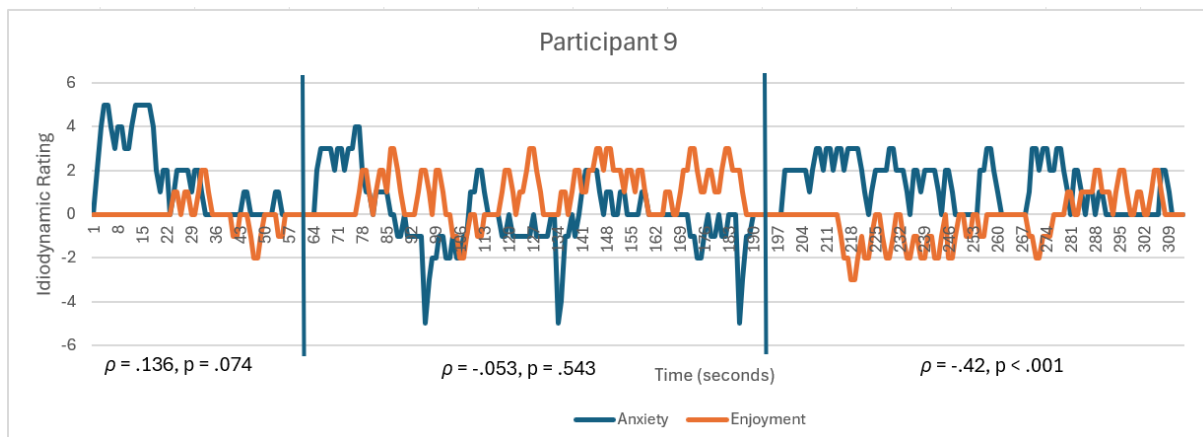


FIGURE 2: PARTICIPANT 9'S JOINT EMOTIONAL TIMELINE GRAPH WITH 3 SEGMENTS

Based on the provided graph (Figure 2) for Participant 9, the fluctuations in FLE (orange line) and FLA (blue line) across the three segments are described below:

Segment 1 (Seconds 1–62)

- **Enjoyment (FLE):** Enjoyment remains at 0 for the first 20 seconds. It shows six minor fluctuations between +2 and -2, with small peaks (two at +1 and one at +2) occurring between seconds 22 and 36, and two dips reaching -1 (second 43 and 54) and -2 (second 47).
- **Anxiety (FLA):** Anxiety levels begin at a high intensity between +4 and +5 during the first 20 seconds after which they drop to levels of +2 for another 15 seconds. Following this, two fluctuations of +1 occur, with notable dips to 0 before, in-between and after these. Eight fluctuations can be counted in total, with some of them even remaining high for a few seconds. Noticeably, FLA is negative not a single time in Segment 1.
- **Fluctuations of FLA and FLE:** Only at the beginning of Segment 1 is FLA very elevated while FLE remains neutral. Moreover, there is only a short time-span in which elevated FLE and FLA co-occur (between seconds 22 and 36). At the end of Segment 1, FLE and FLA have somewhat mirrored trajectories, although the peaks and dips do not overlap perfectly.

Segment 2 (Seconds 63–193)

- **Enjoyment (FLE):** Enjoyment fluctuations increase in frequency (21) and intensity, reaching a peak of +3 six different times (e.g. seconds 85, 148, 185). Dips in enjoyment occur only twice, first reaching -2 and then -1 around seconds 106–113.
- **Anxiety (FLA):** This segment is characterized by extreme volatility and high amplitude. While FLA is very high at the beginning (+3 - +4), it drops to a +1 and even to a 0. It then continues downwards, reaching an all-time low of -5 (second 92). After a small increase to +2, another dip to -1 occurs for 10 seconds, before dropping dramatically to another -5 at second 134. Then, a few small peaks, first to +2, then to +1 appear, followed by a short neutral phase and, finally, a last decrease from -2 to -1 and then to -5 again at approximately second 185. In total, 27 FLA fluctuations can be counted.
- **Fluctuations of FLA and FLE:** For a large amount of Segment 2, the dips in FLA are mirrored by a simultaneous peak in FLE (i.e. seconds 85-106, 117-141 and 169 – 196). Sometimes, a peak in FLA is mirrored by a dip in FLE (i.e. 106-113), while at other times FLE and FLA follow a similar trajectory (i.e. seconds 1141-162). Finally, only at the beginning of Segment 2 is FLA very elevated while FLE remains neutral.

Segment 3 (Seconds 194–310)

- **Enjoyment (FLE):** Enjoyment is predominantly negative (and sometimes neutral) in the first three quarters of this segment, reaching its lowest point at -3 (second 222) and dipping to -2 multiple times. It recovers toward the end (see second 281) with seven peaks ranging between +1 and +2. In total, 20 FLE fluctuations can be counted.
- **Anxiety (FLA):** Anxiety fluctuations (20) become more regular but remain elevated during the entirety of the third segment, frequently reaching a peak of +3 (e.g. seconds 211, 232, 274). Then, FLA dips to 0 before reaching a final peak of +2 at the very end. Noticeably, FLA is not negative a single time in this segment.
- **Fluctuations of FLA and FLE:** At first, FLA peaks (+2 – +3) are accompanied by neutral FLE scores, after which FLE and FLA scores are largely mirrored with heightened FLA scores (0 – +3) being accompanied by low FLE scores (-3 – 0). Only at the very end of Segment 3, does this pattern shift to pattern of heightened FLE and FLA scores (between 0 and +2, for both).

TABLE 6: SUMMARY OF DIFFERENCES BETWEEN SEGMENTS FOR PARTICIPANT 9

Metric	Segment 1 (Highly Familiar)	Segment 2 (Moderately Familiar)	Segment 3 (Least Familiar)
Amplitude	First +5 for FLA, then smaller dips and peaks for both (between 0 and +2 for FLA and between +2 and -2 for FLE)	Very volatile: FLA between +4 and -5 and FLE between +3 and -2	FLA typically at +3 , FLE typically at -2 , safe for the very end (between +1 and +2)
Peak Intensity	FLA reaches the maximum positive intensity (+5)	FLA reaches the maximum negative intensity (-5)	FLA remains high (+3); FLE remains largely low(-2)
Frequency	Lowest; 14 total fluctuations (6 FLE, 8 FLA)	Very High; 48 total fluctuations (21 FLE, 27 FLA)	High; 40 total fluctuations (20 FLE and 20 FLA)

Based on the data above (Table 6), some speculations about the reasons behind Participant 9's emotional fluctuations can be generated:

- **Segment 1 - Anticipatory Stress and Boredom:** The high and long initial FLA peak likely reflects anticipatory stress. The participant is initially overwhelmed by the task and the upcoming questions, resulting in high FLA and rather low FLE. Even after the anticipatory stress has receded, FLE remains fairly low (neutral, small peaks or negative) suggesting that the highly familiar topic is not capable of rising much FLE. Given that FLA also remains rather neutral, this emotional landscape hints at moments of boredom during the first segment.
- **Segment 2 – Emotional Complexity and High Engagement:** This segment shows the most versatile and extreme interaction between emotions. The extreme dips in FLA coinciding with FLE peaks suggest moments of cognitive reward, resulting in a massive relief of FLA and a surge in FLE. The high amplitude reflects a deep engagement with the topic, despite the decreased topic familiarity. In general, in this section is

FLE the highest and FLA the lowest by far, although an initial high in FLA, again likely due to anticipatory stress, is duly noted.

- **Segment 3 - Negative Correlation and Evaluative Pressure:** This segment displays the strongest negative relationship between FLE and FLA. As the topic became less familiar (i.e. politics), FLA remained consistently peaked at +3 while FLE stayed low (dipping to -3), indicating high stress levels due to topic unfamiliarity. The surge in FLE at the end might hint at relief of completing the task successfully.

Section 3: Comparison of Idiodynamic Fluctuations

While both participants navigated the same three-segment task structure, their emotional landscapes reveal two distinct psychological profiles: Participant 1 displays a relatively stable, co-occurring emotional state, while Participant 9 exhibits extreme volatility and a more reactive, mirrored relationship between FLE and FLA.

Segment 1: Highly Familiar Topic

In the opening segment, both participants experienced initial performance pressure, though the intensity and nature of this pressure differed significantly.

- **Similarities:** Both participants recorded their highest FLA of the interview, in this segment, suggesting a ‘warm-up’ period or anticipatory stress regardless of the familiar topic. This may point to initial insecurity due to the native-speaker status of the interlocutor.
- **Differences:** Participant 9’s FLA was far more debilitating, starting at a maximum of +5, whereas Participant 1’s FLA peaked at +3. Furthermore, Participant 1’s emotions tended to co-occur (i.e. both rising together), suggesting that their anxiety did not lead to low FLE, but was rather tied to a productive buzz of engagement. In contrast, Participant 9’s FLE remained neutral while anxiety was high, shifting only to a little more diverse emotional profile toward the end of the segment, as the initial intensity wore off.

Segment 2: Moderately Familiar Topic

Segment 2 proved to be the phase of highest engagement for both participants, though they manifested this engagement through different levels of volatility.

- Similarities: This was the most enjoyable phase for both, with each reaching numerous FLE peaks of +3. Both participants appeared most deeply invested in the task during this segment.
- Differences: The scale of fluctuation was vastly different. Participant 9 showed extreme volatility with 48 total fluctuations compared to Participant 1's 21. Most notably, Participant 9 experienced massive relief with FLA dropping to an all-time low of -5 thrice whereas Participant 1's FLA stayed primarily positive. Participant 1's emotions continued to rise and fall together, while Participant 9's mostly followed mirrored trajectories (where a dip in anxiety directly fuelled a surge in enjoyment and vice-versa), with only a single positive correlation phase.

Segment 3: Least Familiar Topic

The transition to the least familiar topic (i.e. politics) caused a divergence in how each participant managed their cognitive load.

- Similarities: In this final segment, both participants shifted toward a more mirrored emotional pattern: The positive co-occurrence seen in earlier segments largely vanished, replaced by a dynamic where higher anxiety typically resulted in lower enjoyment – although this pattern only appeared to a limited extent for Participant 1. For both participants, moments of heightened FLE and neutral FLA still existed, though, hinting at a not-solely-negative experience during Segment 3.
- Differences: Participant 1 responded to the unfamiliar topic with an emotional plateau, characterized by the lowest frequency (13) and amplitude of fluctuations (+2 to -1). This suggests a boredom-induced disengagement. Participant 9, however, remained highly reactive (40 fluctuations) but negatively so. While Participant 1 seemed to settle into a quiet plateau, Participant 9 struggled with the pressure of the topic, maintaining high FLA (+3) and consistently low FLE (-2/-3) until the very end, where an increase in FLE hinted at relief of the task being completed.

TABLE 7: COMPARATIVE OVERVIEW OF IDIODYNAMIC FLUCTUATIONS PER SEGMENT FOR PARTICIPANTS 1 AND 9

Feature	Participant 1	Participant 9
Primary Interaction	Co-occurrence: Emotions often rise/fall together.	Mirrored/Inverse: the rise of one emotion is typically accompanied by the fall of the other.
Peak FLA Intensity	Moderate (+3/-2)	Extreme (+5 / -5)
Segment 3 Strategy	Emotional Plateau: Disengagement or boredom.	Active Stress: High FLA and low FLE
Overall Volatility	Moderate and steady	High; extremely sensitive to task shifts

In short, Participant 1's experience was defined by a moderate 'rhythm', while Participant 9's experience was a rollercoaster of high-stakes relief and stress. Participant 1 eventually succumbed to a lack of emotional engagement in the final segment, whereas Participant 9 remained emotionally taxed by the difficulty of the subject matter (see Table 7).

4.10.2.2 Qualitative Analysis of Post-Hoc Interviews: Coding Interview Data

The present qualitative analysis examined participants' self-reported explanations, collected during the post-hoc interviews, for fluctuations in FLE and FLA experienced during conversations with a native speaker across three segments of varying topic familiarity. To identify recurring emotional triggers, a qualitative coding procedure was conducted. An inductively developed codebook was created with the assistance of OpenAI based on participants' explicit reflections on their emotional experiences (see Appendix 1 for Participant 1 and Appendix 4 for Participant 9).

Section 1: Results for Participant 1:

This section will dive into the particular codes identified for Participant 1, meaning the triggers of increased FLE, decreased FLE, increased FLA and decreased FLA. The full tables comprising these codes, with their labels, directionality, description, instances and examples can be found in Appendix 2 and 3.

Section 1.1: Triggers of Increased FLE

Enjoyment was primarily driven by factors related to topic engagement and communicative meaning. Five triggers emerged as positive drivers of FLE.

1. Topic Interest And Personal Relevance emerged as a central driver. Participant 1 consistently reported higher FLE when discussing subjects they found meaningful.
2. Enjoyment was reinforced by recalling positive personal experiences, such as engaging in sports or recounting travel experiences (often co-occurring with the first).
3. Linguistic Ease And Fluency contributed to increased enjoyment.
4. Idea Satisfaction (or Cognitive Reward) was another contributor to enjoyment.
5. Perceived Positive Feedback from the interlocutor, such as nonverbal cues indicating understanding or humour, increased FLE.
6. Anecdotal discourse appeared to facilitate FLE.

Section 1.2: Triggers of Decreased FLE

Only a single factor was associated with decreases in FLE: Lexical Retrieval Difficulty. Importantly, this same factor was also the main driver of increased FLA, indicating a strong overlap between the two emotional dimensions.

Section 1.3: Triggers of Increased FLA

In contrast, anxiety was predominantly driven by factors related to linguistic processing and performance monitoring. Eleven triggers of increasing FLA emerged from the analysis.

1. The most salient and recurrent trigger was Lexical Retrieval Difficulty,
2. Closely related to this was Lexical Uncertainty, where anxiety stemmed not from a lack of words per se, but from uncertainty about their correctness.
3. Anxiety was also associated with Topic–Language Mismatch, that is, situations in which the participant was familiar with a topic but not accustomed to discussing it in the target language.
4. Similarly, the absence of formulaic language contributed to heightened anxiety.
5. Another important factor was Task-Induced Performance Pressure, i.e. the stress coming from the need to conform to task expectations and rules.
6. Error Awareness was another FLA trigger.
7. Self-Induced Cognitive Interference, where overthinking created anxiety.

8. Fluency Breakdowns, such as pauses, were markers of particularly strong anxiety peaks.
9. Epistemic Uncertainty (i.e. not being sure about the correctness of the content) led to FLA increases.
10. Formulation Difficulties, where the participant struggled to translate ideas into linguistic form despite having a clear conceptual understanding, also led to more FLA.
11. Comprehension Breakdowns (i.e. failing to understand the interviewer) also contributed to increased anxiety.

Section 1.4: Triggers of Decreased FLA

Finally, the analysis identified a smaller set of three triggers associated with decreases in anxiety. Only those triggers that had not been discussed previously are briefly explained below:

1. Positive Experience Recall
2. Linguistic Ease and Fluency
3. Reduced Constraint via Code-Switching lowered FLA by alleviating pressure to adhere strictly to a correct use of the TL.

Overall, decreases in FLA were associated with conditions that reduce cognitive load and increase comfort, and these conditions frequently overlap with those that increase FLE.

Section 1.5: Interrelation between FLA and FLE

For Participant 1, the analysis revealed an asymmetry between the two emotional dimensions. Specifically, a greater number and variety of codes were associated with increases in FLA than with increases in FLE. FLA was linked to a wide range of linguistic, cognitive and task-related factors, whereas FLE was primarily associated with topic-related and experiential dimensions.

Overall, a small subset of triggers (4 out of 17) functioned bidirectionally, particularly those related to fluency and topic engagement. However, most triggers affected only one dimension, indicating that the two emotions are interconnected but not simply oppositional.

In addition, emotional fluctuations were typically multi-causal, with one to three co-occurring triggers shaping each shift. As such, emotional shifts should be understood as the result of interacting factors rather than isolated causes.

Another key finding of the analysis is the systematic co-occurrence of increased FLE and increased FLA: Rather than functioning as opposite ends of a single continuum, the two emotions frequently held a positive relationship, triggered by different codes (e.g. when the participant has meaningful ideas but lacks the linguistic resources to express them).

This pattern suggests a distinction between two underlying dimensions for Participant 1:

- Meaning-related processes, which drive enjoyment (e.g. interest, personal relevance, idea generation), and
- Form-related processes, which drive anxiety (e.g. lexical access, accuracy, task constraints).

In sum, the findings indicate that enjoyment and anxiety are shaped by distinct but interacting mechanisms. Enjoyment is primarily driven by engagement with content and communicative success, whereas anxiety is driven by linguistic difficulty and performance monitoring. Emotional fluctuations are best understood as multi-causal and dynamic, with multiple codes often co-occurring within the same moment of interaction.

Section 2: Results for Participant 9

As with Participant 1, the present section outlines the specific codes identified for Participant 9. The complete coding tables, including code labels, directionality, descriptions, occurrences, and illustrative examples, are provided in Appendices 5 and 6.

Section 2.1: Triggers of Increased FLE

Nine factors were associated with increases in FLE. As several of these factors have already been discussed in the previous section, only the newly emerging triggers will be described below:

1. Topic Interest And Personal Relevance
2. Positive Experience Recall
3. Cognitive Reward played a central role. Enjoyment increased when the participant successfully expressed ideas or completed a response, often at the end of a segment.
4. Similarly, confidence in one's ability to perform the task was associated with increased FLE.
5. Linguistic Ease and Fluency

6. Reduced Performance Pressure enhanced enjoyment: When the participant perceived that grammatical accuracy was not strictly required, enjoyment increased, suggesting that reduced evaluative pressure fosters a more positive emotional experience.
7. Enjoyment increased when the task resembled a conversation rather than a monologue (i.e. Interactional Support).
8. Enjoyment also increased when the participant felt receptive to the question (i.e. Task Receptivity).
9. Topic-Language Match (or 'safe zone') (i.e. a topic was previously discussed in the TL and thus familiar) also increased FLE.

Section 2.2: Triggers of Decreased FLE

Seven triggers for decreased FLE were identified, which were primarily associated with content-related and evaluative difficulties.

1. Low Content Creativity was the most prominent factor was, referring to situations in which the participant lacked ideas of what to say.
2. Task-Induced Performance Pressure
3. Social-evaluative concerns, particularly when discussing personal topics with an unfamiliar interlocutor, led to decreased enjoyment due to discomfort and fear of judgment.
4. Fluency Breakdowns
5. Lexical Retrieval Difficulties
6. Lexical Uncertainty
7. Topic–Language Mismatch

Section 2.3: Triggers of Increased FLA

A wide range of factors (12) contributed to increases in FLA, highlighting the multidimensional nature of anxiety.

1. Anticipatory Uncertainty of performance was a major driver, particularly at the beginning of the task and before new questions: Not knowing what would be asked or whether one could respond effectively generated heightened anxiety.

2. Cognitive Load during L2 production increased anxiety, especially when the participant had to simultaneously plan content, structure responses and retain the question in working memory.
3. Low Content Creativity
4. Epistemic Uncertainty
5. Lexical Retrieval Difficulties
6. Lexical Uncertainty
7. Topic–Language Mismatch
8. Fluency Breakdowns
9. Formulation Difficulty
10. Task-Induced Performance Pressure
11. Error Awareness
12. Social-Evaluative Concerns

Section 2.4: Triggers of Decreased FLA

In contrast to the more limited set of factors contributing to decreased FLE (7), a larger set of triggers was associated with decreases in FLA (10), primarily reflecting conditions that enhance topic valence, reduce evaluative pressure and lower cognitive demands.

1. Confidence in Abilities
2. Cognitive Reward
3. Reduced Performance Pressure
4. Topic Interest/Personal Relevance
5. Positive Experience Recall
6. Topic–Language Match
7. Linguistic Fluency
8. Lower Cognitive Load during L2 production – for instance, once the participant had begun speaking and structured their response – contributed to reduced anxiety, as the initial planning demands diminished.
9. Interactional Support
10. Reduced Constraints via Code-Switching

Section 2.5: Interrelation between FLE and FLA

The qualitative analysis of Participant 9's stimulated recall interview identified many interacting codes underlying fluctuations in FLE and FLA. Overall, FLE was primarily associated with topic engagement, lower cognitive demands and perceived competence, whereas FLA was shaped by uncertainty, cognitive load, task pressure and social-evaluative concerns.

Emotional shifts were rarely attributable to a single cause. Instead, most peaks and dips resulted from the interaction of three to five co-occurring codes, reflecting a high level of emotional complexity. A strong interdependence between FLE and FLA was also observed: Many triggers (15 out of 23) functioned bidirectionally, simultaneously increasing one emotion while decreasing the other (e.g. Topic Interest enhancing FLE while reducing FLA). However, this relationship was not fully symmetrical, as some triggers were more consistently linked to one emotional dimension than the other, indicating partial independence between FLE and FLA.

Compared to Participant 1, Participant 9's coding profile shows a greater prominence of higher-order cognitive and affective factors. Codes such as Cognitive Reward, Confidence In Abilities, Social-Evaluative Risk and Low Content Creativity highlight the importance of self-perception and evaluative concerns. This suggests that emotional dynamics in this case extend beyond linguistic, task-driven and topical constraints to include broader psychological mechanisms, particularly sensitivity to judgment and self-evaluation.

Section 3: Cross-Participant Comparison of Codes

Section 3.1: Complexity and Multi-causality of Emotional Shifts

A defining feature of the emotional fluctuations in this study was their multi-causal nature, with shifts including one to five triggers, depending on the learner (Participant 1: 1-3; Participant 9: 3-5).

In addition, only rarely did Participant 1's codes have bidirectional effects, compared to Participant 9, for who a peak in one emotion often corresponded with a dip in the other, although this relationship was not absolute. This highlights that while FLE and FLA are closely linked, they are not merely opposite ends of a single spectrum and that the extent to which these emotions function bidirectionally depends on individual speakers.

Section 3.2: Comparison of Coding Profiles: Participant 1 vs. Participant 9

The distribution and nature of the codes reveal distinct emotional profiles for each participant, summarized in the table below.

TABLE 8: DISTRIBUTION AND NATURE OF CODES FOR PARTICIPANT 1 VS. PARTICIPANT 9

Category	Participant 1	Participant 9
Primary Driver of FLA	Linguistic Form: Lexical retrieval difficulty (8), lexical uncertainty (3), formulation difficulty (4) Self-Monitoring and Self-Induced Performance Pressure: Error awareness (2), self-induced cognitive interference (3), fluency breakdown (2)	Psychological Pressure: Anticipatory uncertainty (4), cognitive load (2), social-evaluative risk (3) Task- and Topic-Related Concerns: Task-induced performance pressure (4), low content creativity (3), topic-language mismatch (3), epistemic uncertainty (2)
Primary Driver of FLE	Content Engagement: Topic interest (3), positive experience recall (4), idea satisfaction (3)	Internal Validation: Cognitive reward (3), confidence in abilities (3) Content Engagement: Topic interest (3), positive experience recall (2)
Coding Variety	Asymmetrical; significantly more codes associated with FLA (14) than FLE (6).	Balanced and dense; high variety of codes across both dimensions (16 FLE, 22 FLA).

For both learners, the data suggest a distinction between meaning-related processes (driving FLE) and form-related processes (driving FLA). While these could work in parallel for Participant 1 (i.e. high FLE from a topic and high FLA due to linguistic constraints), they were typically more integrated for Participant 9 (i.e. a meaning-related code could both increase FLE and decrease FLA, while a form-related code, could trigger a lowered FLE and a heightened FLA).

In addition, both participants shared foundational triggers, such as Topic Interest, Linguistic Ease and Lexical Retrieval Difficulty. However, their unique codes reflect different underlying mechanisms:

1. Participant 1's Linguistic Focus: This participant's anxiety was heavily tied to the 'mechanics' of the language. Unique codes like *Self-Induced Cognitive Interference* and *Lack of Formulaic Language* suggest that for Participant 1, the struggle is primarily one of form-related processing.
2. Participant 9's Cognitive-Affective Focus: This participant's profile was characterized by higher-order psychological factors. Unique codes such as *Confidence in Abilities*, *Social-Evaluative Risk* and *Low Content Creativity* indicate that their emotional state is less about 'finding the word' and more about self-perception and the risk of personal disclosure.
3. Participant 1's FLA driver *Self-Monitoring and Self-Induced Performance Pressure* (see Table 8 above), however, also hints at a level of psychological monitoring and self-perception that is more akin to Participant 9, suggesting that Participant 1 (although described in chapter 4.10.2.1, section 3 as less affective) is not immune to concerns of face-exposure.

4.10.2.3 Qualitative Analysis of Post-Hoc Interviews: Thematic Analysis of Emotional Triggers

To complement the code-level analysis, the identified triggers of FLE and FLA were further grouped into higher-order themes using an inductive approach consistent with Qualitative Research and Thematic Analysis. This thematic organization provides a more integrative understanding of the mechanisms underlying emotional fluctuations. A full overview of the codes per theme, their directionality on FLE and FLA and their number of instances can be found in Appendix 2 and 3 for Participant 1 and Appendix 5 and 6 for Participant 9.

For Participant 1, five main themes emerged (see Table 9 below), with varying directionalities in regards to FLE and FLA (i.e. increase FLE/decrease FLA/increase FLA/decrease FLE or several of these). The thematic organization of Participant 9's data, on the other hand, revealed six overarching themes structuring fluctuations in FLE and FLA (see Table 10 below).

TABLE 9: THEMATIC DISTRIBUTION OF CODES AND THEIR EFFECTS ON FLA AND FLE FOR PARTICIPANT 1

Theme	Code	FLA fect	Ef- fect	FLE fect	Ef- fect	In- stances
Topic Engagement and Meaning-Making	Topic Interest / Personal Relevance	↓		↑		3
	Positive Experience Recall	↓		↑		5
	Idea Satisfaction / Cognitive Reward	—		↑		3
	Perceived Positive Feedback	—		↑		1
Linguistic Processing and Cognitive Load	Lexical Retrieval Difficulty	↑		↓		8
	Formulation Difficulty	↑		—		4
	Lack of Formulaic Language	↑		—		1
	Fluency Breakdown	↑		—		2
Linguistic Accuracy and Performance Monitoring	Lexical Uncertainty / Accuracy Concern	↑		—		3
	Error Awareness / Self-Monitoring	↑		—		2
	Self-Induced Cognitive Interference	↑		—		3
Task Constraints and Contextual Pressure	Task-Induced Performance Pressure	↑		—		1
	Topic–Language Mismatch	↑		—		1
	Comprehension Breakdown	↑		—		1
	Epistemic Uncertainty	↑		—		1
Facilitators of Fluency and Emotional Regulation	Linguistic Ease / Fluency	↓		↑		2
	Reduced Constraint via Code-Switching	↓		—		1

TABLE 10: THEMATIC DISTRIBUTION OF CODES AND THEIR EFFECTS ON FLA AND FLE FOR PARTICIPANT 9

Theme	Code	FLA fect	Ef- fect	FLE fect	Ef- fect	In- stances
Topic Engagement and Meaning-Making	Topic Interest / Personal Relevance	↓		↑		3
	Positive Experience Recall	↓		↑		2
	Cognitive Reward	↓		↑		3
	Low Content Creativity	↑		↓		3
Linguistic Processing and Cognitive Load	Lexical Retrieval Difficulty	↑		↓		1
	Formulation Difficulty	↑		—		1
	Fluency Breakdown	↑		↓		1
	High Cognitive Load in L2 Production	↑		—		2
	Lower Cognitive Load in L2 Production	↓		—		1
Linguistic Accuracy and Performance Monitoring	Lexical Uncertainty / Accuracy Concern	↑		↓		2
	Error Awareness / Self-Monitoring	↑		—		1
Task Constraints and Contextual Pressure	Task-Induced Performance Pressure	↑		↓		4
	Topic–Language Mismatch	↑		↓		3
	Epistemic Uncertainty	↑		—		2
	Anticipatory Uncertainty of Performance	↑		—		4
	Task Engagement / Receptivity	—		↑		1
Social-Evaluative and Affective Factors	Social-Evaluative / Personal Exposure Risk	↑		↓		3
	Confidence in Abilities	↓		↑		3
	Reduced Performance Pressure	↓		↑		2
Facilitators of Fluency and Emotional Regulation	Linguistic Ease / Fluency	↓		↑		2
	Topic–Language Match	↓		↑		1
	Interactional Support	↓		↑		1
	Reduced Constraint via Code-Switching	↓		—		1

Following the identification of themes for each participant, a cross-participant comparison was conducted to examine similarities and differences in emotional triggers. The analysis revealed substantial structural overlap alongside important differences in distribution and prominence. Five core themes were shared across both participants – (1) ‘topic engagement and meaning-making’, (2) ‘linguistic processing and cognitive load’, (3) ‘linguistic accuracy and performance monitoring’, (4) ‘task constraints and contextual pressure’ and (5) ‘facilitators of fluency and emotional regulation’ – while a sixth theme, ‘social-evaluative and affective factors’, emerged distinctly for Participant 9.

The presence of these shared themes suggests a common underlying architecture in L2 emotional experience, with fluctuations in FLE and FLA shaped by the interaction of topic engagement, linguistic demands, performance monitoring and task-related pressures. However, the relative weight and internal composition of these themes differ considerably.

Most notably, ‘social-evaluative and affective factors’ play a distinct and central role for Participant 9 but remain peripheral for Participant 1. Participant 9 frequently referenced concerns related to self-presentation, confidence and evaluation, indicating a strong influence of interpersonal and self-perceptive processes. In contrast, Participant 1’s profile appears more task- and language-oriented (N.B: triggers that are also central for Participant 9), with only limited indications of evaluative concern. Only the theme of ‘linguistic accuracy and performance monitoring’ may tentatively be interpreted as reflecting concerns related to face loss or evaluation in Participant 1. However, given that Participant 9 not only exhibits this theme but also demonstrates a distinct and explicitly self-evaluative theme (‘social-evaluative and affective factors’), such an interpretation for Participant 1 should be treated with caution.

Similarly, the theme ‘task constraints and contextual pressure’ was more salient for Participant 9, with codes such as Anticipatory Uncertainty (unique to Participant 9) and Task-Induced Performance Pressure more frequent and influential. This indicates that Participant 9 experienced the task as more evaluative and demanding, particularly in anticipatory phases. Nonetheless, the presence of this theme in both participants’ data lends support to this study’s assumption that task-related constraints, such as topic familiarity, play a significant role in shaping emotional experiences during L2 production.

‘Topic engagement and meaning-making’ functioned as a key driver of FLE in both cases, though its bidirectional effects were more pronounced for Participant 9.

By contrast, the themes ‘facilitators of fluency and emotional regulation’, ‘linguistic accuracy and performance monitoring’ and ‘linguistic processing and cognitive load’ operated broadly similarly across participants, with only a few codes being particular to either the one or the other (e.g. Cognitive Load being very prominent for Participant 9), indicating some shared underlying mechanisms despite individual differences.

Overall, while both participants rely on comparable thematic structures, Participant 9’s emotional experience is marked by greater complexity (i.e. more interacting and often bidirectional codes/themes), density (i.e. greater number of codes) and psychological depth. The stronger presence of social-evaluative concerns, anticipatory processes and cognitive load suggests that emotional responses in Participant 9 are more heavily mediated by internal evaluative and cognitive mechanisms, rather than being driven primarily by linguistic or topical factors – as is the case for Participant 1’s more constrained profile.

Interestingly, the thematic findings for Participants 1 and 9 largely confirm the patterns previously identified in the idiodynamic graph analyses rather than introducing unexpected or contradictory results, thereby presenting process-level explanations for the emotional fluctuations identified earlier. Participant 1’s thematic profile aligns with the previously identified low-intensity and limited affective reactivity profile (see chapter 4.10.2.1, section 3): The limited presence of overtly social-evaluative and affective factors, combined with a stronger emphasis on linguistic and task-related triggers, supports the interpretation of Participant 1 as a learner whose emotional experience is less affectively reactive and more narrowly tied to immediate language processing demands. In addition, the comparatively weak negative relationship observed between FLA and FLE in the idiodynamic data (see chapter 4.10.1) is reflective of Participant 1’s limited bidirectionality of triggers. By contrast, Participant 9’s thematic profile is highly consistent with a more affectively engaged and reactive learner profile (see chapter 4.10.2.1, section 3). The strong presence of social-evaluative concerns, anticipatory uncertainty and cognitive load corresponds closely to the higher emotional intensity and variability observed in the idiodynamic graph data (see chapter 4.10.2.1, section 2). Furthermore, the frequent co-occurrence of multiple codes and the clear bidirectional effects mirror the previously identified stronger negative coupling between FLA and FLE under increased task demands (i.e. Segment 3) (see chapter 4.10.1).

Taken together, the thematic analysis deepens and substantiates the idiodynamic findings by demonstrating that differences in emotional trajectories can be explained by variations in the type, density, and interaction of underlying triggers. While Participant 1's emotional experiences appeared more constrained, linguistically driven and topic-related, Participant 9's profile reflected a more complex interplay of cognitive, linguistic, affective, and evaluative processes. Moreover, the existence of a task-constraint theme highlights the important role of task-related factors in shaping learners' emotional experiences (see RQ3). Finally, these findings confirm the context-dependent and multidimensional nature of FLE and FLA, while also illustrating how individual differences manifest not only in emotional outcomes but in the underlying mechanisms that generate them.

4.10.2.4 Segment-Based Comparison of Emotional Fluctuations and Triggers

Across segments, Participants 1 and 9 exhibit markedly different idiodynamic profiles. Compared to Participant 9, Participant 1 shows low-frequency, moderate fluctuations, with frequent co-occurrence and a narrow emotional range, suggesting stable but subdued engagement, particularly in Segment 3.

Participant 9, by contrast, displays high-frequency, high-amplitude fluctuations, especially in FLA, alongside increasingly strong negative coupling between FLE and FLA. Although both participants show peak engagement in Segment 2, Participant 9's responses are considerably more intense and complex. Refer to Appendix 7 for a full coding overview per segment.

Section 1: Segment 1 – Familiar Topic

Participant 1's nine FLA increases are primarily linked to 'linguistic processing and cognitive load', 'linguistic accuracy and performance monitoring' and 'task constraints and contextual pressure', while the ten largely co-occurring FLE increases mainly stem from 'topic engagement and meaning-making'. This positive co-occurrence suggests largely independent (non-bidirectional) triggers for Participant 1 in Segment 1.

Participant 9's eight FLA increases are mainly driven by 'task constraints and contextual pressure' (especially Anticipatory Uncertainty at the beginning) and Low Content Creativity (especially at the end). In contrast, FLE increases and FLA decreases are associated with 'social-evaluative and affective factors' (especially in the middle of the segment).

In conclusion, both participants experience initial performance pressure (highest number of fluctuations and highest FLA peak for Participant 1; very high FLA peak due to Anticipatory Uncertainty for Participant 9), but through different mechanisms: Participant 1's fluctuations are primarily linguistically- and task-driven, suggesting that even familiar topics can be accompanied by a processing-related strain. Similarly, Participant 9's FLA is affected by task- and topic-driven concerns. FLE is topic-driven for Participant 1, but more dependent on affective reassurance for Participant 9.

Section 2: Segment 2 – Moderately Familiar / Personal Topic

For Participant 1, the notable FLA decreases and FLE increases were due to Positive Experience Recall and facilitators of fluency. Notably, FLE is highest and most frequent in this segment, highlighting the positive force of topic engagement for learners' emotional journey during L2 use. Despite this high engagement, FLA peaks (although less strong and less frequent) and FLE dips persists, mainly due to linguistic concerns (i.e. 'linguistic accuracy and performance monitoring' and 'linguistic processing and cognitive load'), indicating that even positively engaged learners can be stressed by concerns of performance monitoring, linguistic processing and cognitive load. In addition, triggers remained largely non-bidirectional.

Participant 9 shows a dense and complex pattern, with topic valence, interactional and fluency-related facilitators leading to numerous and strong dips in FLA as well as to a nearly constantly positive FLE in Segment 2 – again highlighting the facilitating power of topic valence. Despite this positivity, some strong FLA peaks persisted, driven by 'task constraints and contextual pressure' (especially Anticipatory Uncertainty at the beginning), as well as linguistic concerns (i.e. 'linguistic processing and cognitive load' and linguistic difficulties) and 'social-evaluative and affective factors' throughout the segment – highlighting that positively engaged learners can react vulnerably to debilitating triggers. Finally, these factors often operate bidirectionally, producing high volatility.

Thus, both participants markedly benefitted from topic valence and facilitators of fluency as central drivers of increased FLE and decreased FLA. In addition, both were maximally engaged in this section, while also showing vulnerability to debilitating factors – of linguistic nature for Participant 1 and of linguistic, task-driven and social-evaluative nature for Participant 9. Finally, the differing nature of triggers explain the clearly different graphs of the participants: Participant 1's positive co-occurrences can be explained by independent triggers

while Participant 9's inversed relationship between FLA and FLE are due to the bidirectional nature of their triggers.

Section 3 : Segment 3 – Least Familiar Topic

Participant 1 shows few, moderate fluctuations, with FLA mainly linked to Formulation Difficulty and Epistemic Uncertainty, and FLE mainly to Idea Satisfaction as well as marginally to Topic Relevance. Overall, the few and less ample fluctuations hint at emotional neutrality and disengagement or even boredom, although self-reports indicate continued investment (i.e. idea satisfaction) despite frustration due to formulation difficulties. Finally, in this segment, limited bidirectional effects emerge and emotional co-occurrences partially shift to inverse relationships.

Participant 9 exhibits sustained positive FLA throughout the task, largely driven by 'task constraints and contextual pressure' (especially Anticipatory Uncertainty), alongside linguistic concerns (e.g. Formulation Difficulty and Error Awareness), reduced creativity and social-evaluative concerns. Alongside high FLA, reduced FLE persists due to a Topic–Language Mismatch. Only at the end do triggers of increased FLE and decreased FLA, like 'facilitators of fluency', Lower Cognitive Load and 'social-evaluative and affective factors' (especially Cognitive Reward due to task completion), lead to an increase of FLE, and thus to a positive co-occurrence of both emotions. Overall, emotional fluctuations are numerous but only moderate in amplitude, suggesting that the learner is less engaged than in Segment 2. In addition, triggers largely function bidirectionally again.

In conclusion, both participants experience increased FLA (although for Participant 1 only very minimally) due to linguistic, task- and topic-driven concerns (as well as socio-evaluative concerns for Participant 9) – but Participant 1 remains regulated, with only slight increases in FLA, persistent moments of FLE and much neutrality, whereas Participant 9 shows sustained anxiety and reduced enjoyment. Moreover, the dominance of task-related and evaluative pressures, alongside many more factors, suggests that this segment constitutes a highly demanding context, where linguistic and conceptual challenges overwhelm enjoyment and amplify anxiety for Participant 9.

Section 4: Overall Comparison of Theme/Code Use across Segments

Across all segments, both participants draw on a shared set of overarching themes, particularly linked to topic valence, linguistic processing and task constraints. However, the distribution, density and interaction differs substantially.

Participant 1 relies on a more limited set of triggers with only few active codes at play simultaneously (1-3) and non-bidirectionally – with FLE mainly emerging from topic valence and FLA from processing demands (i.e. linguistic, cognitive and task-driven triggers) – resulting in predictable, low-intensity fluctuations. In addition, engagement constantly declines across segments, with maximal engagement in Segment 1 and 2 (22 and 21 low-to moderate fluctuations) but limited engagement in Segment 3 (13 low-to moderate fluctuations) (see chapter 4.10.2.1, section 1), although self-reports did not confirm this stark decline.

Participant 9 demonstrates a broader, denser coding profile, with more codes and multiple interacting triggers across task-driven, topic-driven, cognitive, affective, social-evaluative and linguistic domains. Emotional shifts were typically multi-causal (3-5) and often bidirectional. Moreover, engagement increases markedly in Segments 2 and 3 (48 and 40 fluctuations of high amplitudes, compared to 14 fluctuations of differing amplitudes in Segment 1), alongside increasingly inverse FLE–FLA relationships (see chapter 4.10.2.1, section 2).

Overall, per-segment-comparisons confirm earlier findings about Participant 1's primarily linguistically driven and relatively regulated emotional responses and Participant 9's more complex responses, with stronger affective, social-evaluative and task-related influences, which lead to greater intensity and imbalance (especially in the most demanding segment).

4.10.3 Results of the Idiodynamic Study

This section presents the quantitative findings of the idiodynamic study, interpreted in conjunction with the qualitative codes and themes identified in the previous chapters.

Section 1: Participant 1

Participant 1 exhibited consistently low mean levels of both FLA and FLE across all three segments, with values remaining close to zero, suggesting that the participant experienced generally low emotional intensity throughout the task, with neither strong anxiety nor strong enjoyment predominating. Median scores of zero further indicate that emotional fluctuations were frequently minimal or centred around a neutral baseline. This low-intensity emotional profile aligns with the relatively small number and low density of codes identified, which were

predominantly linguistic, task-driven and personal in nature, in contrast to the more affective and social-evaluative coding observed for Participant 9 (see chapter 4.10.2.2 and 4.10.2.3).

A more fine-grained analysis of mean scores reveals subtle variation across segments. Mean FLA decreased slightly over time (from $M = .35$ in Segment 1 to $M = .25$ in Segment 3), suggesting possible familiarization with the task, disengagement or boredom. This interpretation is supported by extended periods of emotional neutrality and reduced fluctuation intensity in Segment 3 (see chapter 4.10.2.1, section 1), although it contrasts with the participant's self-reported experience of sustained engagement and pride in idea expression alongside ongoing formulation difficulties in Segment 3. This discrepancy underscores the importance of post-hoc interviews in interpreting idiodynamic data.

Although FLA follows a slight decrease over time, the relationship between mean scores of FLA and FLE follows a non-linear pattern: FLA slightly exceeds FLE in Segments 1 and 3, whereas FLE exceeds FLA in Segment 2. Given the progressive decrease in topic familiarity, this pattern indicates that this factor alone cannot account for emotional variation (see RQ3). Qualitative data show that Segment 2 elicited higher enjoyment due to positive topic valence (e.g. personal relevance and positive memories), while FLA peaks persisted, suggesting that even engaged learners are not immune to stress due to linguistic processing demands. Thus, topic valence and perceived linguistic difficulty emerge as key drivers alongside task complexity. Additionally, the theme 'linguistic accuracy and performance monitoring' further suggests a potential, albeit implicit, sensitivity to social-evaluative risk. Moreover, a very similar category emerged as the primary driver of FLA during code comparisons, suggesting that even rather confident participants are not immune to fears of evaluative pressure in L2 experiences. However, as this concern was more overtly represented in Participant 9's data (i.e. as a separate theme), its role for Participant 1 must remain marginal and tentative.

Correlation analyses provide only partial support for a relationship between FLA and FLE, revealing weak, non-significant negative correlations across segments ($\rho = -.041; -.097; -.172$). Although the strength of this relationship increases linearly from Segment 1 to 3, suggesting a greater impact of FLA on FLE under higher task demands, this finding contrasts with mean-level patterns and qualitative evidence, which both found FLE to be highest in Segment 2, thus hinting at a non linear-patterned relationship between FLE and FLA. Im-

portantly, qualitative analysis indicates that emotional triggers operated largely non-bidirectionally for Participant 1 (see chapter 4.10.2.3). Based on this, as well as on the small, non-statistical effect size, FLA and FLE appear to function largely independently for Participant 1.

Despite low overall intensity, relatively high standard deviations – particularly for FLE in Segment 2 ($SD = 1.05$) – indicate substantial moment-to-moment variability. This variability reflects the interplay of different emotional triggers (i.e. codes) on increases/decreases of FLE/FLA – more specifically, in Segment 2, the interplay of positive topic engagement and intermittent linguistic difficulties.

Overall, Participant 1 demonstrates a low-intensity yet dynamically fluctuating emotional profile shaped primarily by concerns of linguistic processing, task conditions and topic valence. This pattern aligns with a learner who is somewhat disengaged or cautious, rather than strongly anxious – as was expected (see chapter 4.9). Although questionnaire data initially suggested a more confident profile, Participant 1 self-reported that reduced recent L2 exposure had increased anxiety and reduced speaking comfort, aligning the participant more closely with Cluster 1. However, their relatively neutral emotional levels rather than the expected high FLA and low FLE (see chapter 4.9) indicate only partial representativeness. While weak negative FLA–FLE correlations may tentatively suggest a cluster-typical pattern, the lack of statistical significance and qualitative confirmation warrants caution. More broadly, the observed shift in their profile (from more confident to self-reportedly more anxious, to emotional neutrality) highlights the fluid and context-dependent nature of learner characteristics.

Section 2: Participant 9

Participant 9 displayed greater emotional intensity and variability than Participant 1, with low mean levels of FLE across all three segments, alongside more variable and, at times, elevated levels of FLA – although all scores remained relatively moderate. Mean FLA exceeded FLE in Segments 1 ($M = 1.60$ vs. $.00$) and 3 ($M = 1.62$ vs. $-.83$), whereas FLE slightly exceeded FLA in Segment 2 ($M = .47$ vs. $.32$). These patterns are consistent with qualitative findings showing a broader and denser coding system, encompassing not only linguistic, topic-driven and task-related factors but also affective and social-evaluative dimensions (see chapter 4.10.2.2 and 4.10.2.3). A key feature of Participant 9's trajectory is elevated anticipatory anxiety at the beginning of each segment, which is absent in Participant 1. In Segment 1, FLA remains dominant due to task pressure and low content creativity, while positive affective

factors only partially mitigate anxiety. In Segment 2, topic engagement and meaning-making drive increases in FLE and reductions in FLA, although anxiety spikes persist due to linguistic difficulties and social-evaluative risks. This again demonstrates that even while feeling enjoyment, learners remain vulnerable to triggers of anxiety. In Segment 3, multiple debilitating (linguistic, cognitive and psychological) triggers interact, resulting in sustained high FLA and reduced FLE. Nevertheless, intermittent FLA reductions and FLE increases occur due to affective and linguistic facilitators, particularly toward the end of the segment, where FLE rises notably (see chapter 4.10.2.4). This highlights the highly volatile and multi-causal nature of emotional fluctuations and reinforces that factors beyond topic familiarity shape emotional experiences. In conclusion, mean scores and qualitative data indicate that enjoyment was limited and context-dependent (largely confined to Segment 2), whereas anxiety remained the more salient emotion across segments. However, because emotional intensity remained moderate overall, Participant 9 appears more anxiety-prone than Participant 1 rather than highly anxious in absolute terms.

Median values support this interpretation, showing increased anxiety in Segments 1 and 3 and negative enjoyment in Segment 3. Again, the progression across segments reveals a non-linear but overall deteriorating emotional trajectory, with enjoyment peaking in Segment 2 and dropping in the final segment, whereas FLA surges persisted across Segment 1 and 2 and dominated during Segment 3. As for Participant 1, these non-linear patterns again suggest that task difficulty and topic familiarity are important, but insufficient alone to explain emotional fluctuations. The interacting and sometimes bidirectional triggers identified in the qualitative analysis highlight that emotional fluctuations were shaped not only by topic familiarity, but also by topic valence, perceived linguistic accuracy, and, for Participant 9 especially, affective and psychological concerns, suggesting greater self-awareness and sensitivity to evaluative pressure.

Moreover, relatively high standard deviations (FLA: $SD = 1.06\text{--}1.85$; FLE Segment 2: $SD = 1.10$) further indicate substantial moment-to-moment emotional fluctuations throughout the task – a finding which is in line with the qualitative data outlined before in this chapter.

Correlation analyses reveal a shifting relationship between FLA and FLE: a small positive (non-significant) correlation in Segment 1 ($p = .232$), a negligible negative (non-significant) correlation in Segment 2 ($p = -.053$) and a strong negative, statistically significant correlation in Segment 3 ($p = -.42, p < .001$). In other words, in Segment 1, anxiety may have co-occurred

with enjoyment, whereas in Segment 2, higher FLA coincides with lower FLE. In Segment 3, however, increased anxiety clearly suppresses enjoyment, suggesting that greater task complexity intensifies the negative relationship between FLA and FLE. This interpretation is only partly supported qualitatively, as Segment 2 was more complex than Segment 1 yet produced the highest FLE. Additionally, this interpretation suggests that triggers functioned increasingly bidirectionally, which is only partially true since many did function bidirectionally for Participant 9 throughout the interview, meaning also in Segment 1.

Finally, while Participant 9's general questionnaire profile aligns with the more confident and less anxious characteristics of Cluster 2 (see chapter 4.8), the idiodynamic data reveal substantial context-dependent emotional reactivity. The participant appears sensitive to task difficulty, topic valence, task pressures, cognitive difficulties, affective factors as well as psychological concerns, with anxiety undermining enjoyment as cognitive and linguistic demands rise (especially in Segment 3), while enjoyment peaks are strongly tied to topic valence and can also ensue FLA drops (see Segment 2). Thus, the participant appears more anxiety-prone and less stable than expected (see chapter 4.9), highlighting a discrepancy between self-reported and experienced emotions.

On the other hand, their self-reported generally low anxiety and high speaking comfort are partly reflected in the data, particularly in Segment 2, where anxiety remains low ($M = .32$) and enjoyment peaks ($M = .47$). However, the qualitative findings reveal greater anxiety-proneness and insecurity through frequent social-evaluative concerns and affective triggers, suggesting that Participant 9, like Participant 1, reflects their cluster profile less clearly than expected. Taken together, these findings indicate that even lower-anxiety learners may experience notable affective fluctuations under pressure, and that the anxiety–enjoyment relationship becomes more negative in challenging communicative contexts (Segment 3), a statistically significant pattern generalizable to all Cluster 2 participants. Participant 9 illustrates that, although Cluster 2 learners are generally more comfortable, they remain susceptible to anxiety-related disruptions, underscoring the context-dependent and dynamic nature of L2 emotional experience.

In conclusion, Participant 9's idiodynamic behaviour partially reflects the more confident and less anxiety-prone profile of Cluster 2, although context-dependent variation and moderate anxiety fluctuations indicate that they are more anxious than Participant 1 (without being highly anxious overall).

Section 3: Comparative Analysis of Participant 1 and 9

TABLE 11: COMPARATIVE EMOTIONAL AND CODING PROFILES OF PARTICIPANT 1 AND PARTICIPANT 9

Dimension	Participant 1	Participant 9
Thematic structure	Shared core themes (topic engagement, linguistic difficulties, task constraints)	Same shared themes, additional psychological and affective theme
Thematic composition	Less dense and frequent	Many codes, high frequency
Code direction	Low code interaction complexity	High bidirectionality
Emotional fluctuations	Mainly positive co-occurrences (limited negative relationship in S3)	Increasingly more inverse relationships; only limited positive relationship (in all segments)
Code multi-causality	Low (1–3 codes/event); mainly single-cause explanations	High (3–5 codes/event); multi-causal and co-occurring triggers
Emotional intensity	Generally low, stable FLA/FLE; near-zero activation	High variability; FLA peaks (S1, S3), FLE peak (S2), negative FLE (S3)
Emotional trajectory	Non-linear; slight decline of engagement over time; possible disengagement (not supported by qualitative findings); overall decline of FLA and most positive in S2	Non-linear; deteriorating trajectory; increased FLA and reduced FLE in final segment; most positive in S2
Emotional volatility	Frequent highs and lows indicate that more regulated learners remain vulnerable to unexpected fluctuations due to emotional triggers	Frequent highs and lows indicate that more engaged learners remain vulnerable to unexpected fluctuations due to emotional triggers
Code profile	Linguistic, cognitive and task-related focus (e.g. lexical retrieval, topic engagement, task-induced pressure); limited affective/social factors	Broad spectrum: cognitive, linguistic, task-related, affective, social-evaluative (e.g. uncertainty, exposure risk, confidence)
Emotional orientation	Task- and process-oriented	Multidimensional; heightened awareness of social norms and self-presentation, thus importance of social evaluation factors
Questionnaire vs behaviour	Reported high FLA and low speaking comfort; observed low reactivity and well-regulated reactions, appearing relatively confident, stable and at times even disengaged (mismatch)	Reported low FLA and higher speaking comfort; observed high volatility, higher FLA scores and social-evaluative concerns (mismatch)
Overall profile	Relatively neutral, low-activation emotional profile characterised by limited affective engagement despite ongoing fluctuations	More emotional intensity and variability and more engagement; moderate fluctuations, in general

When comparing the results between Participant 1 and Participant 9, both shared structural patterns and substantial differences in their idiodynamic emotional trajectories, further highlighting the complex, dynamic and context-dependent nature of FLA and FLE. These findings are summarized in a comparative overview above (Table 11).

Taken together, these findings underscore two key insights: (1) Shared thematic categories do not necessarily result in similar emotional processes, as individual differences in trigger interaction and complexity shape distinct trajectories, and (2) self-reported emotional dispositions may diverge substantially from moment-to-moment emotional experiences. Finally, these results highlight the dynamic, context-dependent nature of L2 emotions and the value of idiodynamic and qualitative approaches in capturing their complexity.

4.10.4 Comparison of Findings with Research Questions

4.10.4.1 Research Question 1

As mentioned in chapter 2.3, the first research question corresponds to ‘How many clusters emerge based on the learner variables FLA, L2 motivation, speaking comfort and FL Attitudes, what are the clusters’ composition and characteristics?’ More detailed findings were already presented in chapters 4.2-4.7, yet here is a summarized answer:

A hierarchical cluster analysis using Ward’s method identified a two-cluster solution as the most interpretable and statistically robust model when considering FLA, L2 motivation (integrative and instrumental), speaking comfort and attitudes. Although initial models including attitudes yielded three clusters, these solutions were uneven and less stable; subsequent analyses (including factor analysis, case summaries and bootstrapping) supported a two-cluster structure, with attitudes retained due to their strong discriminative power.

Cluster 1 (n = 54) can be characterized as a more anxious and less comfortable learner profile, with higher FLCA (M = 2.04), lower speaking comfort (M = 2.09) and only moderate-to-high attitudes (M = 6.82). Despite these affective constraints, learners in this cluster still demonstrate moderate-to-high integrative (M = 2.35) and instrumental motivation (M = 1.70).

Cluster 2 (n = 15) represents a more confident and positively oriented profile, with lower anxiety (M = 3.74), higher speaking comfort (M = 3.70) and more favourable attitudes (M = 7.74). This group also shows slightly stronger integrative (M = 2.15) and instrumental motivation (M = 1.52), although motivation does not substantially differentiate the clusters.

Overall, the results indicate that the primary distinction between clusters lies in affective variables (anxiety and speaking comfort) and attitudes, rather than motivation (see chapter 4.6), suggesting that learners differ mainly in their emotional experience of L2 use rather than in their motivational orientation. In addition, given the much bigger size of Cluster 1 than Cluster 2, B1-B2 learners of German seem to be more anxious, less comfortable in speaking and less favourable to German, Germany and the Germans, overall.

4.10.4.2 Research Question 2 and Hypotheses

The second research question corresponded to ‘Do representants of clusters behave as expected (see hypotheses) while topic familiarity decreases or do self-reported profiles diverge from situated behavior during L2 production?’

Overall, the empirical findings only partially support the proposed hypotheses, with several expectations contradicted by the observed idiodynamic patterns. The comparison above reveals that while some task-related tendencies are confirmed, most between-learner and reactivity-based predictions are not borne out.

H1–H2: Task difficulty effects

Hypotheses H1 and H2 predicted a linear increase in FLA and decrease in FLE as topic familiarity decreased. The results provide limited and only partial support for these assumptions.

While both participants show more negative emotional experiences in Segment 3, consistent with concerns about the low topic familiarity, their trajectories are clearly non-linear rather than linear. In both cases, Segment 2 emerges as the most positive phase, with highest FLE scores and relatively lower anxiety (especially for Participant 9). This confirms that especially topic valence and personal relevance play a crucial role alongside factors determining emotional fluctuations, such as task difficulty.

Moreover, Participant 1 does not show the expected increase in FLA; instead, their FLA slightly decreases over time, directly contradicting H1. Participant 9 shows a clearer increase in FLA in the final segment, which is more in line with H1, but not in a strictly gradual pattern. Similarly, FLE does not steadily decline for either participant, contradicting H2.

In conclusion, H1–H2 are only partially supported, as topic familiarity influences emotions, but not in a linear or uniform way.

H3–H4: Between-learner differences

Hypotheses H3 and H4 anticipated that Participant 1 would show higher FLA and lower FLE than Participant 9. The findings, however, clearly contradict H3: Participant 1 consistently reports lower FLA levels than Participant 9 across all segments. In fact, Participant 9 appears more anxiety-prone, particularly in Segments 1 and 3.

H4 is, however, partially supported. While Participant 9 does show slightly higher enjoyment than Participant 1 in Segment 2, both participants generally report low-to-moderate levels of FLE overall, and Participant 9 even shows negative FLE in Segment 3. Thus, the expected clear advantage in enjoyment for Participant 9 is not consistently observed.

Thus, in conclusion, H3 is not supported while H4 is only weakly supported.

H5: Reactivity to task difficulty

For what H5 is concerned, it was assumed that that Participant 1 would show stronger affective reactivity (i.e. steeper increases in FLA and decreases in FLE), while Participant 9 would remain more stable or show more moderate emotional tendencies.

The findings, however, contradict this hypothesis. Participant 1 exhibits low-intensity and relatively stable emotional patterns, with only subtle fluctuations and no increase – on the contrary, even a slight decrease – in FLA across the three segments. In contrast, Participant 9 shows greater reactivity, particularly in the sharp prominence of anxiety and overall decrease in enjoyment in Segment 3.

Therefore, H5 is not supported and, in fact, the opposite pattern is even observed.

H6: Intra-individual variability

Finally, H6 predicted greater moment-to-moment variability for Participant 1 and more stable trajectories for Participant 9.

The results again contradict this expectation. Although Participant 1 does show variability, it occurs within a restricted emotional range. Participant 9, by contrast, demonstrates greater variability combined with higher emotional intensity, particularly in FLA. This results in more pronounced peaks and dips, indicating stronger affective fluctuations.

Thus, in conclusion, H6 is not supported, with Participant 9 showing greater variability than Participant 1.

Taken together, the findings indicate that the hypotheses were largely not confirmed, particularly with regard to between-participant differences and affective reactivity. The most robust insight is that topic familiarity alone does not determine emotional experience, as both learners were strongly influenced by topic valence, in addition to other factors such as linguistic concerns of accuracy, affective factors and social-evaluative concerns.

Most notably, the results reveal an unexpected reversal of roles: Participant 1, initially expected to be more anxious, displays a low-intensity, relatively neutral emotional profile, whereas Participant 9, expected to be more stable and confident, exhibits greater anxiety and stronger emotional fluctuations as compared to Participant 1. Nevertheless, these FLA scores and emotional fluctuations remain still only moderate for Participant 9.

4.10.4.3 Research Question 3

The third research question ('Does topic familiarity emerge as the sole and reliable factor contributing to FLA and FLE fluctuations in L2 speaking situations with natives? If not, what (other) factors contribute to learners' emotional trajectories?') has been answered in chapter 4.10.3 already, and will only be briefly summarized here:

Topic familiarity does not emerge as the sole or reliable factor driving fluctuations in FLA and FLE. As topic familiarity decreased, FLA was hypothesized to increase and FLE to decrease in a linear pattern, which was not the case for Participant 1 and 9, with Segment 2 emerging as particularly positive (high FLE, low FLA). While topic familiarity was still shown to influence emotional trajectories in more demanding or unfamiliar tasks (see Segment 3), both participants' data show that emotions are shaped by a dynamic interaction of multiple factors, the composition of which depends on individual learner differences. Such factors included most notably, and for both participants, topic valence (interest and personal relevance), linguistic processing demands (e.g. lexical retrieval and formulation difficulty) and other task-related concerns than topic (i.e. relying solely on L2). Additional factors included self-monitoring, cognitive load, affective factors and social-evaluative concerns. These factors often co-occurred (although the number of factors was, again, learner-dependent) and could function bidirectionally (especially for Participant 9), indicating that L2 emotional experiences are multicausal, context-dependent and individually variable, rather than determined by topic familiarity alone.

5. Discussion

The present study aimed to investigate the dynamic relationship between foreign language enjoyment and foreign language anxiety, alongside the role of learner variables such as speaking comfort, language attitudes and L2 motivation in shaping learners' emotional experiences during L2 interaction. Overall, the findings support previous research conceptualizing learner emotions as highly dynamic, context-dependent and learner-specific phenomena while also contributing additional insights into the interplay between affective variables, task characteristics and interpersonal dynamics in spontaneous spoken interaction.

A central finding of the present study concerns the highly individualized nature of emotional trajectories during L2 communication. Aubrey (2022) argued that learners exposed to the same task may nevertheless experience substantially different emotional responses. The present findings strongly support this claim, as both participants displayed distinct emotional profiles despite completing identical tasks. Emotional fluctuations varied not only between learners but also across interactional segments, confirming the non-uniform and dynamic nature of FLE and FLA. This variability aligns with the broader conceptualization of FLA and FLE as situation-specific emotions (Kasbi & Elahi Shirvan, 2017) shaped by multiple interacting factors, including self-perception (Kasbi & Elahi Shirvan, 2017; MacIntyre, 2017), linguistic difficulty, topic familiarity, social factors like teacher evaluation (see Perceived Positive Feedback) (Alpert & Haber, 1960) and fear of evaluation (Horwitz et al., 1986; Kasbi & Elahi Shirvan, 2017; MacIntyre, 2017) – all of which were identified as central triggers in this study, too. In particular, Participant 9 demonstrated how strongly self-perception and concerns regarding evaluation influenced emotional experiences – possibly reflecting the fulfilment or non-fulfilment of their psychological needs (Botes et al., 2020) – whereas Participant 1 appeared more influenced by linguistic difficulties, interactional feedback and topic engagement.

Moreover, the findings further reinforce the theoretical distinction between FLE and FLA as related but independent emotional constructs rather than opposite ends of a single continuum (Dewaele & MacIntyre, 2016; MacIntyre & Gregersen, 2012). Although negative relationships between the two variables were frequently observed, these correlations were generally weak to moderate and rarely statistically significant. The only significant finding was, however, consistent with earlier findings, in that it represented a moderate-to-low negative relationship (Dewaele & Alfawzan, 2018; Dewaele et al., 2017; Dewaele & Dewaele, 2017;

Dewaele et al., 2019a; Hung, 2020; Resnik & Dewaele, 2020; Uzun, 2017). Moreover, the study identified instances in which both emotions increased simultaneously, particularly for Participant 1 and during Segment 1 for Participant 9, or were even very elevated at the same time. This finding aligns with Dewaele and MacIntyre's (2014) observation that learners can experience high levels of both FLE and FLA concurrently. In addition, a small positive (although non-significant) relationship between FLE and FLA was also identified in Participant 9's Segment 1. Such findings support earlier research reporting occasional positive or non-significant relationships between FLE and FLA (Dewaele et al., 2019c; Dewaele & Dewaele, 2017). The present results therefore further challenge a simplistic 'see-saw' conceptualization of learner emotions. Instead, they suggest that FLE and FLA may at times function inversely while also operating independently depending on contextual triggers (either bidirectional or independent) and learners' interpretations of the communicative situation.

As to the prevalence of either FLA or FLE, our findings only partially support Dewaele and MacIntyre's (2014) conclusion that learners generally experience more FLE than FLA. Emotional fluctuations in the present study were found to be highly context-dependent and varied considerably across interactional segments and between learners. While Participant 1 displayed marginally higher overall levels of enjoyment than anxiety, Participant 9 consistently experienced substantially higher levels of FLA than FLE. These contrasting emotional trajectories further reinforce the learner-specific nature of emotional experiences in L2 communication and suggest that overall emotional tendencies may differ considerably depending on individual learner characteristics.

Importantly, the data also support the multidimensional model of affect proposed by Linnenbrink (2007), according to which both positive and negative emotions can be highly activating, thus fuelling learners' motivation, effort or performance (Aubrey, 2022). In fact, elevated FLA levels did not necessarily result in disengagement (see Arnold & Brown, 1999). On the contrary, Participant 9 remained highly engaged despite consistently elevated FLA levels, particularly during Segment 3. Similarly, qualitative evidence demonstrated that both learners continued striving to express themselves successfully even during moments of heightened anxiety. These findings align with research suggesting that anxiety may sometimes function as a motivational force rather than solely as a debilitating factor (Marcos-Llinaís & Garau, 2009). At the same time, the study also showed that low anxiety alone does not auto-

matically guarantee engagement, as Participant 1 occasionally appeared disengaged despite the existence of anxiety peaks – albeit small ones. Qualitative analysis could not, however, confirm this, highlighting the fact that researchers must remain cautious with participant ratings of FLA and FLE (Aubrey, 2022). Nevertheless, these findings support the notion that both FLE and FLA can energize learners in distinct yet complementary ways.

The study additionally provides evidence for the buffering role of enjoyment in emotionally challenging communicative situations. In line with Fredrickson's (1998, 2001, 2004) Broaden-And-Build Theory, increases in FLE frequently coincided with reductions in FLA, especially through bidirectional emotional triggers observed in Participant 9's data. Successful idea formulation, topic engagement, linguistic fluency and feelings of cognitive reward often reduced anxiety while simultaneously increasing enjoyment. These findings illustrate how positive emotions may help learners cope with communicative challenges and maintain engagement despite moments of linguistic difficulty or socio-evaluative pressure.

The role of socio-evaluative concerns emerged as particularly salient throughout the study. Horwitz et al.'s (1986) identification of fear of negative evaluation as a core component of FLA was strongly reflected in the qualitative data, especially for Participant 9, whose emotional fluctuations were heavily influenced by concerns about being judged negatively. The findings further highlight the importance of interpersonal dynamics during dyadic interaction. Previous idiodynamic studies have emphasized that learner emotions are strongly shaped by social interaction, including teacher behaviour (friendliness or feedback) (Botes et al., 2020; Botes et al., 2022a), self-comparison, topic familiarity and the maintenance of interpersonal harmony (Aubrey, 2022; Shirvan & Talebzadeh, 2018b). The present study supports these conclusions. Both participants displayed clear sensitivity to perceived feedback (via positive feedback or fear of judgement) and social appropriateness and qualitative data suggested that both learners actively sought to maintain positive interactional dynamics with their interlocutor. Concerns about appearing rude or politically incorrect (e.g. Participant 9: "...pour vraiment décrire à quoi ressemble la ville sans vouloir enfoncer tout le peuple irlandais") frequently contributed to anxiety fluctuations, thereby underscoring the socially situated nature of learner emotions during spoken interaction.

Moreover, linguistic and cognitive difficulties emerged as some of the most consistent triggers of anxiety. In line with findings from Gregersen et al. (2014) and Aubrey (2022) (see also MacIntyre & Gregersen, 2022; MacIntyre & Legatto, 2011; MacIntyre & Serroul, 2015), lexical

retrieval difficulties, fluency breakdowns, unfamiliar topics, difficulties organizing ideas, fear of negative evaluation, formulation problems and uncertainty regarding linguistic accuracy frequently triggered anxiety surges while sometimes simultaneously reducing enjoyment. Among these, the linguistic triggers were Participant 1's main emotional fluctuation drivers but were also observed for Participant 9, while the psychological triggers (idea organization and fear of judgment) were particularly typical for Participant 9. Conversely, moments characterized by emotions like satisfaction or pride (i.e. Cognitive Reward), personal topics, perceived positive feedback (see above) and successful idea expression often increased enjoyment and sometimes reduced anxiety, especially for Participant 9. Finally, some triggers (e.g. learners' own skill perception) could function as triggers for both FLA and FLE increases, especially for Participant 9. Such findings further demonstrate the close interconnection between cognitive, linguistic and affective subsystems during real-time communication, as well as the overarching similarities of emotional triggers despite individual learner differences.

Task characteristics, including topic and task implementation, also played an important role in shaping emotional experiences. Previous research has suggested that meaningful and familiar tasks of appropriate cognitive load promote enjoyment and reduce anxiety while unfamiliar or cognitively demanding tasks may have the opposite effect (Chen, 2023; Dewey et al., 2018; Nakamura et al., 2021). Elements of learner control (e.g. choosing a picture for description task) have been proven to mainly boost FLE, but can also lead to FLA (Nakamura et al., 2021). In addition, earlier research suggested that pre-task planning and repeated tasks reduce anxiety and increase enjoyment by lowering cognitive load and increasing confidence (Bygate & Samuda, 2005; Skehan, 2018), while restricted spontaneity from pre-planning can lead to more anxiety (Bui & Teng, 2018; see also Boudreau et al., 2018; Gregersen et al., 2014) and extensive task repetition can induce boredom (Kim, 2013). The present findings partially support this claim. Segment 2, which allowed learners to choose personally meaningful topics, generated the highest levels of FLE for both participants, suggesting that learner autonomy and personal relevance strongly contribute to enjoyment. The power to choose in Segment 2, however, also led to small FLA surges in Participant 9, as they reported to struggle with cognitive load when having to decide quickly which topic to choose, based on available ideas and vocabulary knowledge. However, topic familiarity alone did not consistently predict emotional outcomes. Although Segment 1 involved a more familiar topic, it elicited lower

enjoyment levels than Segment 2. This suggests that personal relevance, emotional investment and even learner control may be more influential than mere topic familiarity. Nevertheless, the data also indicate that task planning may still indirectly reduce FLA, as many anxiety spikes in Segments 2 and 3 were caused by idea generation difficulties that pre-task preparation could potentially have alleviated. In addition, according to earlier findings, the highly repetitive nature of Segment 1 should have led to low FLA scores or even boredom, which was not confirmed by our data (high engagement and relatively high FLA), suggesting that other factors led to increases in FLA despite task repetition and high topic familiarity. This may suggest the existence of a ‘warm-up’ phase characterized by initial insecurity when speaking to a native speaker. This finding aligns with Pizarro Chacón’s (2022) observation that initial interactions with native speakers may provoke fear and insecurity.

Beyond emotional fluctuations during interaction, the present study also contributes to research on learner variables and clustering. The cluster analysis identified two distinct learner profiles. Learners with higher speaking comfort displayed lower FLA and more positive language attitudes, whereas learners with lower speaking comfort demonstrated higher anxiety and only moderately positive attitudes. These findings support earlier research on willingness to communicate (WTC), which has consistently linked communicative confidence to lower anxiety, friendly interlocutors and more positive affective experiences (Peng, 2025). The results therefore suggest that the here proposed learner variable of speaking comfort may function similarly to WTC and may additionally be associated with attitudes toward the target language, its country and its speakers.

The findings regarding language attitudes provide further insights, while also responding to the need of a deeper and more holistic investigation of language attitudes in FLA/FLE research, as outlined in the literature review. This study’s attitudes scale demonstrated only moderate internal consistency, thereby indicating the need for more reliable multidimensional measures of language attitudes. The cluster analysis nevertheless suggested a possible negative relationship between FLA and language attitudes. Learners in the more anxious cluster reported less positive attitudes overall than learners in the more confident cluster. At the same time, the quantitative analysis did not find strong evidence linking language attitudes directly to moment-to-moment emotional fluctuations during interaction, despite previous findings on the positive relationship between language attitudes and increased FLE/decreased FLA (Botes et al., 2022a; Dewaele & MacIntyre, 2014; Rippengale, 2022). Similarly,

in spite of findings pointing to the important impact of positive attitudes on L2 motivation, this study did not find a significant relationship between L2 motivation and language attitudes, as motivation did not emerge as a defining clustering variable since both clusters displayed moderate-to-high motivational levels. These findings suggest that while attitudes and motivation may shape broader learner profiles, their direct influence on real-time emotional fluctuations may be less immediate than situational factors such as self-perception, linguistic difficulty or topic interest.

With regard to L2 motivation and emotions, a similar pattern emerged. Although previous research has identified a positive relationship between FLE and L2 motivation, as well as a negative relationship between FLA and L2 motivation (Busse & Walter, 2013; Dewaele & Meftah, 2023; MacIntyre & Vincze, 2017), the present study did not yield comparable results. This discrepancy may, however, be explained by Dewaele and Meftah's (2024) findings suggesting that motivational levels tend to stabilize at the intermediate proficiency level, which could account for the absence of significant motivational differences among the intermediate learners in the present study.

Methodologically, the present study also supports the value of idiographic and idiodynamic approaches to the study of learner emotions. Consistent with Boudreau et al. (2018), the findings revealed substantial variation in FLE–FLA correlations both across participants and across interactional segments, demonstrating that group-level patterns may obscure important individual differences. The use of stimulated recall additionally proved valuable for identifying the specific triggers underlying emotional fluctuations. Like Boudreau et al. (2018), this study confirms that the idiodynamic method is particularly effective in capturing and assessing the very context-dependent and dynamic affective fluctuations of FLE and FLA. At the same time, the study confirmed several limitations associated with idiographic research outlined by Velicer et al. (2014), particularly regarding the difficulty of generalizing findings beyond individual trajectories – as even generalizing to sub-groups proved difficult in this study –, as well as the inconsistencies observed between group levels and individual behaviour. Thus, while broader applicability remains limited, the approach nevertheless provided rich insights into the dynamic and context-sensitive nature of learner emotions that would likely remain undetected through purely aggregate methods.

Finally, the present study responds to several important gaps identified in previous research on learner emotions. First, by focusing on medium-level learners rather than beginners, the

study addresses Nikitina's (2019) call for research involving more advanced learners whose motivational and emotional profiles may differ from the heightened enthusiasm typically associated with early stages of language learning. The findings demonstrated that even medium-level learners maintained moderately positive to highly positive language attitudes and moderate-to-high motivation levels, suggesting that L2 motivation as well as favourable attitudes toward the TL, its speakers and culture may persist as proficiency develops. Furthermore, the study contributes to the still limited body of research examining the relationship between learner emotions and language attitudes, particularly in relation to FLA. Unlike earlier studies that primarily focused on attitudes toward the TL itself, the present research adopted a more holistic perspective by also incorporating attitudes toward the TL community and culture. Although no direct relationship between attitudes and moment-to-moment emotional fluctuations was observable, the findings nevertheless suggest potential links between language attitudes, speaking comfort and anxiety profiles. In doing so, the study responded to the need of more detailed discussions on possible relationships between learner variables. Methodologically and contextually, the present study also addresses several limitations identified in previous FLA/FLE research. By focusing on L1 French learners of German rather than the more commonly studied Chinese EFL learner populations, the study contributes to a more diversified understanding of learner emotions across linguistic and cultural contexts. Furthermore, the mixed-methods design combining questionnaire data, idiodynamic ratings and stimulated recall interviews enabled the investigation of real-time emotional fluctuations during authentic interactions with native speakers, thereby providing a more ecologically valid and dynamic perspective on learner emotions than traditional retrospective questionnaire-based approaches alone, while also responding to the need of more diversified interaction types (Zhang et al., 2024a) and the identification of external and internal emotional triggers.

Despite these strengths in the study design, several limitations of the present study should be acknowledged. First, similarly to much previous FLA/FLE research (e.g. Boudreau et al., 2018; Dewaele & MacIntyre, 2014), the study focused exclusively on adult university learners. Consequently, the findings cannot readily be generalized to younger learners, whose emotional trajectories may differ substantially. In addition, although the study contributes to the comparatively underrepresented body of research on medium-level learners (Nikitina, 2019), the highly underrepresented proficiency groups of beginners and highly advanced learners were not represented in the sample. Likewise, while the study investigated L1

French learners of German rather than the more frequently studied Chinese EFL populations (Zhang et al., 2024a), the languages involved nevertheless remain widely studied European languages, thereby limiting broader linguistic generalizability.

Second, the study adopted a cross-sectional design and therefore captured only limited snapshots of learners' emotional experiences. Given the inherently dynamic nature of learner emotions (Li et al., 2018), longitudinal research would be necessary to better examine the evolution of FLE and FLA over time (Shen, 2021). Furthermore, the tasks employed in the study were entirely spontaneous and did not involve pre-task planning. Although this design enabled the investigation of real-time emotional fluctuations during spontaneous communication, it did not address recent calls for research comparing planned and unplanned task conditions (Aubrey, 2022).

Another limitation concerns the communicative setting. While the interactions were not formally evaluated, the experimental environment may nevertheless have heightened socio-evaluative pressure, as participants were filmed, interacted with an unfamiliar interlocutor and completed the tasks within a university setting. Not only does this lead to the observer's paradox, it also inscribes this study in a more formal setting design, thereby failing to answer the need for more informal settings in FLE/FLA research. Moreover, the study focused exclusively on speaking-related anxiety and enjoyment, which remain the most extensively researched dimensions of learner emotions. Consequently, the findings cannot account for emotional experiences associated with other language skills such as listening, reading or writing, which remain comparatively underexplored and warrant further investigation.

Methodological limitations linked to the idiodynamic component should also be considered. The idiodynamic sample size was very small and did not fully represent the characteristics of the broader learner clusters, thereby limiting generalizability even at the subgroup (i.e. cluster) level. Furthermore, due to the relatively limited pool of Belgian participants available for in-person participation, the selected cluster representatives could only approximate the typical characteristics of their respective clusters. Future studies should therefore aim to recruit more representative participants in order to strengthen the broader applicability of the findings. In addition, emotional ratings and stimulated recall comments relied heavily on participants' subjective interpretations of the FLA/FLE concepts, emotional awareness and retrospective explanations, meaning that the findings should be interpreted with appropriate caution.

Finally, certain measurement-related limitations should be acknowledged. The language attitudes scale demonstrated only moderate internal consistency, likely due to the relatively small number of items included. Future research should therefore strive to develop more reliable and multidimensional measures of language attitudes in order to facilitate stronger comparisons and broader generalizability. Moreover, while a standardized FLA scale was included in the questionnaire, no equivalent FLE scale was administered. This limited direct comparisons between questionnaire-based and idiodynamic enjoyment measures. However, the inclusion of an additional FLE scale would have further increased the already substantial length of the questionnaire, thereby potentially increasing participants' cognitive load and reducing response quality or completion rates.

6. Conclusion

The present study set out to investigate the dynamic relationship between FLA and FLE during spontaneous L2 interaction with native speakers, while also examining the role of learner variables such as speaking comfort, language attitudes and L2 motivation. More specifically, the study aimed to determine whether learners grouped into distinct affective profiles would behave as predicted under increasingly demanding conditions and whether topic familiarity alone could account for emotional fluctuations. Overall, the findings demonstrate that learner emotions during L2 interaction are highly dynamic, context-dependent and individually variable, thereby supporting contemporary conceptualizations of FLA and FLE as complex and fluctuating emotional constructs rather than stable learner traits.

With regard to RQ1, the cluster analysis identified two distinct learner profiles primarily differentiated by affective variables. Learners in Cluster 1 displayed higher anxiety, lower speaking comfort and only moderately-favourable attitudes toward the TL, TL community and TL culture, whereas learners in Cluster 2 reported lower anxiety, greater speaking comfort and more positive attitudes. In contrast, motivational variables did not substantially differentiate the clusters, suggesting that emotional and attitudinal dimensions may play a more decisive role than motivation in clustering learner profiles. These findings further support previous research linking communicative confidence and positive affective orientations to more favourable language learning experiences.

The second research question examined whether representatives of these clusters would behave in line with their self-reported profiles during spontaneous L2 interaction. The findings revealed substantial discrepancies between questionnaire-based learner profiles and situated emotional experiences. Contrary to expectations, Participant 1, who was expected to display stronger FLA and greater emotional reactivity, exhibited relatively neutral and low-intensity emotional trajectories. Participant 9, by contrast, demonstrated greater emotional volatility, stronger FLA peaks and more pronounced socio-evaluative concerns despite belonging to the more confident cluster. These findings highlight the limitations of relying solely on self-report questionnaires to understand emotions and underscore the importance of investigating emotions as situated and fluctuating experiences emerging in interaction.

The third research question addressed the role of topic familiarity in shaping emotional trajectories. Although topic familiarity did influence emotional experiences, particularly during the most demanding segment, it did not emerge as the sole or most reliable explanatory factor. Instead, emotional fluctuations resulted from the dynamic interplay of multiple interacting variables, including topic valence, linguistic processing difficulties, cognitive load and socio-evaluative concerns. The findings therefore challenge linear assumptions according to which decreasing topic familiarity automatically increases FLA and reduces FLE. Rather, emotionally meaningful and personally engaging topics frequently generated high enjoyment even under cognitively demanding conditions.

A further important contribution of the present study concerns the relationship between FLA and FLE themselves. The findings support previous research conceptualizing both emotions as related but partially independent constructs rather than opposite ends of a single continuum. While negative relationships between FLA and FLE were frequently observed, the study also identified moments in which both emotions co-occurred or fluctuated independently. Particularly noteworthy was the finding that enjoyment occasionally buffered anxiety through positive emotional triggers such as successful idea expression or topic engagement, while anxiety could also buffer enjoyment via triggers like cognitive load (difficulty generating ideas or performance pressure), fear of judgment or linguistic difficulties. At the same time, elevated anxiety did not necessarily lead to disengagement, as participants often remained highly invested in the interaction despite moments of linguistic difficulty or evaluative pressure. These findings contribute to a more nuanced understanding of learner emotions as multidimensional, coexisting and dynamically interacting phenomena.

Methodologically, the study demonstrates the value of combining quantitative clustering techniques with idiodynamic and qualitative approaches in the investigation of learner emotions. The idiodynamic method and stimulated recall interviews made it possible to capture fine-grained, moment-to-moment emotional fluctuations and to identify the specific triggers underlying these changes. In doing so, the study contributes to the growing body of research advocating more idiographic and dynamic approaches to second language emotions, particularly in authentic communicative settings involving native speakers.

Despite these contributions, several limitations should be acknowledged, as explained in more detail above. The relatively small idiodynamic sample of questionable representativeness limits the broader generalizability of the findings, especially at the cluster level. In addition, the cross-sectional design captured only short-term emotional trajectories rather than long-term emotional development. The formal and recorded nature of the communicative setting may also have intensified socio-evaluative pressure and influenced participants' emotional reactions. Furthermore, the study focused exclusively on speaking-related emotions, leaving emotional experiences related to other language skills comparatively unexplored. Future research should therefore expand on the present findings by adopting longitudinal designs capable of tracing emotional development over longer periods of time and across different learning contexts. Larger and more representative idiodynamic samples would additionally strengthen the generalizability of cluster-based comparisons. Future studies could also investigate the role of pre-task planning, different interactional settings and more diversified learner profiles. Moreover, further research is needed to develop more reliable and multidimensional measures of language attitudes in order to better understand their relationship with learner emotions.

In conclusion, the present study highlights the fundamentally dynamic, multidimensional and context-sensitive nature of emotional experience in L2 communication. The findings demonstrate that learner emotions cannot be reduced to static learner profiles or explained solely through task difficulty or topic familiarity. Instead, emotions emerge through the complex interaction of cognitive, linguistic, affective and social factors that vary across learners and communicative situations. By combining cluster analysis with idiodynamic and qualitative methods, this study contributes new insights into the situated nature of FLA and FLE and emphasizes the importance of examining learner emotions not only as stable dispositions but also as fluctuating experiences shaped by real-time interaction.

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8. Appendix

Appendix 1: Coding book for Qualitative coding analysis of Participant 1's Post-Hoc Interview

Code	Label	Definition	When to Apply	FLA Effect	FLE Effect	Instances	Example
E1	Topic Interest / Personal Relevance	Enjoyment derived from discussing personally meaningful or interesting topics	When participant expresses liking, interest or relevance of topic.	↓	↑	3	“c'est lié aussi au fait que le sujet m'intéresse...”
E2/A12	Positive Experience Recall	Emotional response linked to recalling enjoyable personal experiences	When describing enjoyable past activities (e.g., sport, travel).	↓	↑	5	“C'est ça. Et c'est très très actuel. Parce que pour l'instant, c'est vraiment quelque chose qui est très présent”
E3	Idea Satisfaction / Cognitive Reward	Enjoyment from expressing meaningful or valued ideas	When participant evaluates idea positively.	—	↑	3	“Tout en ayant en tête des idées que je voulais véhiculer quoi”
E4/A13	Linguistic Ease / Fluency	Ease of expression due to accessible linguistic resources	When participant reports not searching for words.	↓	↑	2	“Que du coup j'ai pas dû chercher mes mots”
E5	Perceived Positive Feedback	Enjoyment from feeling understood or validated by the interlocutor	When referencing interviewer's reactions (e.g., nodding).	—	↑	1	“Et que je te voyais, je pense, faire un signe de tête”
A1/E6	Lexical Retrieval Difficulty	Difficulty accessing words during speech production	When participant searches for words or cannot find them.	↑	↓	10	“c'était une question de mots”
A2	Lexical Uncertainty /	Anxiety due to uncertainty about	When multiple word options or	↑	—	3	“Mais comédien c'est pas 'acteur'... Et

	Accuracy Concern	correctness of word choice	uncertainty is expressed.				j'avais que 'acteur' en tête"
A3	Topic–Language Mismatch	Difficulty expressing familiar topics in the target language	When participant notes lack of experience discussing topic in language.	↑	—	1	"je pense que c'est un sujet sur lequel je n'ai pas l'habitude de parler en allemand"
A4	Lack of Formulaic Language	Absence of automatic lexical chunks increases effort	When participant refers to missing 'word combinations'	↑	—	1	"il y a des mots qui fonctionnent ensemble... et là ce n'était pas le cas"
A5	Task-Induced Performance Pressure	Anxiety due to task constraints or expectations	When participant references speaking rules or constraints.	↑	—	1	"la tâche c'était de parler en allemand... c'est chiant que j'ai que les mots en anglais"
A6	Error Awareness / Self-Monitoring	Anxiety triggered by noticing or anticipating errors	When participant identifies mistakes or hesitates.	↑	—	2	"j'étais là en mode 'ouhla...'"
A7	Fluency Break-down	Anxiety linked to interruptions in speech flow	When pauses or breakdowns are mentioned.	↑	—	2	/
A8	Epistemic Uncertainty	Anxiety due to uncertainty about factual correctness	When participant is unsure about factual accuracy.	↑	—	1	"j'étais pas exactement sûr de l'info"
A9	Formulation Difficulty	Difficulty translating ideas into linguistic form	When participant struggles to formulate thoughts.	↑	—	4	"j'arrivais pas à bien formuler ce que je voulais dire"
A10	Comprehension Break-down	Anxiety caused by failure to understand input	When participant did not understand a word/question.	↑	—	1	"je n'avais pas compris ton 'Jakobsweg'"
A11	Self-Induced Cognitive	Anxiety due to overthinking or self-perturbation	When participant overthinks or 'perturbs' themselves.	↑	—	3	"'bekannt' m'a perturbé"

	Interference						
A14	Reduced Constraint via Code-Switching	Use of another language reduces pressure	When use of another language increases comfort.	↓	—	1	“c'était en français... je ne me suis pas perturbé à trouver des noms en allemand”

Appendix 2: Codes for Enjoyment With Definitions, Directionality and Examples – Participant 1

Code	Direction	Label	Description	Instances	Example
E1	+	Topic Interest / Personal Relevance	Enjoyment derived from discussing topics that are meaningful or interesting to the participant.	3	“c'est lié aussi au fait que le sujet m'intéresse... fin, est vraiment très enjoyable. Donc, enfin, pour en parler”
E2	+	Positive Experience Recall	Enjoyment increases when recounting lived, enjoyable experiences (e.g., sport, travel, anecdotes).	4	“C'est ça. Et c'est très très actuel. Parce que pour l'instant, c'est vraiment quelque chose qui est très présent.”
E3	+	Idea Satisfaction / Cognitive Reward	Enjoyment from expressing meaningful or valued ideas.	3	“Tout en ayant en tête des idées que je voulais véhiculer quoi”
E4	+	Linguistic Ease / Fluency	Enjoyment increases when expression is fluent and requires no word search.	1	“Que du coup j'ai pas dû chercher mes mots”

E5	+	Perceived Positive Feedback	Enjoyment linked to feeling understood or validated by the interlocutor.	1	“Et que je te voyais, je pense, faire un signe de tête”
E6	–	Lexical Retrieval Difficulty	Enjoyment decreases when the participant struggles to find words.	2	“C'est moins de enjoyment... parce que je ne trouvais pas le bon mot”

Appendix 3: Codes for Anxiety With Definitions, Directionality and Examples – Participant 1

Code	Direction	Label	Description	Instances	Example
A1	+	Lexical Retrieval Difficulty	Anxiety caused by difficulty retrieving words.	8	“c'était une question de mots”
A2	+	Lexical Uncertainty / Accuracy Concern	Anxiety due to uncertainty about correctness of word choice.	3	“Mais comédien c'est pas 'acteur'... Et j'avais que 'acteur' en tête”
A3	+	Topic–Language Mismatch	Anxiety when a familiar topic cannot be easily expressed in the target language.	1	“je pense que c'est un sujet sur lequel je n'ai pas l'habitude de parler en allemand”
A4	+	Lack of Formulaic Language	Anxiety due to absence of automatic lexical chunks.	1	“il y a des mots qui fonctionnent ensemble... et là ce n'était pas le cas”

A5	+	Task-Induced Performance Pressure	Anxiety from task constraints and pressure to perform correctly.	1	“la tâche c'était de parler en allemand... c'est chiant que j'ai que les mots en anglais”
A6	+	Error Awareness / Self-Monitoring	Anxiety triggered by noticing or anticipating mistakes.	2	“j'étais là en mode ‘ouhla...’”
A7	+	Fluency Breakdown	Anxiety linked to pauses or breakdowns in speech flow.	2	/
A8	+	Epistemic Uncertainty	Anxiety due to uncertainty about correctness of information.	1	“j'étais pas exactement sûr de l'info”
A9	+	Formulation Difficulty	Anxiety when ideas cannot be adequately expressed linguistically.	4	“j'arrivais pas à bien formuler ce que je voulais dire”
A10	+	Comprehension Breakdown	Anxiety caused by failure to understand the interlocutor.	1	“je n'avais pas compris ton ‘Jakobsweg’”
A11	+	Self-Induced Cognitive Interference	Anxiety caused by overthinking or self-perturbation.	3	“‘bekannt’ m'a perturbé”
A12	-	Positive Experience Recall	Anxiety decreases when recounting enjoyable experiences.	1	“c'était la partie qui me plaisait... c'est pour ça que j'avais mis l'anxiety aussi bas”

A13	–	Linguistic Ease / Fluency	Anxiety decreases when language is easily accessible.	1	“‘schlechte Erfahrungen’... plus ancré dans l’allemand”
A14	–	Reduced Constraint via Code-Switching	Anxiety decreases when switching languages reduces pressure.	1	“c’était en français... je ne me suis pas perturbé à trouver des noms en allemand”

Appendix 4: Coding book for Qualitative coding analysis of Participant 9’s Post-Hoc Interview

Code	Label	Definition	When to Apply	FLA Effect	FLE Effect	Instances	Example
E1/A15	Topic Interest / Personal Relevance	Comfort derived from discussing personally meaningful or emotionally salient topics	When participant explicitly expresses liking, enthusiasm or personal connection to topic	↓	↑	3	“j’adore parler de mon Erasmus”
E2/A16	Positive Experience Recall	Comfort arising from recalling positive personal experiences	When describing enjoyable past events (e.g., travel, hobbies)	↓	↑	2	“j’étais fan aussi, donc Dublin, Limerick”
E3/A18	Cognitive Reward	Positivity linked to successfully expressing ideas or completing a response	When participant signals relief, success or completion of answer	↓	↑	3	“j’en parle et j’arrive à en parler” “c’était la fin de la question”
E4/A20	Linguistic Ease / Fluency	Ease of expression due to accessible linguistic resources	When participant reports speaking effort-	↓	↑	2	“donc je parle juste et je dis ce qui me passe par la tête”

			lessly or without searching for words				
E5/A13	Confidence in Abilities	Ease stemming from perceived ability to successfully perform the task	When participant expresses confidence or reassurance	↓	↑	3	“Mais parce que je sais que je vais pouvoir répondre à la question, ...c'est ça, c'est vraiment... ça me rassure”
E6/A14	Reduced Performance Pressure	Ease due to absence of evaluation or perfection requirements	When participant refers to task as non-evaluative or low-stakes	↓	↑	2	“comme c'est pas un test de besoin d'avoir la grammaire parfaite pour pouvoir y répondre non plus”
E7	Task Engagement / Receptivity	Enjoyment arising from engagement with an interesting or stimulating question	When participant shows responsiveness or cognitive engagement	—	↑	1	“on est réceptif par rapport à la question”
E8/A17	Topic–Language Match / Safety Zone	Comfort due to familiarity with discussing topic in L2	When participant indicates prior L2 experience with topic	↓	↑	1	“Comme c'est des sujets sur lesquels j'ai aussi parlé en allemand avec mes amis allemands, c'est aussi... Je ne sais pas, il y a une certaine zone de confort en ce sujet.”
E9/A19	Interac-tional Support	Comfort facilitated by dialogic interaction reducing cognitive burden	When participant contrasts interaction with monologue and expresses preference for dialogues	↓	↑	1	“c'était une conversation”
A1	Anticipatory Performance Uncertainty	Anxiety arising from uncertainty about upcoming questions or	When participant anticipates difficulty before speaking	↑	—	4	“c'est dans l'appréhension de parler et de ce qu'on va me demander”

		ability to respond					
A2	High Cognitive Load in L2 Production	Anxiety due to simultaneous planning, structuring and speaking	When participant describes effortful response construction	↑	—	2	“c'est toute la... la structure de la question qui me reste à former dans ma tête aussi....”
A3	Epistemic Uncertainty	Anxiety due to uncertainty about factual correctness	When participant questions accuracy of content	↑	—	2	“en même temps, je suis pas sûr de ce que je dis”
A4/E10	Low Content Creativity	Anxiety and/or reduced enjoyment due to lack of ideas or content to express	When participant reports not knowing what to say	↑	↓	3	“je ne sais jamais quoi dire à ça”
A5/E14	Lexical Retrieval Difficulty	Stress caused by inability or difficulty to retrieve words	When participant searches for words during speech	↑	↓	1	“et justement, j'ai un peu de mal à retomber sur mes mots”
A6/E15	Lexical Uncertainty / Accuracy Concern	Discomfort due to uncertainty about correctness of word choice	When multiple lexical options create hesitation	↑	↓	2	“je mâche un peu sur mes mots”
A7/E16	Topic–Language Mismatch	Anxiety when topic cannot be expressed in L2	When participant lacks vocabulary for topic	↑	↓	3	“Et, je sais aussi que c'est un vocabulaire dont j'ai aucune idée de comment parler de la politique”
A8/E11	Task-Induced Performance Pressure	Stress due to pressure to meet perceived task expectations and evaluation	When participant questions task correctness	↑	↓	4	“Et d'appréhender la réaction aussi, ... en mode "est-ce que c'est ça qui fallait que je réponde à la question", "est-ce que c'était ça l'intention de la question", ou "est-ce que

							je m'égare complètement du point... ou euh...".."
A9	Error Awareness / Self-Monitoring	Anxiety triggered by noticing or anticipating errors	When participant evaluates their own correctness	↑	—	1	"et si ce que je dis, ... Enfin, est vraiment bien exprimé"
A10	Formulation Difficulty	Anxiety when ideas cannot be mapped onto language	When participant struggles to verbalize ideas	↑	—	1	"et si ce que je dis, ... Enfin, est vraiment bien exprimé"
A11/E12	Social-Evaluative / Personal Exposure Risk	Anxiety and/or reduced enjoyment due to discomfort with personal disclosure or fear of judgment	When participant expresses concern about being judged	↑	↓	3	"Mais c'est... quelque chose qui est personnel. Et... c'est... je racontais des sentiments qui sont... personnels, ... à des gens que je ne connais pas forcément"
A12/E13	Fluency Break-down	Anxiety and/or reduced enjoyment due to pauses or disrupted speech flow	When pauses are explicitly linked to difficulty	↑	↓	1	/
A21	Reduced Cognitive Load	Reduced anxiety once speech is underway and structured	When participant reports reduced planning effort	↓	—	1	"Je pense que comme je commence à parler, l'anxiété est un peu moins présente parce que il y a moins cet anticipation de ce que je vais dire"
A22	Reduced Constraint via Code-Switching	Reduced anxiety through use of alternative linguistic resources	When participant switches language to ease production	↓	—	1	"avec des mots en anglais"

Appendix 5: Codes for FLE With Definitions, Directionality and Examples – Participant 9

Code	Direction	Label	Description	Instances	Example
E1	+	Topic Interest / Personal Relevance	Enjoyment derived from discussing personally meaningful or emotionally positive topics	3	“j'adore parler de mon Erasmus”
E2	+	Positive Experience Recall	Enjoyment linked to recalling lived, enjoyable experiences	2	“j'étais fan aussi, donc Dublin, Limerick...”
E3	+	Cognitive Reward	Enjoyment resulting from successfully expressing ideas or completing a response	3	“j'en parle et j'arrive à en parler”
E4	+	Linguistic Ease / Fluency	Enjoyment associated with effortless language production	2	“donc je parle juste et je dis ce qui me passe par la tête”
E5	+	Confidence in Abilities	Enjoyment linked to realizing one can successfully	3	“Mais parce que je sais que je vais pouvoir répondre à la question,

			complete the task		...c'est ça, c'est vraiment... ça me rassure”
E6	+	Reduced Performance Pressure	Enjoyment increases when strict accuracy is not required	2	“comme c'est pas un test de besoin d'avoir la grammaire parfaite pour pouvoir y répondre non plus”
E7	+	Task Engagement / Receptivity	Enjoyment increases when the participant finds the question engaging	1	“on est réceptif par rapport à la question”
E8	+	Topic–Language Match (Safety Zone)	Enjoyment increases when topic is familiar in the target language – both in content and vocabulary	1	“Comme c'est des sujets sur lesquels j'ai aussi parlé en allemand avec mes amis allemands, c'est aussi... Je ne sais pas, il y a une certaine zone de confort en ce sujet.”
E9	+	Interactional Support	Enjoyment increases in conversational (vs. monologic) settings	1	“c'était une conversation”
E10	-	Low Content Creativity	Reduced enjoyment due to lack of ideas or	3	“je ne sais jamais quoi dire à ça”

			difficulty generating content		
E11	-	Task-Induced Performance Pressure	Reduced enjoyment due to concern about meeting task expectations	1	“Et d'appréhender la réaction aussi, ... en mode "est-ce que c'est ça qui fallait que je réponde à la question", "est-ce que c'était ça l'intention de la question", ou "est-ce que je m'égare complètement du point... ou euh..."..”
E12	-	Social-Evaluative/ Personal Exposure Risk	Reduced enjoyment due to discomfort with personal disclosure or fear of judgment	2	“Mais c'est... quelque chose qui est personnel. Et... c'est... je racontais des sentiments qui sont... personnels, ... à des gens que je ne connais pas forcément”
E13	-	Fluency Breakdown	Reduced enjoyment due to pauses or disrupted speech flow	1	/
E14	-	Lexical Retrieval Difficulty	Reduced enjoyment due to difficulty finding words	1	“et justement, j'ai un peu de mal à retomber sur mes mots”
E15	-	Lexical Uncertainty	Reduced enjoyment due to	2	“je mâche un peu sur mes mots”

			uncertainty about word correctness		
E16	-	Topic–Language Mismatch	Reduced enjoyment when topic cannot be expressed in L2	3	“Et, je sais aussi que c'est un vocabulaire dont j'ai aucune idée de comment parler de la politique”

Appendix 6: Codes for FLA With Definitions, Directionality and Examples – Participant 9

Code	Direction	Label	Description	Instances	Example
A1	+	Anticipatory Uncertainty	Anxiety due to uncertainty about upcoming questions or ability to respond	4	“c'est dans l'appréhension de parler et de ce qu'on va me demander”
A2	+	High Cognitive Load	Anxiety from planning, structuring and holding information during speech	2	“c 'est toute la... la structure de la question qui me reste à former dans ma tête aussi....”
A3	+	Epistemic Uncertainty	Anxiety due to uncertainty about factual correctness of content	2	“en même temps, je suis pas sûr de ce que je dis”

A4	+	Low Content Creativity	Anxiety due to lack of ideas or difficulty generating content	3	“je ne sais jamais quoi dire à ça”
A5	+	Lexical Retrieval Difficulty	Anxiety due to difficulty accessing words	1	“et justement, j'ai un peu de mal à retomber sur mes mots”
A6	+	Lexical Uncertainty	Anxiety due to fear of incorrect word choice	2	“je mâche un peu sur mes mots”
A7	+	Topic–Language Mismatch	Anxiety when unable to express a topic in the target language	3	“Et, je sais aussi que c'est un vocabulaire dont j'ai aucune idée de comment parler de la politique”
A8	+	Task-Induced Performance Pressure	Anxiety from needing to meet task expectations	4	“est-ce que je peux même répondre à la question”
A9	+	Error Awareness / Self-Monitoring	Anxiety from monitoring and evaluating one's own output	1	“et si ce que je dis, ... Enfin, est vraiment bien exprimé”
A10	+	Formulation Difficulty	Anxiety due to difficulty translating ideas into language	1	“et si ce que je dis, ... Enfin, est vraiment bien exprimé”
A11	+	Social-Evaluative Risk	Anxiety due to fear of judgment	3	“Mais aussi une anxiété de... ‘est-ce que ce que je raconte est de la merde ou pas”

			or personal exposure		
A12	+	Fluency Breakdown	Anxiety linked to pauses and disrupted speech	1	/
A13	-	Confidence in Abilities	Anxiety decreases when participant feels capable of responding	2	“Mais parce que je sais que je vais pouvoir répondre à la question, ...c'est ça, c'est vraiment... ça me rassure”
A14	-	Reduced Performance Pressure	Anxiety decreases when accuracy is not strictly required	2	“comme c'est pas un test de besoin d'avoir la grammaire parfaite pour pouvoir y répondre non plus”
A15	-	Topic Interest / Personal Relevance	Anxiety decreases when topic is meaningful and engaging	2	“j'adore parler de mon Erasmus”
A16	-	Positive Experience Recall	Anxiety decreases when recalling enjoyable experiences	1	“j'étais fan aussi, donc Dublin, Limerick...”
A17	-	Topic–Language Match (Safety Zone)	Anxiety decreases when topic is familiar in L2 – both in content and vocabulary	1	“Comme c'est des sujets sur lesquels j'ai aussi parlé en allemand avec mes amis allemands, c'est aussi... Je ne sais pas, il y a une certaine zone de confort en ce sujet”

A18	-	Cognitive Reward	Anxiety decreases after successfully completing a response	2	“c’était la fin de la question”
A19	-	Interac-tional Sup-port	Anxiety decreases in conversational (vs. monologic) settings	1	“c’était une conversation”
A20	-	Linguistic Ease / Flu-ency	Anxiety decreases when language production is effort-less	1	“donc je parle juste et je dis ce qui me passe par la tête”
A21	-	Lower Cog-nitive Load	Anxiety decreases once speech is under-way and struc-tured	1	“Je pense que comme je com-mence à parler, l'anxiété est un peu moins présente parce que il y a moins cet anticipa-tion de ce que je vais dire”
A22	-	Reduced Constraint via Code-Switching	Anxiety decreases when language flexibil-ity is allowed	1	“avec des mots en anglais...”

Appendix 7: Comparison of Themes and Codes per Segment for Participant 1 and Participant 9

Seg-ment	Emo-tion	Di-rec-tion	Participant 1 Theme	Participant 1 Codes	Participant 9 Theme	Participant 9 Codes

S1	FLA	↑	Task Constraints and Contextual Pressure	Topic–Language Mismatch (1); Task-Induced Performance Pressure (1); Comprehension Breakdown (1)	Task Constraints and Contextual Pressure	Anticipatory Uncertainty (1); Task-Induced Performance Pressure (1)
			Linguistic Accuracy and Performance Monitoring	Lexical Uncertainty (1); Error Awareness (1)	Topic Engagement and Meaning-Making	Low Content Creativity (1)
			Linguistic Processing and Cognitive Load	Lexical Retrieval Difficulty (3); Formulation Difficulty (1); Lack of Formulaic Language (1); Fluency Breakdown (1)		
	FLA	↓	—	—	Social-Evaluative and Affective Factors	Confidence in Abilities (1); Reduced Performance Pressure (1)
	FLE	↑	Topic Engagement and Meaning-Making	Topic Interest (2); Positive Experience Recall (1); Perceived Positive Feedback (1)	Social-Evaluative and Affective Factors	Confidence in Abilities (2); Reduced Performance Pressure (1)
	FLE	↓	Linguistic Processing and Cognitive Load	Lexical Retrieval Difficulty (2)	Topic Engagement and Meaning-Making	Low Content Creativity (1)
S2	FLA	↑	Linguistic Processing and Cognitive Load	Lexical Retrieval Difficulty (2); Fluency Breakdown (1)	Linguistic Processing and Cognitive Load	High Cognitive Load (1); Fluency Breakdown (1); Lexical Retrieval Difficulty (1)
			Linguistic Accuracy and Performance Monitoring	Lexical Uncertainty (2); Self-Induced Cognitive Interference (2); Error Awareness (1)	Linguistic Accuracy and Performance Monitoring	Lexical Uncertainty (2)
					Social-Evaluative and Affective Factors	Social-Evaluative Risk (2)

					Task Constraints and Contextual Pressure	Anticipatory Uncertainty (1); Task-Induced Performance Pressure (3)
	FLA	↓	Topic Engagement and Meaning-Making	Positive Experience Recall (1)	Topic Engagement and Meaning-Making	Topic Interest (2); Positive Experience Recall (1); Task Engagement (1); Cognitive Reward (1)
			Facilitators of Fluency and Emotional Regulation	Reduced Constraint via Code-Switching (1)	Facilitators of Fluency and Emotional Regulation	Topic-Language Match (1); Interactional Support (1)
	FLE	↑	Topic Engagement and Meaning-Making	Positive Experience Recall (3)	Topic Engagement and Meaning-Making	Topic Interest (3); Positive Experience Recall (2); Task Engagement (1); Cognitive Reward (1)
			Facilitators of Fluency and Emotional Regulation	Linguistic Ease (1)	Facilitators of Fluency and Emotional Regulation	Topic-Language Match (1); Interactional Support (1)
	FLE	↓	—	—	Social-Evaluative and Affective Factors	Social-Evaluative Risk (1)
					Task Constraints and Contextual Pressure	Task-Induced Performance Pressure (1)
S3	FLA	↑	Task Constraints and Contextual Pressure	Epistemic Uncertainty (1)	Task Constraints and Contextual Pressure	Anticipatory Uncertainty (2); Topic-Language Mismatch (3); Epistemic Uncertainty (2)
			Linguistic Accuracy and Performance Monitoring	Self-Induced Cognitive Interference (1)	Linguistic Accuracy and Performance Monitoring	Error Awareness (1)

			Linguistic Processing and Cognitive Load	Formulation Difficulty (4); Lexical Retrieval Difficulty (1)	Linguistic Processing and Cognitive Load	Formulation Difficulty (1)
					Social-Evaluative and Affective Factors	Social-Evaluative Risk (1)
					Topic Engagement and Meaning-Making	Low Content Creativity (2)
	FLA	↓	—	—	Linguistic Processing and Cognitive Load	Lower Cognitive Load (1)
					Facilitators of Fluency and Emotional Regulation	Linguistic Ease (1); Code-Switching (1)
					Social-Evaluative and Affective Factors	Confidence in Abilities (1); Reduced Performance Pressure (1)
	FLE	↑	Topic Engagement and Meaning-Making	Topic Interest (1); Cognitive Reward (3)	Topic Engagement and Meaning-Making	Cognitive Reward (2)
					Facilitators of Fluency and Emotional Regulation	Linguistic Ease (1)
					Social-Evaluative and Affective Factors	Confidence in Abilities (1)
	FLE	↓	—	—	Task Constraints and Contextual Pressure	Topic–Language Mismatch (3)

Appendix 8: Quantitative Questionnaire

La relation entre les variables individuelles des apprenants et l'anxiété et le plaisir dans les interactions orales avec des locuteurs natifs : une étude idiodynamique

(The interrelationship between individual learner variables and speaking anxiety and enjoyment in oral interaction with first language speakers: An idiodynamic study)

Dans le cadre de mon projet de mémoire, nous recherchons environ 20 étudiants francophones apprenant l'allemand (niveau minimum B1) pour participer à une étude sur l'anxiété dans la classe de langue étrangère (*Foreign Language Classroom Anxiety*) et les attitudes linguistiques (incluant les stéréotypes et les attitudes envers les locuteurs, la langue et le pays, ainsi que l'expérience de l'apprentissage linguistique).

Conception de l'étude

1. Première phase : Analyse quantitative

Les participants rempliront un questionnaire visant à évaluer leur anxiété en classe de langue étrangère et leurs attitudes linguistiques. Les données recueillies seront analysées statistiquement afin d'identifier différents profils d'apprenants.

2. Deuxième phase : Étude qualitative approfondie

Parmi les participants, 2 à 3 personnes représentant typiquement les profils identifiés seront sélectionnées pour une étude détaillée. Ces participants :

- complèteront un questionnaire biographique et sociolinguistique ;
- participeront à deux interactions orales avec un locuteur natif. Les échanges porteront sur des sujets de la vie quotidienne et des thématiques académiques.

3. Analyse idiodynamique

Après les interactions, les participants visionneront les enregistrements vidéo de leurs échanges. À l'aide d'un logiciel spécifique, ils indiqueront les moments précis où ils ont ressenti de l'anxiété ou du plaisir en parlant.

4. Entretien de suivi

Quelques semaines plus tard, un entretien sera organisé avec les participants pour clarifier et approfondir certains points issus de l'analyse qualitative.

Confidentialité des données: Toutes les informations recueillies dans le cadre de cette étude seront traitées de manière strictement confidentielle.

Ce questionnaire constitue donc la première étape de ce projet de mémoire. Le remplissage du questionnaire prendra environ 20 minutes.

Votre participation constitue une étape cruciale pour cette recherche. Nous vous remercions chaleureusement de votre aide et de votre contribution à ce projet.

Politique de confidentialité

1. J'ai lu et accepté la politique de confidentialité.

- Oui
- Non

Quelques données biographiques

2. Quand êtes-vous né(e) ?

3. Quel est votre sexe ?

- Masculin
- Féminin
- Divers

4. Où êtes-vous né(e) ? (Lieu, région, pays)

5. Quelle est votre nationalité ?

- Belge
- Allemande
- Française
- Autre : _____

6. Quelle est votre langue maternelle ?

- Allemand
- Français
- Néerlandais
- Luxembourgeois
- Autre : _____

7. Quelle est votre université ?

8. Où se trouve votre université ?

9. Veuillez indiquer votre adresse e-mail afin que nous puissions vous contacter si vous êtes sélectionné(e) pour l'étude empirique et l'entretien de suivi.

Données qualitatives et quantitatives

Cette partie du questionnaire consiste à mesurer votre anxiété dans la classe de langue étrangère allemande (*Foreign Language Classroom Anxiety*) et vos attitudes linguistiques (incluant les stéréotypes et les attitudes envers les locuteurs d'allemand, la langue allemande et l'Allemagne en tant que pays, ainsi que votre expérience de l'apprentissage linguistique).

Il ne s'agit pas d'un examen et il n'y a pas de bonnes ou de mauvaises réponses. Votre opinion personnelle sincère constitue la bonne réponse. La participation à cette étude est volontaire et très appréciée. Le fait de renvoyer le questionnaire rempli au chercheur implique votre consentement à participer à cette étude. Vos réponses resteront confidentielles.

L'anxiété dans la classe de langue étrangère allemande

(*Foreign Language Classroom Anxiety*)

Cette partie du questionnaire provient du *Short-Form Foreign Language Classroom Anxiety Scale* (S-FLCAS), développé par MacIntyre (1992), lui-même basé sur le *Foreign Language Classroom Anxiety Scale* développé par Horwitz et al. (1986).

Veuillez vous référer à vos expériences passées dans la classe de langue allemande.

Échelle de réponse :

1 = Tout à fait d'accord

2 = D'accord

3 = Ni d'accord ni en désaccord

4 = Pas d'accord

5 = Pas du tout d'accord

10. Même si je suis bien préparé(e) pour le cours de langue étrangère (allemande), je me sens anxieux(se).

11. J'ai toujours l'impression que les autres étudiants parlent mieux la langue étrangère (allemande) que moi.

12. Je sens mon cœur battre lorsque je vais être sollicité(e) en cours de langue étrangère (allemande).

13. Je ne crains pas de faire des erreurs en classe de langue étrangère (allemande).

14. Je me sens confiant(e) lorsque je parle en classe de langue étrangère (allemande).

15. Je suis nerveux(se) et confus(e) lorsque je parle dans ma classe de langue étrangère (allemande).

16. Je commence à paniquer lorsque je dois parler sans préparation en classe de langue étrangère (allemande).

17. Je suis gêné(e) de donner des réponses spontanées dans mon cours de langue étrangère (allemande).

Les attitudes linguistiques sur l'allemand

Cette partie du questionnaire est basée sur Nikitina (2019). Quelques questions additionnelles ont été ajoutées sur la base de Schmid et Dusseldorp (2010).

Cette partie du questionnaire explore votre opinion sur l'Allemagne en tant que pays, l'allemand en tant que langue et les Allemands en tant que population, ainsi que votre expérience de l'apprentissage de la langue allemande.

PARTIE I

Images et représentations mentales

Quelles images ou représentations mentales vous viennent à l'esprit lorsque vous entendez les mots « Allemagne », « Allemand » et « les Allemands » ? Écrivez autant de mots ou de phrases courtes que nécessaire.

Veuillez ensuite attribuer une note allant de -2 à +2 à chaque image :

- -2 = image très négative
- -1 = image négative
- 0 = image neutre
- +1 = image positive
- +2 = image très positive

18. Vos images ou représentations mentales sur l'Allemagne :

19. Vos images ou représentations mentales sur la langue allemande :

20. Vos images ou représentations mentales sur les Allemands :

21. Aviez-vous donné une note à chaque image mentale ?

- Oui
- Non

PARTIE II

Autres questions

22. À quel point vous sentez-vous à l'aise pour parler allemand ?

1 = Pas du tout à l'aise
5 = Très à l'aise

23. Veuillez expliquer votre réponse à la question précédente.

24. Indiquez votre attitude générale à l'égard de l'Allemagne en tant que pays sur un « thermomètre » allant de 0° (très négative) à 100° (très positive).

25. Indiquez votre attitude générale à l'égard de l'allemand en tant que langue sur un « thermomètre » allant de 0° (très négative) à 100° (très positive).

26. Indiquez votre attitude générale à l'égard du peuple allemand sur un « thermomètre » allant de 0° (très négative) à 100° (très positive).

PARTIE III

Échelle de réponse

1 = Tout à fait d'accord

2 = D'accord

3 = Ni d'accord ni en désaccord

4 = Pas d'accord

5 = Pas du tout d'accord

27. J'ai décidé d'étudier cette langue parce que je m'intéresse à la culture populaire allemande.

28. Je travaille dur pour apprendre la langue allemande.

29. Je me porte toujours volontaire pour répondre aux questions posées par mon professeur de langue.

30. L'étude de cette langue est importante car elle me permettra de mieux comprendre le mode de vie en Allemagne.

31. Après avoir terminé le niveau B1/B2 de la langue allemande, je poursuivrai l'apprentissage de cette langue au prochain niveau.

32. Si mon professeur voulait que quelqu'un fasse un travail supplémentaire pour le cours, je me porterais volontaire.

33. La connaissance de la langue allemande me sera utile lorsque je voyagerai à l'étranger.

34. Je fais de gros efforts pour comprendre tout ce que mon professeur enseigne pendant le cours.

35. La connaissance de la langue allemande peut m'être utile pour la suite de mes études.

36. J'ai décidé d'apprendre la langue allemande pour mieux connaître ses locuteurs.
37. L'étude de cette langue est importante pour moi car elle me permettra d'apprécier l'art et la littérature allemands.
38. La connaissance de la langue allemande augmentera mes possibilités d'emploi.
39. Si la langue allemande n'était pas proposée à mon université, j'essaierais de suivre des cours ailleurs.
40. La maîtrise de la langue allemande peut m'apporter des avantages financiers.
41. La connaissance de la langue allemande me sera utile pour ma future carrière.
42. Il m'arrive d'être mal à l'aise de parler allemand devant les autres (amis, famille, camarades de classe, professeurs, etc.).
43. Il m'arrive d'être mal à l'aise de parler allemand devant les autres, surtout avec des locuteurs natifs.
44. Il m'arrive d'être mal à l'aise de parler allemand devant les autres, surtout avec d'autres apprenants d'allemand.

Merci beaucoup pour votre participation !

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