



RESEARCH ARTICLE

Second language anxiety: Construct, effects, and sources

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Abstract

Second language (L2) anxiety is the most studied affective factor in the field of second language acquisition. Numerous studies have been conducted on this emotion from different perspectives over the last few decades. These studies can be classified into three groups. The first group has tried to conceptualize and operationalize L2 anxiety and identify the different components or dimensions of the construct (e.g., Cheng, 2004; Horwitz et al., 1986). The second group has explored the impact of L2 anxiety on various motivational, behavioral, learning, and performance aspects of L2 learning (e.g., Gkonou et al., 2017). Finally, the third group has investigated different sources of L2 anxiety (Papi & Khajavy, 2021). In this manuscript, we will draw on studies from the three strands to present an overview of the state of research on this construct and conclude by discussing major issues with the conceptualization, measurement, and design of studies on L2 anxiety.

Keywords: second language (L2) anxiety; L2 anxiety construct; L2 anxiety measurement; L2 anxiety effects; L2 anxiety sources

Emotions exist to “prepare us with an automatic, very quick, and historically successful response to life’s fundamental tasks” (Reeve, 2015, p. 354). These adaptive responses are derived from human cognition about life situations we experience. A person’s perception of achievement can lead to the emotional response of enjoyment whereas their failures can arouse the emotional response of disappointment. Similarly, a person’s perception of the existence of safety and security can lead to the emotional response of calmness whereas the perceived existence of risk perceptions can generate fear or anxiety. Whereas feelings such as joy and fear have roots in the existing reality, emotions such as hope and anxiety are responses to the anticipation of possible but currently nonexistent situations. In the specific case of anxiety, cognitions that generate this unpleasant emotion represent the individual’s anticipation of negative consequences (e.g., negative judgment, poor evaluation, failure) that may or may not happen immediately or in a near or distant future. The emotional response of anxiety to such anticipations can function as an adaptive mechanism that would help the individual prepare for the anticipated negative situation. When it comes to anxiety for goal pursuits such as language learning, anticipations of certain costs can lead to the arousal of this

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emotional response and motivate action to minimize this feeling by approaching the goal. At the same time, the anxiety aroused during L2 use or learning could harm the student's quality of experience and performance due to its inhibitory effects on learners' L2 comprehension and use (e.g., Horwitz, 1986; Teimouri et al., 2019).

The anxiety associated with L2 learning, performance, and use situations is commonly known as foreign or second language (L2) anxiety. L2 teachers and practitioners generally see this emotion as an obstacle for language learning. Anxious L2 learners commonly report experiencing tenseness, freezing, trembling, sweating, and palpitations in their L2 classes, underperforming, overstudying, avoiding the L2, forgetting what they mean to say, being distracted and confused in class, and having trouble speaking in the new language (Horwitz, 1986). Some L2 teaching methods such as Suggestopedia and Community Language Learning have explicitly focused on reducing anxiety as a central principle of L2 teaching. Krashen (1982) argued that anxiety creates an *affective filter* that would block second language acquisition (SLA). This emotion has also been the topic of scholarly research for almost four decades in the field of second language acquisition. Studies on L2 anxiety can generally be classified into three groups. The first group of studies is conceptual, which has tried to introduce the notion to the field, examine its different dimensions, and provide methods for its measurement. The second group includes studies that have investigated the effects of anxiety on different L2 outcomes. Finally, the third group contains studies that have explored the potential sources of L2 anxiety. The following sections provide overviews of the three groups of studies and proceeds to provide suggestions for future research on this topic.

Group 1: Conceptualization and Operationalization

Early debates on the concept of anxiety focused on whether this emotion has facilitative or debilitating effects on L2 learning. "Facilitating anxiety motivates the learner to 'fight' the new learning task; it gears the learner emotionally for approach behavior. Debilitating anxiety, in contrast, motivates the learner to flee the new learning task..." (Scovel, 1978, p. 139). In other words, *facilitative anxiety* is a moderate level of anxiety that motivates the individual to temporarily or permanently remove or ease the source of anxiety, but *debilitative anxiety* is so overwhelming that it can inhibit any adaptive action. Scovel (1978) also made a distinction between *trait anxiety* that is considered a relatively stable personal characteristic and *state anxiety* that is considered an emotional reaction to specific situations. Gardner (1985) did not specifically deal with what anxiety is, but he considered anxiety to be largely debilitating and made a distinction between classroom French as an L2 anxiety and general classroom anxiety and drew on his previous research to argue that the former is a better predictor of L2 French achievement. His conception of anxiety included measures such as English classroom anxiety, English use anxiety, English test anxiety, and generalized interpersonal anxiety. Horwitz (1986) defined L2 (foreign language) anxiety as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 128). She attributed the arousal of L2 anxiety to the risk inherent in the individual's uncertainty about the linguistic and sociocultural standards of the new language, challenge to the individual's self-concept as a competent communicator, and threat to the perceived authenticity of one's communication due to the individual's relatively immature command over the new language. Horwitz (1986) developed the Foreign Language

Classroom Anxiety Scale (FLCAS) with thirty-three items reflective of the common anxiety-related thoughts, feelings, symptoms, and behaviors that students experience in their foreign language class. In a follow-up study, Horwitz et al. (1986) showed that foreign language anxiety is distinct from other forms of anxiety such as *communication apprehension*, *fear of negative evaluation*, and *trait anxiety*. To explore the factors underlying the FLCAS, Aida (1994) submitted data collected using the questionnaire to a factorial analysis that yielded four factors reflecting *speech anxiety*, *fear of failing*, *comfort speaking with native speakers*, and *negative attitudes toward the foreign language class*.

The FLCAS helped streamline research on L2 anxiety by providing a useful tool for researchers to conduct studies and compare results across different contexts and populations. However, due to its bias for the oral dimension of L2 communication, its broad scope, and a lack of a meaningful theory for representing a thorough understanding of the experience of L2 anxiety, researchers have developed new scales that have narrower and more theoretically meaningful scopes. These scales either focused on anxiety related to specific L2 skills and dimensions or classified different cognitions, attitudes, feelings, symptoms, and reactions related to anxiety. MacIntyre and Gardner (1994) developed a questionnaire with items that specifically focused on anxiety reactions related to the *input* (e.g., “I get flustered unless French is spoken very slowly”), *processing* (e.g., “I feel anxious if the French class seems disorganized”), and *output* (e.g., “I may know the proper French expression but when I am nervous it just won’t come out”) stages of language learning.

Saito et al. (1999) introduced and developed a scale for measuring foreign language reading anxiety. Not unlike Cheng et al. (1999), the scale included a mixture of items that addressed anxiety symptoms (e.g., confusion, nervousness, feeling intimidated) and other thoughts, emotions, preferences which might only be indirectly related to L2 reading anxiety (e.g., translating while reading, enjoying reading, reading difficulty). The researchers did not report a factor analysis that would uncover specific factors that might underlie these items, leaving the construct validity of the scale open to questions. Kim (2000, 2005) developed the Foreign Language Listening Anxiety Scale (FLLAS), which included thirty-three items that fell under two constructs related to the experience of L2 anxiety: *lack of confidence in listening* (e.g., “I feel confident in my listening skills”) and *tension and worry in English listening* (e.g., nervousness, tenseness, discomfort, confusion), with the latter being more directly related to L2 listening anxiety. Similar to Cheng et al. (1999) and Saito et al. (1999), Kim’s scale also included items that only seemed to be indirectly related to L2 listening anxiety (e.g., “I have difficulty when the environment around me is noisy”). Kimura (2008) reported the results of a factor analysis that yielded three factors underlying Kim’s (2000) FLLAS items, including *emotionality*, representing the affective dimension of the anxiety experience (e.g., “My thoughts become jumbled and confused in listening for important information”), *worry*, representing thoughts that create anxiety for the individual (e.g., “I often get so confused that I cannot remember what I have heard”), and *anticipatory fear*, representing the experience of anxiety while listening or in anticipation of listening in a foreign language (e.g., “I feel tense when listening to, or imagining myself listening to, a lecture”). The distinctions between these three components were not clear though; in addition, seven items from the original scale did not even load on any factors, suggesting that the items did not create a theoretically meaningful model of L2 listening anxiety. Woodrow (2006) developed a scale for measuring L2 speaking anxiety by focusing on the various situations that cause anxiety inside or outside of the class context. For instance, giving an oral presentation and communicating with native speakers were

considered situations that would cause in-class and out-of-class L2 speaking anxiety, respectively. So far, the scales reviewed above do not seem to have a clear focus when it comes to operationalizing L2 anxiety with scales including items that measure a wide and atheoretical mixture of cognitions, attitudes, reactions, experiences, and situations that are in many cases only indirectly related to L2 anxiety. To avoid the conceptual confusion in the previous L2 anxiety scales, Cheng (2004, 2017) developed theoretically meaningful scales that only focused on the experiential dimensions of L2 anxiety based on Lang's (1971) tripartite framework. These scales also focused on the anxiety related to specific L2 skills. Cheng (2004) developed the Second Language Writing Anxiety Inventory (SLWAI) that included twenty-seven items that specifically measured the symptoms associated with L2 writing anxiety, including somatic/physiological (e.g., pounding heart, sweating, trembling, tenseness), cognitive (e.g., mind going blank, worrying, confusion, jumbled thoughts), and behavioral (avoidance) symptoms (e.g., avoiding writing in L2, avoiding L2 writing situations). In a more recent attempt, Cheng (2017) developed brief scales for measuring anxiety specific to L2 skills, namely L2 speaking anxiety, L2 listening anxiety, L2 writing anxiety, and L2 reading anxiety. The researcher developed a pool of items based on previous studies, the results of a focus-group interview, and piloting the initial questionnaire, which was administered to 523 learners of English in Taiwan in the main study. The results of exploratory factor analysis led to the emergence of four skill-specific anxiety scales with items representing the *somatic* (e.g., "When listening to English, I often feel my heart pounding"), *cognitive* (e.g., "When listening to English, I often worry that I will miss information") and *behavioral* (e.g., "When listening to English, I often give it up easily") dimensions of anxiety. The scales were confirmed in confirmatory factor analyses and showed acceptable psychometric properties such as reliability, discriminant, and convergent validity. Overall, several researchers seem to have focused on different dimensions of L2 anxiety. Scovel (1978) explored its debilitating versus facilitative or trait versus state dimensions. Gardner and associates (e.g., Gardner, 1985) focused on the specific situation in which anxiety is experienced such as English classroom, English use, English test, and generalized interpersonal anxiety. Horwitz (1986) put the focus of her work on developing the foreign language classroom anxiety scale that included a mixture of loosely related thoughts, feelings, symptoms, and behaviors. MacIntyre and Gardner (1994) examined anxiety related to the input, processing, and output stages of L2 learning. Finally, skill-specific scales for measuring anxiety were developed by Cheng (2004, 2017), Saito et al. (1999), Kim (2000, 2005), and Woodrow (2006), among others. This chaos in focus of measurement has led to confusion among researchers and practitioners alike (Sudina, 2023). One notable exception is the work produced by Cheng (2004, 2017), who has used Lang's (1971) framework of anxiety and rigorous methodological procedures for developing psychometrically valid scales for measuring skill-specific anxiety. These scales not only provide a clear focus on the experience of anxiety, but they also represent the experience in a theoretically meaningful way that distinguishes the somatic, cognitive, and behavioral aspects of it. Confusing the cognitions (e.g., fear of negative evaluation, judgment, and embarrassment; perceived task difficulty) or situations (e.g., taking a test, giving an oral presentation) that can precede the arousal of anxiety, or the related emotions (e.g., shame, embarrassment) and cognitions (e.g., "I'm not good at English") that may follow the experience with the actual experience of anxiety has only caused plenty of confusion in the field and should be avoided. Distinguishing the experiential dimensions of anxiety, on the other hand, can help us understand

what that experience feels like for the learner, what contributes to it, what its consequences are, and finally how and where we can intervene to make a positive impact in the learner's experience.

Group 2: The Effects of Anxiety

Anxiety likely affects the L2 outcomes through its impact on learners' motivation and learning experience. Studies on the effects of anxiety in L2 learning, therefore, can be classified into two major groups: the first group focuses on the effects of anxiety on learner motivation and learning processes and behavior, and the second group examines the effects of anxiety on L2 outcomes.

The first group of studies has led to interesting findings related to the effects of L2 anxiety on students' learning motivation, process, and behavior. Steinberg and Horwitz (1986) showed that people who were made anxious tended to avoid using their L2 in novel and creative ways. MacIntyre and Gardner (1994) exposed L2 learners to a video camera while they were completing a vocabulary learning task. They found that the induced anxiety adversely affected their task performance at the input, processing, and output stages of vocabulary learning. This effect dissipated when the students got used to the camera and were able to partially make up for their performance deficit. Gregersen and Horwitz (2002) found that more anxious learners believed the goal of using the target language to be avoiding mistakes whereas students with lower levels of anxiety were eager to talk without any concern about making mistakes. In a more recent study, Papi and Khajavy (2021) found that L2 anxiety led to the students' vigilant use of the target language, suggesting that anxious students tended to use the target language only if they had to. The debate over the effects of anxiety on L2 outcomes has been an interesting one since the introduction of the concept to the field (Li et al., 2022). The debilitating versus facilitative dilemma was especially considered an important one until the mid-1980s when more specialized instruments (e.g., Horwitz et al., 1986) for measuring L2 anxiety were developed (see Gardner, 1985; Scovel, 1978). Earlier studies had shown mixed results with some showing a negative association between L2 French class anxiety and L2 achievement (Gardner et al., 1976), and others showing positive relationships (Chastain, 1975). The confusion caused by the inconsistent results led MacIntyre (2017) to call this period "the confounding stage" in research on L2 anxiety. Nonetheless, since the introduction of the FLCAS (Horwitz et al., 1986), numerous studies have been conducted to explore the relationship between the new measure of foreign language classroom anxiety and achievement. Three meta-analyses have been conducted to synthesize the results of these studies. In the first published meta-analysis, Teimouri et al. (2019) analyzed ninety-seven published studies conducted between 1985 and 2017 and found a moderate correlation of -0.36 . The size of this correlation varied as a function of different moderators such as language educational level, target language, achievement measure, and anxiety type. More notably, listening anxiety ($r = -0.46$) and writing anxiety ($r = -0.41$) showed stronger correlations with achievement than reading anxiety ($r = -0.38$) and speaking anxiety ($r = -0.39$) did. In a second meta-analysis involving forty-six studies, Zhang (2019) reported a medium-size negative correlation ($r = -0.34$) between L2 anxiety and language performance (i.e., course grades and language performance tests), which did not change much across proficiency groups. In addition, listening anxiety showed larger correlations with performance ($r = -0.53$) than reading anxiety ($r = -0.23$) and testing anxiety ($r = -0.27$). Botes et al.'s (2020) meta-analysis only included

fifty-nine classroom studies that employed the Horwitz et al. (1986) FLCAS as the measure of L2 anxiety. The results of the study showed another medium-sized negative correlation ($r = -.39$) between FLCA and general academic achievement, a value that was stronger for listening ($r = -.53$) and writing achievement ($r = -.44$), followed by reading ($r = -.34$) and speaking achievement ($r = -.26$). Having become more streamlined, research on the notion of anxiety seems to have led to the general conclusion that anxiety is bad for language learning (e.g., Horwitz, 2017; MacIntyre, 2017). MacIntyre (2017) went so far as to consider the issue one “that can be put to bed” (p. 27) and Horwitz (2017) called the search for facilitative anxiety “a huge step backwards” (p. 39). This claim has its basis in the large number of studies that have provided evidence for the negative relationship between anxiety and L2 outcomes. However, it is based on a narrow definition of anxiety as an emotion that is generated only due to difficulties in the process of L2 learning and use. For example, if a student anticipates that in an oral presentation in class their peers may laugh at them if they make any mistakes, this anticipation may make them anxious during the presentation, which can keep them from trying novel structures (Steinberg & Horwitz, 1986), negatively affecting the input, processing, and output stages of learning (e.g., MacIntyre & Gardner, 1994) or making them avoid using the L2 eagerly (e.g., Gregersen & Horwitz, 2002; Papi & Khajavy, 2021). However, L2 learners do not only have L2-related feelings. In the real world, goal-pursuit anxiety functions as a strong motivational force. The motivational capacity of anxiety is the reason behind creating laws, rules, and regulations in almost every institution. Individuals often may feel anxious about meeting some duties and obligations in order to avoid possible negative outcomes, which motivates them to take action and remove the source and experience of anxiety (e.g., Papi et al., 2019). For instance, students might feel anxious about completing an assignment within a certain timeframe even if they are not enthusiastic about the assignment. Employees may feel anxious when they run late, and the anxiety can push them to hurry and make it in time for work. Drivers may feel anxious while seeing the police and avoid speeding. Anxiety is a reality and has a strong motivational force. In line with this argument, Papi and Khajavy (2021) found that for the learners who are motivated by oughts and obligations, L2 anxiety can motivate them to remain vigilant in class and use the L2 when they have to, even though this vigilance negatively affected achievement. Papi (2010), Papi and Teimouri (2014), and Tahmouresi and Papi (2021) also found positive associations between L2 anxiety and motivation for students motivated by their ought-to L2 self (representing obligations). Tahmouresi and Papi (2021) found L2 anxiety to positively predict L2 writing motivation, but it negatively predicted L2 writing achievement. Anxiety, therefore, can be an alternative motivational force in the absence of more internal and self-determined sources of motivation. However, due to the inherent risk-taking involved in L2 learning and use, the quality of the behavior motivated by anxiety does not seem to positively contribute to L2 learning and use. According to Papi and Khajavy (2021), “[l]earning a new language, at least to higher levels, might require leaving one’s comfort zone, embracing another culture and language, taking risks to use the language and make mistakes, and developing a new identity” (p. 565). In other words, “in the very short term, an anxiety response motivates self-protective behaviors that deal with an uncomfortable situation even if such actions limit learning and practice opportunities in the longer run” (MacIntyre & Wang, 2022, p. 177). The quantitative effect of anxiety on motivated behavior thus seems to be outweighed by the quality of the behavior that may not be a good fit for learning a new language (Papi, 2018).

Group 3: Sources of L2 Anxiety

Several empirical and theoretical studies have investigated the sources of L2 anxiety. Before examining these sources, it should be noted that by “source,” we do not necessarily mean a causal effect, and readers should be aware that in most cases such a relationship implies a reciprocal relationship between L2 anxiety and other constructs (MacIntyre, 2017). By reviewing the literature, we have divided the sources of L2 anxiety into three categories of linguistic, learner-internal, and learner-external factors.

With regard to linguistic sources of anxiety, Sparks and Ganschow (1991) argue that L2 anxiety is mainly the result of difficulties that people experience in their first language (L1) skills (i.e., language aptitude). However, this view has been criticized by other L2 researchers (see MacIntyre, 1995) who believe that many other factors are involved in producing L2 anxiety besides L1 skills. One of these factors is L2 learners’ self-perceived language proficiency. Research has consistently found that L2 learners with higher self-perceived language proficiency experience less L2 anxiety (e.g., Botes et al., 2020; Jiang & Dewaele, 2020). Furthermore, it has been found that more anxious L2 learners tend to underestimate their L2 proficiency while less anxious L2 learners tend to overestimate their L2 proficiency (MacIntyre et al., 1997). Actual L2 proficiency has also been found as a predictor of L2 anxiety with people who have higher L2 proficiency/achievement experiencing less L2 anxiety because they have the necessary skills to do the relevant language tasks and activities (e.g., Jiang & Dewaele, 2019, 2020; Jin et al., 2015; Liu, 2006). Among other linguistic factors, multilingualism has been linked to less L2 anxiety levels (Botes et al., 2020; Dewaele, 2007; Thompson & Lee, 2013). Such a link might be related to the fact that multilinguals are more confident about learning new languages, can communicate more effectively due to their prior experience of L2 learning (see Dewaele, 2007), or have higher metalinguistic knowledge, which could help them to decrease L2 anxiety (see Botes et al., 2020; Thompson & Lee, 2013). Furthermore, research has found that multilingualism does not necessarily reduce anxiety unless the multilingual has at least an intermediate proficiency level in the additional language (Thompson & Lee, 2013). Finally, among linguistic factors, frequent use of the L2 has been associated with experiencing less L2 anxiety (Dewaele, 2013; Dewaele & Al-Saraj, 2015; Jiang & Dewaele, 2020). It has been argued that the individuals who use the L2 more frequently have higher self-perceived communicative competence and are more willing to use the L2 in different situations, which in turn reduces L2 anxiety (Jiang & Dewaele, 2020), even though the reverse can also be true. That is, less anxious students might feel more confident about their communicative competence and be willing to use the L2 more frequently (Gregersen & Horwitz, 2002; Papi & Khajavy, 2021). In sum, learners’ perceived L2 learning competence, whether it comes from their L1 skills, multilingual skills, or actual L2 proficiency, seems to be associated with lower levels of L2 anxiety. This can also be related to the finding of a recent meta-analysis (Zhou et al., 2022) in which a strong meta-analytic correlation ($r = -.70$) was found between L2 anxiety and self-efficacy. Learner-internal factors have been also reported as predictors of L2 anxiety. Some of these factors are sociobiographical (e.g., gender and age), while others are psychological (e.g., motivation and personality). Sociobiographical factors have not shown very conclusive findings. For example, with regard to the role of gender in L2 anxiety, research has produced mixed findings (see Piniel & Zólyomi, 2022). Some studies have found that females reported higher levels of L2 anxiety (e.g., Khajavy et al., 2018) while other studies have found that males reported being more anxious (Dewaele et al., 2022). Still other

studies did not find any significant difference between males' and females' L2 anxiety (Jiang & Dewaele, 2020; Matsuda & Gobel, 2004). A recent meta-analysis by Piniel and Zólyomi (2022) found no statistically significant difference between females and males in terms of their L2 anxiety. In addition, this result was not moderated by factors such as age, geographical area of residence, L2, and major of study. Another sociobiological factor examined in relation to L2 anxiety is age. Like gender, mixed findings have been reported for age. While some studies have found that older L2 learners experience more L2 anxiety (Dewaele & Al-Saraj, 2015; Onwuegbuzie et al., 1999), other studies have found the opposite (e.g., Arnaiz & Guillen, 2012). It seems future research is required to systematically examine the role that age plays in L2 anxiety and the possible moderators that can affect this link. Psychological factors can also be sources of L2 anxiety. For example, several studies have found that self-esteem, as a personality trait, can be negatively related to L2 anxiety (Jin et al., 2015; Onwuegbuzie et al., 1999; Young, 1991). Low self-esteem makes L2 learners worry about others' judgments and make them want to please other people, which can in turn increase their anxiety (see Young, 1991). Competitiveness, another personality characteristic that refers to the situation in which L2 learners compare themselves to other students, has been reported as a cause of L2 anxiety. Findings about the role of competitiveness as a source of L2 anxiety has been mixed. For example, Bailey (1983) found that competitiveness is a source of L2 anxiety, while Onwuegbuzie et al. (1999) did not find a significant relationship between them. Interestingly, Jin et al. (2015) found that competitiveness was a negative predictor of L2 anxiety, which was in contrast with previous studies (e.g., Bailey, 1983). Jin et al. (2015) explained that such a contrast might be related to factors such as using different competitiveness scales, study designs, or other intervening variables. Previous research has found that L2 anxiety can be related to learners' L2 motivation (Jiang & Papi, 2022; Papi, 2010; Papi & Khajavy, 2021; Tahmouresi & Papi, 2021; Teimouri, 2017). Individuals motivated by an *ought-to L2 self* (representing the learner's L2-related duties and obligations) tend to experience more L2 anxiety in comparison with individuals motivated by an *ideal L2 self* (representing one's L2-related hopes and aspirations), because the former group is more prevention-focused and sensitive to the presence or absence of negative outcomes, which naturally provoke anxiety. On the other hand, individuals with an ideal L2 self are more promotion-focused and more concerned with growth, advancement, and positive outcomes, which can even decrease anxiety. L2 learners' mindsets (i.e., individuals' perceptions of their L2 learning ability) can be sources of L2 anxiety. Consistent with Mindset Theory in general (Dweck & Leggett, 1988), research in the field of applied linguistics has identified two types of mindsets: *L2 growth mindset*, which refers to the perception that L2 learning ability can be improved by effort and hard work, and *L2 fixed mindset*, which refers to the perception that L2 learning ability is an innate ability and cannot be improved (Mercer & Ryan, 2010). Research has shown that a fixed L2 mindset can be a source of L2 anxiety while a growth L2 mindset can be a source of positive emotions such as enjoyment (Khajavy et al., 2022; Lou & Noels, 2020; Ozdemir & Papi, 2022). The reason for these findings is that learners with a fixed L2 mindset are more concerned about how they are judged by other people, especially in challenging situations. These perceptions in turn increase their L2 anxiety. On the other hand, learners with a growth mindset see these challenges as opportunities for learning and are less concerned about others' judgments. These perceptions protect them from experiencing L2 anxiety (Lou et al., 2022). Among other factors that have been reported as sources of L2 anxiety, we can refer to personality factors. For example, several studies have found that extraversion is a negative predictor of L2 anxiety (e.g.,

Dewaele, 2013), as extroverts are more willing to take risks and are generally more optimistic than introverts (Dewaele & Al-Saraj, 2015). Another personality predictor of L2 anxiety is neuroticism (versus emotional stability) as people scoring higher on neuroticism experiencing more L2 anxiety (Dewaele, 2013; Dewaele & Al-Saraj, 2015). In other words, L2 learners who are naturally more emotionally stable experience less L2 anxiety. Moreover, among lower-order personality factors, trait emotional intelligence can be a negative predictor of L2 anxiety (Shao et al., 2013). The reason is that learners with higher trait emotional intelligence “are better able to control their own emotions and to gauge the emotional reactions of other people, allowing smoother interpersonal relationships, resulting in lower anxiety levels” (Jin & Dewaele, 2018, p. 151). Another lower-order personality factor related to L2 anxiety is perfectionism for which research has found that more perfectionistic L2 learners suffer more from L2 anxiety (e.g., Gregersen & Horwitz, 2002). One point that should be taken into account is that perfectionism can be both adaptive and maladaptive. For example, the *personal standards* aspect of perfectionism (i.e., following high standards that are motivating) has been a negative predictor of L2 anxiety, while *concern over mistakes* aspect of perfectionism has been a positive predictor (Barabadi & Khajavy, 2020). Learners’ regulatory focus and regulatory mode have also been found to predict L2 anxiety. Jiang and Papi (2022) found that learners’ regulatory focus and concern with growth and accomplishments strongly and negatively predicted their L2 anxiety. Teimouri et al. (2022) found that learners’ regulatory mode of assessment, representing preoccupation with the accuracy and suitability of L2 output, positively predicted their L2 anxiety, whereas their locomotion mode, representing the preoccupation with the act of communication, negatively predicted their L2 anxiety. Learner-external factors constitute the third source of L2 anxiety. For example, a supportive classroom environment in which teachers help students and classmates support each other can reduce L2 anxiety (Khajavy et al., 2018). A harsh manner of error correction by L2 teachers (Mak, 2011; Young, 1991), strictness, younger age, and limited use of L2 in the class (Dewaele et al., 2019) have been reported as sources of L2 anxiety. In addition to teachers’ characteristics and instruction, positive attitudes towards L2 teachers can be linked to less L2 anxiety (Jiang & Dewaele, 2019). L2 anxiety increases when students have to speak in L2 in front of the class or when they have to do tasks that they are not familiar with (Young, 1991). Finally, students who are perceived to have a higher relative standing than their classmates experienced less L2 anxiety (Dewaele & Dewaele, 2017; Jiang & Dewaele, 2019).

Conclusions

Even though MacIntyre (2017) calls the early period of research on L2 anxiety “the confounded approach,” we argue that we still have not made our way entirely out of that period. Definitions and measurements of anxiety are still divergent and all over the place (see Cheng, 2004, 2017). This was evident in the meta-analytic studies conducted on the topic. Teimouri et al.’s (2019) meta-analysis included studies that employed twenty-five different questionnaires for measuring anxiety. The sheer number of questionnaires used makes any conclusions drawn from such an analysis questionable. Half of the studies included in Teimouri et al. (2019) used the FLCAS, and Botes et al. (2020) only included studies that used the FLCAS. As discussed above, Horwitz’s (1986) FLCAS itself included thirty-three items that represented a mixture of cognitions, attitudes, feelings, reactions, and behaviors that may tap into constructs other than anxiety. As Sparks and Patton (2013) argued, the FLCAS might be a better measure of students’

perceived L2 competence than their language learning anxiety (see also Teimouri et al., 2019). The FLCAS includes items ranging from worry and nervousness to self-confidence, word-by-word translation, tests, and being distracted in class. Aida (1994) factor-analyzed the FLCAS items and found four conceptually distinct factors including speech anxiety, fear of failing, comfortableness in speaking with native speakers, and negative attitudes toward the foreign language class. In another study, Ozdemir and Papi (2021) used twenty-two items in a factor analysis that led to the emergence of two factors representing oral English communication anxiety and English-speaking self-confidence. In South Korea, Park (2014) also found two factors underlying the FLCAS, which he labeled *communication apprehension and understanding*, and *communication apprehension and confidence*. Given the lack of a valid theoretical basis for L2 anxiety in the FLCAS and other scales (e.g., Saito et al., 1999; see Cheng, 2004, 2017) used in L2 anxiety studies, the data used in these meta-analyses, thereby the conclusions drawn may not be considered valid. This divergent and unprincipled representation reflects Horwitz et al.'s (1986) broad definition of L2 anxiety as “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning” (p. 128).

Although it has been helpful to develop L2-specific measures of anxiety such as the FLCAS, this should not prevent researchers from exploring other types of anxiety that might affect the L2 learning processes and outcomes. For instance, L2 classroom anxiety can be aroused in certain classrooms and negatively affect the learner's experience in that context; L2 task anxiety can be related to specific L2 tasks (e.g., oral class presentation); and goal-pursuit anxiety can be a type of anxiety that is generated in response to the costs associated with not meeting certain duties and obligations and lead to motivated action (e.g., Tahmouresi & Papi, 2021). Certain learners are in fact motivated only through the anxiety that such duties and obligations produce even though the anxiety may not harm the quality of their L2 learning and performance. More recently, a complex dynamic perspective toward exploring L2 anxiety has become popular (e.g., Gregersen et al., 2014). The trend is motivated by research on complex dynamic system theory (CDST) and has shown that anxiety is dynamic and complex. Whereas the approach is interesting from a methodological standpoint, the dynamic and complex nature of anxiety is common sense and trying to prove the obvious may not help push the field forward. This research approach can be more informative though if researchers try to not only simplify the complexity of L2 anxiety but also identify the sources of its dynamicity, based on which appropriate interventions can be designed for the effective management of student anxiety.

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