Studies in Second Language Learning and Teaching
Department of English Studies, Faculty of Pedagogy and Fine Arts, Adam Mickiewicz University, Kalisz
SSLLT 16 (1). 2026. 191-207. Published online: 21.11.2025
https://doi.org/10.14746/ssllt.48993
http://pressto.amu.edu.pl/index.php/ssllt

Reply to Shao, Stockinger, Marsh and Pekrun (2023). Applying control-value theory for examining multiple emotions in L2 classrooms: Validating the Achievement Emotions Questionnaire – Second Language Learning

Jean-Marc Dewaele ✉
VIZJA University, Warsaw, Poland
University College London, United Kingdom
Birkbeck, University of London, United Kingdom
https://orcid.org/0000-0001-8480-0977
j.dewaele@bbk.ac.uk

Elouise Botes
University of Luxembourg, Luxembourg
https://orcid.org/0000-0003-4952-8386
elouise.botes@uni.lu

Pia Resnik
University College of Teacher Education Vienna/Lower Austria, Austria
University of Vienna, Austria
https://orcid.org/0000-0003-0948-9546
pia.resnik@kphvie.ac.at

Peter MacIntyre
Cape Breton University, Sydney, Canada
https://orcid.org/0000-0002-1085-6692
Peter_MacIntyre@cbu.ca

Samuel Greiff
Technical University Munich, Germany
https://orcid.org/0000-0003-2900-3734,
samuel.greiff@tum.de

Abstract

Shao et al. (2023) make a number of critical comments on our previous research on foreign language (FL) emotions, but also add debatable claims, present an inaccurate view of existing research and present an instrument, the *Achievement Emotion Questionnaire – Second Language Learning* (AEQ-L2L), that does not capture the full range of habitual positive and negative emotions in regular FL classrooms by focusing exclusively on learner emotions during exams. We agree with the authors that some early scales had unclear factor structures but claiming that therefore these scales are invalid and unreliable is unjustified. We do not deny that the AEQ can provide a comprehensive measure of emotion, but it does not prioritize the context which is fundamental in research on FL learners' classroom emotions. Moreover, the AEQ-L2L is too long to be reasonably included in complex studies.

Keywords: foreign language learner emotions; control-value theory; positive psychology; applied linguistics

1. Introduction

Shao et al. (2023) used "Pekrun's control-value theory as a framework to validate the *Achievement Emotion Questionnaire – Second Language Learning* (AEQ-L2L) for assessing eight student emotions in second language (L2) learning" (p. 1). The authors criticize widely used instruments in applied linguistics such as the *Foreign Language Classroom Anxiety scale* (FLCAS) (Horwitz et al., 1986) and the *Foreign Language Enjoyment Scale* (FLES) (Dewaele & MacIntyre, 2014), claiming that there is a "theory-method gap" in applied linguistics.

As researchers with a keen interest in the psychology of foreign language (FL) learners,[1] we have always been fascinated by the amazing complexity of learner emotions and the dynamic interactions between both learner-internal and external variables and their effect on performance. One source of fascination is the interdisciplinarity required to study emotion in language learning and usage. Two fields have been particularly influential. The first is the social constructionist approach in emotion psychology (Barrett et al., 2025) that considers

[1] We adopt the term *foreign* language to refer to any language acquired after age three. The term *second* is useful to distinguish between a third, fourth or fifth language.

emotions as being created in the moment and based on the brain's predictions, affected by environmental, psychological and physiological factors, and shaped in the longer term by socialization. The second is positive psychology, which posits that for too long psychologists have focused on the "abnormal" rather than the "normal," on the negative rather than the positive in life (Seligman & Csikszentmihalyi, 2000), which explains the long-standing interest in anxiety in applied linguistics. Positive psychology encourages researchers to adopt a holistic approach and to consider the dialectic between positive and negative emotions (MacIntyre & Gregersen, 2012). Additionally, emotions in the language arena can be examined from a wide range of perspectives, from sociocultural to education theory to a functional approach to details of neurobiology. There are inevitable risks in crossing disciplinary boundaries and emotion has long been a multidisciplinary concern. The emerging research and novel methods for studying emotion have energized thinking about FL acquisition, but they can also become a target for criticism. Healthy criticism and debate move the field forward, but we have been surprised by some of the claims in Shao et al. (2023) when discussing our research.

Our work and on-going psychometric improvement of our scales seem to have helped trigger the current wave of interest in learner emotions in FL learning, including a number of special issues and meta-analyses on the topic (e.g., Derakhshan et al., 2025; Elahi Shirvan & Barabadi, 2024; He et al., 2024; Li et al., 2025; Pawlak & Derakhshan, 2024; Zuniga & Simard, 2024). It has allowed us to shed light on the dynamic nature of FL learner emotions and their direct and indirect effects on performance and progress (Dewaele & Botes, 2025; Li et al., 2022). We would thus like to clarify the record given what we see as some inaccuracies in Shao et al. (2023), while having a critical look at their new instrument, that is, the AEQ-L2L.

2. Critiques and responses

Shao et al. (2023) make a number of claims concerning previous work on emotions in language learning contexts that require a response. The criticisms can be summarized as follows: (1) questioning the basis for and development of prior scales of emotion (especially the FLCAS anxiety measure and the FLES enjoyment measure) and dismissing prior work based on their questionable claims related to scale validity, and (2) assuming unidimensional measures are inappropriate or that the dimensionality underlying scales developed from different theoretical bases must be the same.

2.1. Basis for scale and theory development

Shao et al. (2023) report a study of the applicability of the *Achievement Emotions Questionnaire* (AEQ) to language achievement contexts, based on the control-value theory (CVT, Pekrun, 2006). The CVT starts with an assumption that emotions are comprised of affective, physiological, cognitive, and motivational dimensions. This is one of many possible starting points, given the fact that other emotion theories have started with physiology or brain-based processes, sociocultural theory, dual systems views, various flavors of appraisal theories, and more. Given the complicated and sometimes thorny definitional issues that arise from attempts to specify a list of emotion dimensions, it is inappropriate to dismiss work that takes another theoretical starting point.

Most relevant to the present discussion, applied linguistic-centered studies of emotions have not started from a specific theoretical base, but from the experiences of learners and experiential knowledge of teachers and researchers. Horwitz et al. (1986) grounded their ideas of language anxiety in the experiences of struggling learners working with counsellors at the Learning Skills Centre, University of Texas at Austin. A situation-specific approach such as this is crucial if one is to understand the uniqueness of learners' classroom emotions and how they affect learning and communicating in another language (Gardner, 1985). For this reason, the language learning situation is at the center in the measurement of the emotion adopted by Horwitz et al. (1986), that is, the source of the emotion and the emotion itself are intertwined in the scales in order to better capture meaningful context-specificity. Horwitz et al. (1986) developed the FLCAS based on many years of FL teaching experience, inspired by approaches adopted by theorists working in other areas with concepts defined at similar levels of situational specificity.

Shao et al. (2023) claim that "Horwitz et al. (1986) developed the *Foreign Language Classroom Anxiety Scale* (FLCAS), which aims to measure three aspects of L2 anxiety: communication apprehension; test anxiety; and fear of negative evaluation" (p. 3). This is incorrect as Horwitz et al. (1986) did not specify the dimensionality of foreign language classroom anxiety (FLCA). Furthermore, Horwitz (2017) explicitly rejected the idea that FLCA consists of three dimensions, but rather that the three elements of communication apprehension, test anxiety, and fear of negative evaluation were the conceptual building blocks used as the basis from which the FLCAS was developed. This misconception regarding the dimensionality of the FLCAS resulted in Horwitz (2017) stating again that to do so is a misreading of the original work, a misreading that Shao et al. (2023) perpetuated. Referring to the short form of the FLCAS developed by Botes et al. (2022), Shao et al. (2023) acknowledge "the satisfactory psychometric

properties compared with previous evidence for the full FLCAS" but regret the fact that "the short form considers L2 anxiety as a unidimensional construct, thus not allowing to differentiate between different components of anxiety" (pp. 3-4). We will further address the dimensionality of emotions in the next section.

Shao et al. (2023) argue that anxiety research should be grounded in "contemporary appraisal theories of emotions" (p. 3) and that adopting a situation-specific approach is not acceptable. We disagree with Shao et al. (2023) and support the decision by Horwitz et al. (1986) to view learner experience of anxiety as an integrated experience in language achievement and usage situations. While Shao et al. (2023) acknowledge that "the FLCAS has laid the foundation for L2 anxiety research" (p. 3), they dismiss the FLCAS for its "lack of a clear theoretical foundation, indistinct factor structure, and problematic items" (p. 4) and state that research cannot be effective if the target variables are not measured in a valid manner. They add that "more than half of the 33 items in the FLCAS represent constructs which are apparently distinct from anxiety, such as self-efficacy, confusion, boredom, or social comparison . . . . The FLCAS represents a mix of constructs; it measures more than its name denotes" (p. 4). While we disagree about the proportion of items that do not tap directly into anxiety, we do acknowledge that an item such as "During language class, I find myself thinking about things that have nothing to do with the course" refers to boredom rather than anxiety. Rather than seeing this as a weakness it could in fact be perceived as a strength. Anxiety forms part of a dynamic nomological network which Horwitz et al. (1986) sought to capture with the FLCAS. They had observed that anxious students were often also bored – a relationship that was confirmed in later research (Dewaele et al., 2023). Similarly, conversations that Elaine Horwitz had with students had revealed that social comparison could be a source of anxiety and embarrassment (Horwitz, personal communication). This fact was confirmed in later research (Dewaele & Meftah, 2025) and hence an item such as "I always feel that the other students speak the FL better than I do" captures one important aspect and cause of anxiety, namely, suffering from perceived inferior skills in class and the item was included in the S-FLCAS (Botes et al., 2022). Learners do not experience one single emotion at any one time. They are buffeted by a whirlwind of emotions which can occasionally be conflicting, like peaks in both anxiety and enjoyment when addressing the whole group (Dewaele & MacIntyre, 2014). Moreover, the intensity of these emotions varies over different time frames, ranging from seconds, minutes to months and years (MacIntyre & Ducker, 2022; Saito et al., 2025).

Shao et al.'s (2023) statement the FLCAS lacks a theoretical foundation raises two related issues: (1) the fundamental question about what exactly is understood by "a theoretical foundation" and (2) the ways in which validity is

assessed. Just because Horwitz did not name her model "theory of language anxiety" does not mean there was no theory. Indeed, we would argue that the FLCAS has a foundation in pedagogy, which the AEQ does not have. Put in its historical context, the introduction of the 33-item FLCAS by Horwitz et al. (1986) marked the end of the "confounded phase" in second language acquisition (SLA) anxiety research in which a mishmash of anxiety constructs with questionable applicability to SLA was being employed. The specialized approach (MacIntyre, 2017) to defining language anxiety as a situation-specific concept led to a surge in research on the topic and more focused theorizing (Horwitz, 2017). This represents strong validity for its intended purpose – assessing individual differences in language classroom anxiety by articulating the bases on which that anxiety might arise. Of course, the FLCAS was developed almost 40 years ago in a different research era. Both applied linguistic and emotion theory have changed since then. Space does not permit a full consideration of the various types of validity evidence here, but a reasonable reading of the literature might conclude that the FLCAS captures what teachers and learners mean by language anxiety, considers individual differences in the levels of anxiety, and relates as expected to language course grades (e.g., Aida, 1994), specific behaviors (e.g., Gregersen et al., 2014), and felt experiences (e.g., Yan & Horwitz, 2008).

If we shift our focus to measuring enjoyment, Shao et al. (2023) both praise and criticize Dewaele and MacIntyre's (2014) measure of foreign language enjoyment (FLE) along similar lines: "The FLES has played a pivotal role in promoting research on L2 enjoyment. However, a closer inspection reveals several critical measurement problems with this scale as well" (p. 4). They claim that Fredrickson's (2001) broaden-and-build theory, which was a source of inspiration for the concept of FLE, "is primarily built for examining the functions of positive emotions in relation to psychophysiological health . . . rather than investigating emotions aroused in the educational context" (p. 4). Firstly, it is worth pointing out that negative emotions are not ignored in the broaden-and-build theory but instead serve as a point of contrast for the roles played by qualitatively different types of emotion, a topic of pragmatic concern for learners and teachers in language classrooms. As Fredrickson points out, "the broadened mindsets arising from these positive emotions are contrasted to the narrowed mindsets sparked by many negative emotions" (2004, p. 1367). Secondly, Fredrickson's (2001) theory has been well applied in education contexts, where resilience, well-being, health, and brain function are vital (Fredrickson & Joiner, 2002; MacIntyre & Gregersen, 2012). In the case of FLE, broaden-and-build served as an inspiration to examine the functional differences between positive and negative valenced emotions, and it was not the only relevant theory. Csikszentmihalyi's (1990) work on enjoyment and flow convinced Dewaele and MacIntyre (2014)

that for something to be enjoyable it had to be appropriately intellectually challenging, beyond being merely pleasant or pleasurable. The strong influence of Csikszentmihalyi's (1990) flow theory is reflected in the definition of FLE presented in Dewaele and MacIntyre (2016, pp. 216-217), which was the following:

> [FLE is] a complex emotion, capturing interacting dimensions of challenge and perceived ability that reflect the human drive for success in the face of difficult tasks, pleasure is considered simply an agreeable feeling. On the one hand, enjoyment occurs when people not only meet their needs, but exceed them to accomplish something new or even unexpected; on the other hand, pleasure is a simpler feeling that something likable is happening.

Also, the kernel of the FLES was based on items from Ryan et al.'s (1990) scale which used self-determination theory to investigate the link between emotions and performance in a first language setting. Moreover, the foundation of the FLES was informed by years of (FL) teaching and pedagogical experience regarding emotion regulation in the classroom. The theoretical foundation of FLE is not control-value theory. To claim therefore that FLE lacks a theoretical foundation is indefensible.

As noted in Prior's (2019) critical reflection, placed in a historical context, the study of emotions in the language acquisition field has seen a notable surge in interest in recent years. We agree with Bigelow (2019) that interest has been buoyed (not inhibited) by a diversity of perspectives on emotion. Shao et al. (2023) suggest there is research only on a limited number of emotions claiming that "one key factor contributing to this paucity of research on a broader range of emotions is the lack of theoretically sound and empirically valid instruments for measuring L2 learners' different emotional experiences (Sudina, 2021)" (p. 2). We find this statement reductive as it ignores the work of scholars in applied linguistics and social psychology including Gardner, Brown, Krashen, Schumann, Swain, Lantolf, Scovel, and many others who have been writing about the topic at hand from a diversity of perspectives for over fifty years. Some of them developed instruments, others did not because they adopted different theoretical, epistemological and methodological approaches. The specific contribution of the recent line of research on FL learner emotions started with the publication of the S-FLCAS and the introduction of the FLES in Dewaele and MacIntyre (2014), which led to a surge in research on FL emotions and ushered in a more holistic perspective on emotion in SLA, looking at both positive and negative learner emotions in a classroom context.

2.2. Dimensionality of emotions

Conceptualizing the FLCAS as a unidimensional measure, MacIntyre (1992) had developed an 8-item Short-form of the FLCAS (S-FLCAS). The S-FLCAS was included

in the design of Dewaele and MacIntyre (2014). Answering the need for proper psychometric validation, Botes et al. (2022) followed five sequential steps to ensure the validity and reliability of the scale. Data from 370 FL learners was subjected to exploratory and confirmatory factor analyses. Convergent and discriminant validity were established, and invariance was tested. The S-FLCAS had a clear unidimensional structure with its items loading on a single latent variable. The S-FLCAS was shown to have good internal consistency as well as convergent and discriminant validity. It was also fully invariant across sociobiographical variables and first language (L1) groups.

Issues surrounding the dimensionality underlying the FLES should also be clarified. Shao et al. (2023) claim that "the majority of existing L2 emotion measures adopted a unidimensional approach" (p. 2). This is incorrect. FLCA was developed to be unidimensional but FLE and foreign language boredom (FLLB) were shown to be multi-dimensional (Botes et al. 2021; Dewaele & MacIntyre, 2016; Li et al., 2018, 2023, Pawlak et al., 2020). Although the first published paper (Dewaele & MacIntyre, 2014) reported Cronbach alphas to measure the internal consistency of the FLES, two years later, Dewaele and MacIntyre (2016) reported a principal component analysis with the explicit aim of checking whether the eight items of the short FLCAS clustered separately from the FLES items. This was the case since all anxiety items formed part of the first principal component. The second and third components were the FLES items representing private and social dimensions of enjoyment. Later, Li et al. (2018) selected a subset of 14 items from the FLES to develop the Chinese version of the instrument. Exploratory and confirmatory factor analyses confirmed the construct validity of this tool. Item analysis, reliability tests and validity tests were also performed (Li et al., 2018). The authors found a three-factor structure of FLE (FLE-private, FLE-teacher and FLE-atmosphere). The new, shortened scale had good reliability, high split-half reliability and satisfactory convergent and discriminant validity. This study inspired Botes et al. (2021) to run an extensive empirical validation of the FLES on the original database from Dewaele and MacIntyre (2014) in order to develop a short form of the FLES. Principal component analyses revealed three factors which were named FLE teacher appreciation, FLE personal enjoyment and FLE social enjoyment. The 9-item *Short-form Foreign Language Enjoyment Scale* (S-FLES) contained three items per dimension, based on their factor loadings, the ant colony optimization algorithm, and theoretical considerations. The model was independently tested via confirmatory factor analysis. It was found to have a good fit, strong validity and reliability.

Shao et al. (2023) declare that "studies using confirmatory factor analysis (CFA) to test the construct validity of the FLES have produced inconsistent findings regarding the number of factors underlying the L2 enjoyment scale, reporting

one-, two-, or three-factor structures (see Botes et al., 2021)" (p. 4). We wonder whether the authors mean *exploratory factor analysis* (EFA)? A confirmatory model does not yield differing model options, unless requested by the researcher. The purpose of this comment about factor solutions seems to be to undermine previous work in one broad sweep, even though the three studies just referenced used different selections of items. EFA will provide various solutions, even within one dataset, depending on the number of factors selected and the rotation methods. It is advisable to test and evaluate competing solutions and different solutions may be selected depending on the researcher's decision making and goals for the factor analysis.

Repeating the objection formulated for the FLCAS, Shao et al. (2023) claim that Dewaele and MacIntyre (2014) used their experiential knowledge but "lack a clear theoretical rationale" (p. 4). Here again, we wonder what exactly the authors understand by "theoretical rationale"? We argue that the practical experience of people teaching languages, informed by theories of positive emotion and flow, is a valid basis from which to start to develop a construct. It is no less valid than a top-down theoretical approach.

Shao et al. (2023) state: "It also remains unclear why enjoyment should comprise three dimensions but anxiety only one (Botes et al., 2021, 2022)" (p. 4). It is important to point out that the scales do not start from the same theoretical foundation and are not trying to capture the same thing. The constructs were developed based on ways in which the emotions present themselves and that is how they are measured, namely, through context-specific wordings, sometimes in the singular and sometimes plural. The FLES deliberately included different points of reference. Some items formulated in the first-person singular pronoun "I," the first-person plural pronoun "We" and in the third person singular referring to the teacher, the peers and the class. It was not a surprise that a two-factor solution emerged in Dewaele and MacIntyre (2016). In fact, a three-factor solution was also a possibility where items around the teacher and the peers were split, but the authors opted for the two-factor solution at that point. As the work on the Chinese version of the FLE reported a three-factor solution, and the same pattern existed in the database on which Dewaele and MacIntyre (2014) was based, Botes et al. (2021) found support for the three-factor solution. This also made theoretical sense and, given that the oblique rotation produces FLES factors that are correlated with each other, choices can be made among different solutions depending on research purposes.

We argue that measuring FLE both at the individual and group level makes sense as both levels are complementary: It is unlikely that much personal FLE could be experienced in the absence of teacher appreciation or social enjoyment. The three factors feed off each other. Also, the scores for the three subdimensions

allow a more granular view of the individual and group levels (for a more detailed discussion of this issue, see Morin et al., 2014).

Dewaele and MacIntyre (2014, 2016) wanted to establish whether FLE and FLCA were independent emotions rather than opposite ends of a single psychological dimension. The weak negative correlation between FLE and FLCA was interpreted as evidence that they are indeed independent emotions and that they do not operate as a see-saw (Dewaele & MacIntyre, 2016). In other words, increased FLE does automatically imply lower FLCA and vice versa. Later research confirmed that their sources differ in both online and in-person contexts (Resnik et al., 2023, 2025). The AEQ may be fine to measure a generic model applicable to any emotion, but that is not the purpose of the FLES or the FLCAS which aimed to capture habitual classroom-specific emotions.

Shao et al. (2023) further criticize the composition of the FLES by pointing out that only two items have the word *enjoyment* in them. Firstly, Dewaele and MacIntyre (2014) describe the FLES as measuring a broad positive emotion such as Fredrickson (2001) suggested including pride, fun, interest, absence of boredom and contentment. Secondly, it is misleading and wrong to suggest that items that do not contain the root *enjoy* would somehow fail to grasp "enjoyment." For example, only two out of 29 items in Hills and Argyle's (2002) popular *Oxford Happiness Questionnaire* contain the word *happy*. Botes et al. (2021) did narrow the focus of S-FLES, leaving out items of the FLES such as "I am not bored" despite a good factor loading, because of the development at the time of FL boredom scales. Later research using the S-FLES showed a strong negative correlation between enjoyment and boredom (Dewaele et al., 2023).

Finally, Shao et al. (2023) argue that "contemporary emotion scientists generally agree that cognitive appraisals are the primary causes for emotions to be instigated" (p. 5). Interpretation of this comment depends on the long-contested meaning of the word "appraisal." There is quite a healthy, long-running debate among emotion scientists regarding the interplay of cognition and emotion (see Carey et al., 2016).

In terms of scale development, Shao et al. (2023) start with a generic scale set up to measure four dimensions of an emotion and then apply that approach to the same eight emotions assumed to be applicable to language achievement and several other domains. In contrast, Dewaele and MacIntyre (2014) started with a mixed methods study using a convergent parallel design to collect both quantitative and qualitative data (descriptions of enjoyable episodes in the FL class) from 1,746 FL learners from all over the world. The qualitative part strengthened the quantitative one, allowing the authors to hear the voice of participants and to identify the type of classroom activities that were perceived to be most enjoyable. These turned out to be mostly activities that gave students

a degree of autonomy and control in a positive classroom environment characterized by mutual trust and common purpose between students and teachers. A number of participants provided descriptions that related to flow experiences in their FL class, i.e. they corresponded seamlessly with the very definition of FLE (Dewaele & MacIntyre, 2024; Dewaele et al., 2025). The combination of complementary quantitative and qualitative evidence strengthened the ecological validity of the FLES.

3. Issues with Shao et al.'s (2023) own instrument

In presenting their AEQ-L2L, derived from the AEQ (Pekrun et al., 2011), the authors explain that it contains "74 items pertaining to four components (affective, cognitive, motivational, physiological) of eight emotions (enjoyment, hope, pride, anger, anxiety, shame, hopelessness, and boredom) in language learning" (p. 11). While the authors can be complimented for their thoroughness, they could also be questioned about building an instrument that goes against the current trend toward shorter instruments. Teachers and researchers looking to take the emotional temperature of a classroom are unlikely to use 74 items. Long-form scales like this have fallen out of fashion. Thus, short forms are used more and more frequently in our field, especially when aiming to gain an understanding of the role emotions play in the broader nomological network of FL learning and/or use in relation to other variables.

The authors add that they "adapted the AEQ instructions by asking students to report on their emotional experiences prior to, during, and after studying for the end-of-course English language exam" (p. 11). We differ in terms of what we understand by contextualization. We root context in the specific way emotions are generated and felt in the language class, without focusing exclusively on exams. Indeed, learners' emotional experiences are much broader than merely those associated with exams. Emotions related to exam performance certainly are not the habitual ones in a classroom and not the only ones relevant when learning an FL, especially in an increasingly multilingual world. In a sense, one could argue that Shao et al. (2023) perpetuate traditional psychology's focus on the "abnormal" but then seek to extrapolate the findings to the "normal." We acknowledge that language test-related emotions may play a more important role in achievement scores in contexts that emphasize the test. But informal language learning and usage are pervasive. Even in formal learning contexts, not all FL courses end with an exam (e.g., seminar papers, presentations etc.) so it is not just about the exam even when focusing on passing the course as the ultimate goal. The focus of the FLES is on positive emotions while attending regular classes, which are more likely to occur in that context than in exam situations.

We were surprised to read that "to examine the presumed four-component structure of each emotion scale in the AEQL2L, we used confirmatory factor analysis (CFA; Byrne, 2011)" (p. 14). Indeed, as the authors commented regarding researchers finding different factors using EFA, they themselves did not conduct an EFA to explore the clustering of items but rather assumed the factor structure fit their theoretical design and only conducted a CFA. Looking at Table 4, we were struck by the very strong correlations (> .77) between positive emotions which can be indicative of multicollinearity issues. In fact, the average correlation among pride, hope, and enjoyment in the AEQL2L (estimated median *r* = .785) approaches the reliability estimates for those scales (median alpha = .86), suggesting that the degree of overlap among the reliable variance might be envisioned as a stack of coffee table coasters. The high intercorrelation between the positive emotions in the AEQL2L raises validity issues. The usefulness of the new scale needs to be further supported by validity evidence accumulated across independent studies. Considering that the S-FLES and the S-FLCAS are the most frequently used scales in FL learner emotion research (He et al., 2024), it is surprising that Shao et al. (2023) did not establish convergent and discriminant validity with these scales.

In their section on pedagogical implications, Shao et al. (2023) suggest that "if many students feel bored by the learning materials, teachers may consider incorporating more stimulating activities" (p. 22). This raised the question whether students feel bored in general because it is a class or because it is the context of L2 learning? Using the AEQ-L2L, there can be no answer because it deals with the exam hall, not the regular class. In contrast, Li et al. (2023) distinguish between trait and state boredom in the FL class. The pedagogical implications of Shao et al. (2023) are, in fact, limited. Teachers will know when students generally feel some emotion in their class or exam hall but have no decontextualized way of knowing if it is rooted in the act of language learning, the specific strains and challenges of learning a language itself, or in one of the many other influences on emotion in general, classroom emotions, or language achievement emotions. The authors' approach seems to be to tack on "in English class" or "in math class" or "in rugby practice" to a general emotion measurement framework as a way to capture emotion in FL learning (math, rugby, etc.). Unfortunately, this approach does not capture context-specificity, so we wonder what a FL language teacher is supposed to glean from all of this?

4. Conclusion

It would be wrong to infer that we do not value the control-value theory and the work of Pekrun and colleagues. We agree that it provides a useful framework

that can help cross-fertilization in applied linguistic research on learner emotions. We do disagree, however, with the implication that the AEQ and its underpinnings are the only acceptable starting point to investigate context-specific FL learner emotions. We would like to argue that there is place for a wide variety of (interdisciplinary) approaches, especially ones that foreground learner experience as they describe it. The aim of science is to solve important questions through collaboration, taking into account areas of disagreement. This process is inevitably iterative, one of trial and error. There is no need to dismiss and misrepresent competing theories and scales as there is place under the sun for a variety of approaches. Shao et al. (2023) is suffused with hindsight: Just as one could look at early cars and wonder why they did not contain seatbelts and airbags, it is easy to pick pioneering studies such as Horwitz et al. (1986) and Dewaele and MacIntyre (2014) and judge them harshly for not adopting current practice in the field.

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