

*Second language listening comprehension:  
The role of anxiety and enjoyment  
in listening metacognitive awareness*

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Abstract

Emotion in second language acquisition (SLA) has recently received greater attention because it is largely implicated in daily conversations, which may affect second or foreign language (L2) use including listening comprehension. Most research into emotion and L2 listening comprehension is focused exclusively on anxiety, with an attempt to reduce its negative effects on individuals' listening performance. With the arrival of positive psychology in SLA, researchers began to take a holistic view of a wider range of emotions including enjoyment that language learners experience during their L2 communication. The current study explored the relationships among listening anxiety, enjoyment, listening comprehension performance, and listening metacognitive awareness among a group of 410 international students in a Canadian university. Correlational analyses showed that listening anxiety was negatively correlated with enjoyment. However, these two variables shared only 18% of their variance, indicating that listening anxiety and enjoyment are related but independent emotions. This study suggests that anxiety and enjoyment in L2 listening are not the opposite ends of the same emotional continuum, but

each serves a different purpose. L2 learners should work to find intriguing and enjoyable experiences in language learning, rather than focusing merely on reducing anxiety.

*Keywords:* second language listening comprehension; listening anxiety; listening enjoyment; listening metacognitive awareness

## 1. Introduction

Listening is a skill crucial for second or foreign language (L2) learning and communication. Oral communication is a two-way process which integrates speaking and listening; however, many researchers agree that L2 listening has been neglected relative to speaking which is more visible to an outside observer (Oxford, 2019; Vandergrift, 2003; Zeng & Goh, 2018). Indeed, L2 listening comprehension is an elusive and complex process to research due to the dynamic interplay of various factors such as emotion, metacognitive awareness, and language proficiency (Long, 1990; Oxford, 2019). Greater metacognitive awareness of listening, that is, the awareness of the factors involved in one's own listening, has been found to boost listening performance and to have positive influences on language learners' listening development (Bozorgian, 2014; Goh & Hu, 2014; Yang, 2009). In recent years, emotion has been emerging as a relevant influence on many facets of L2 learning and communication, but its potential impact has long been under-valued, and its effect on various language-related processes has been under-appreciated (Prior, 2019). Adding subtlety and complexity to the role of emotion, positive psychology differentiates the roles of positive and negative emotions in the language learning process (MacIntyre & Gregersen, 2012), roles that can change over time (Boudreau et al., 2018). Although there have been some studies of anxiety as a skill-specific negative emotion that affects listening comprehension (Elkhafaifi, 2005; Zhang, 2013), no study to date has looked at the potential effect of positive emotions such as enjoyment on L2 listening. The present study will explore the relationships of two important emotions, anxiety and enjoyment, with metacognitive awareness in listening comprehension.

## 2. Literature review

### 2.1. Metacognitive awareness in listening comprehension

Metacognitive awareness of listening refers to learners' understanding and attentiveness to the processes involved in L2 listening (Vandergrift et al., 2006). It

is defined as individuals' knowledge and control of their own cognitive processes, encompassing the dimensions of knowing and doing (Goh & Hu, 2014). It has been suggested that students' difficulties in L2 learning and listening may be partly compensated for by increasing metacognitive awareness because reflecting on one's information processing allows listeners to listen in a more effective way (Goh & Hu, 2014; Rubin, 1994). Qualitative data showed that less skilled listeners were likely to fixate on words that they had predicted before a listening activity (Graham et al., 2008), spending a lot of energy on decoding and translating without giving much time to monitor or evaluate their understanding (Gu et al., 2009). In contrast, more skilled listeners were able to draw inferences from context to interpret meaning, form a conceptual framework, and monitor their comprehension against this framework (Graham et al., 2008; Gu et al., 2009). Successful L2 listening relies on the coordination of varied strategies chosen by listeners to regulate listening processes and achieve comprehension, using both bottom-up and top-down processing (Gu et al., 2009; Oxford, 2019; Vandergrift, 2003).

Flavell (1979) originally proposed that metacognitive knowledge reflects learners' understanding of the interactions among person, task, and strategy use. Vandergrift et al. (2006) extended the concept into the area of L2 listening, developing the *Metacognitive Awareness Listening Questionnaire* (MALQ) to assess learners' self-reported uses of listening strategies and perception of themselves as L2 listeners. The MALQ has five factors: (1) *problem-solving*, reflecting strategies used by listeners to make inferences and to monitor these inferences, (2) *planning and evaluation*, defined by strategies listeners use to prepare for listening and to evaluate their performance after listening, (3) (no) *mental translation*, referring to strategies that allow listeners to translate what they hear word-by-word into their native language (more experienced and skilled listeners learn to avoid these strategies), (4) *directed attention*, referring to strategies that listeners use to focus attention and to stay on task, and (5) *person knowledge*, which represents learners' perception of themselves as L2 listeners, focusing on their level of confidence and anxiety experienced in L2 listening. The addition of person knowledge as a factor in metacognitive listening awareness draws emotions into play. The other four factors represent strategies used in L2 listening: problem-solving, planning/evaluation, and directed attention are relatively effective strategies, whereas mental translation represents lower-level, less effective processing. Students who use mental translation and engage in surface analysis tend to be those who experience more difficulties in L2 listening (Vandergrift, 2003; Vandergrift et al., 2006). Vandergrift et al. (2006) reported significant relationships between MALQ scores and measures of L2 listening comprehension success: about 13% of the variance in listening performance could be explained by metacognition.

Since the development of the MALQ, a number of studies have provided evidence for the relationship between metacognitive awareness in L2 listening

and learners' listening performance (Baleghizadeh & Rahimi, 2011; Bozorgian, 2014; Goh & Hu, 2014; Zeng & Goh, 2018). Results suggest that L2 learners possess varying degrees of metacognitive knowledge about the listening process and themselves as L2 listeners, and that this knowledge is linked to their listening abilities (Goh & Hu, 2014; Tavakoli et al., 2012). The substantive conclusion from available studies is that skilled listeners are generally more aware of strategies that may facilitate L2 listening comprehension and how factors such as attention and concentration, background knowledge, task demands and difficulties might affect their listening (Goh & Hu, 2014; Zeng & Goh, 2018).

There have been a few psychometric issues raised with the MALQ. Rahimi and Katal (2012) reported a principal components analysis with five factors. Generally, the factors showed solid measurement properties, with only one item (from the problem-solving subscale) showing a loading coefficient lower than expected (see Ehrich & Henderson, 2019). Aryadoust (2015) performed a Rasch analysis that also generally supported the validity of MALQ, but flagged two subscales as having potentially problematic reliability, planning/evaluation and problem-solving. Finally, Ehrich and Henderson (2019) conducted a Rasch analysis of the MALQ and concluded that although the items generally fit well with the five-factor model, a potential problem exists with the person knowledge subscale and recommended it be re-examined. Taken together, the available psychometric evidence indicates that the MALQ should be used with some caution. Given the concerns expressed in the literature, it is advisable to test its measurement properties in each new sample. Thus, the first goal of the present study is to evaluate the psychometric properties of the MALQ and to explore the factor solutions of the scale before examining the correlations between its subscales and emotion.

## 2.2. Emotion in second language comprehension

In SLA research, emotion has been likened to an "elephant in the room – poorly studied, poorly understood, seen as inferior to rational thought" (Swain, 2013, p. 205). However, there is evidence of a recent affective turn in SLA (Prior, 2019). Emotion theory suggests that there are different roles played by positive and negative emotions in language learning (Fredrickson, 2001, 2013). Negative emotions tend to narrow a learner's focus and positive emotions tend to broaden learners' attention and perception (MacIntyre & Gregersen, 2012). The most widely studied negative emotion in SLA has been language anxiety (Dewaele & MacIntyre, 2016).

Anxiety is a negative experience, defined by negative feelings of apprehension, worry, or fear, which can interfere with language learning and inhibit L2 achievement in both obvious and subtle ways (Horwitz, 2010; Horwitz et al., 1986). MacIntyre (2017) summarized the academic, social, and cognitive effects of

language anxiety. Anxious language learners tend to have lower levels of achievement, reduced linguistic self-confidence, and lower willingness to communicate. In the cognitive domain, anxiety can distract attention and consume cognitive resources that otherwise could be used at the input, processing, and output stages (MacIntyre & Gardner, 1994). In one of the first studies to look at anxiety in listening comprehension, Aneiro (1989) found that communication among two or more people created the largest amount of receiver apprehension, followed by receiving information, communication in a group, and watching TV. Higher receiver apprehension was significantly related to lowered listening and language proficiency in the L2, while higher levels of prior exposure to the target language seemed to reduce the apprehension. Elkhafaifi (2005) suggested that the unfamiliar phonological systems and the foreign cultural context of a L2 might engender listening anxiety in students. In comparison with other receptive skills such as reading, L2 listening can be anxiety-provoking because listeners have more difficulty controlling the speed of L2 input delivery. Further, using a structural equation model to investigate the direction of the effect of anxiety, Zhang (2013) found that foreign language (FL) listening anxiety appeared to have a significant influence on listening performance but that FL performance did not systematically affect FL listening anxiety. One implication is that downstream effects of anxiety arousal on listening comprehension can occur whether anxiety is aroused by language difficulties (Sparks & Ganschow, 1995), elements of the situation such as being tested or evaluated (Gregersen et al., 2014), or by the meaning/content of communication (Boudreau et al., 2018).

In contrast to anxiety, less is known about the potential effects of positive emotional arousal on listening comprehension. Generally, the role of positive emotions in language learning has received little attention until recently. Studies of language enjoyment, defined by positive feelings of creativity, desired relationships, and having fun in language learning/use situations, have caused a reconsideration of the importance of both positive and negative emotions in learners' experience (Dewaele et al., 2019; Dewaele & MacIntyre, 2014). According to the broaden-and-build theory, positive emotion is not simply the lack of negative emotion but serves its own distinct purposes to broaden one's thoughts and actions that come to mind and build resources for the future (Fredrickson, 2001, 2013). To provide a more holistic view on the range of emotions that language learners experience, Dewaele and MacIntyre (2014) studied both foreign language enjoyment (FLE) and foreign language classroom anxiety (FLCA) in the L2 classroom. Results supported partial independence of positive and negative emotions in L2 learning. In a follow-up study, Dewaele and Alfawzan (2018) found that both FLE and FLCA affected L2 performance, and that the positive effect of enjoyment on performance was stronger than the negative effect of anxiety.

In practice, during L2 learning and communication, positive and negative emotions co-exist – they may oppose each other or work together (Boudreau,

et al., 2018; Dewaele & MacIntyre, 2016). As continuously occurring, contextualized experiences (Kong, 2019), positive and negative emotions can be triggered in the process of using any language skill. Dewaele and MacIntyre (2014) suggested that over time, the cooperating processes of positive and negative emotions can facilitate success in the FL classroom; enjoyment encourages playful exploration while anxiety can generate focus on specific activities. Negative emotions tend to narrow learner's attention and promote avoidance behaviors, whereas positive emotions such as enjoyment can encourage engagement with the language and exploration in unfamiliar settings. Applied to L2 listening, anxiety can narrow focus to specific words and sentences and urge the use of specific listening strategies, such as word translation. In contrast, enjoyment may help offset the negative feelings generated by anxiety, aid listeners in better noticing of linguistic input while listening, free their cognitive resources to engage in higher-level processing, and allow them to actively engage in complex strategies such as inferencing and elaboration. Positive emotions such as enjoyment can be theorized to broaden learners' perspective, free their cognitive resources, and facilitate engagement with the language (Boudreau et al., 2018; Fredrickson, 2013). It can thus be hypothesized that enjoyment may boost self-confidence in L2 listening and encourage flexible and adaptive use of metacognitive strategies.

Emotion has been found to interact with metacognitive awareness and information processing in L2 listening. Previous studies indicate that students with lower levels of listening anxiety used metacognitive strategies more often and performed better on listening comprehension tests than more anxious students (Golchi, 2012; Golzadeh & Moiiinvaziri, 2017). Further, MacIntyre et al. (1997) found that language anxiety has a negative effect on L2 learners' self-efficacy, such that anxious students tend to underestimate their level of ability and proficiency. Several studies found that listening metacognitive awareness mediated the relationship between listening anxiety and listening test scores (Xu, 2017; Xu & Huang, 2018). Additionally, findings from research on metacognitive instruction in listening suggest that training students in metacognitive strategies can be helpful in reducing listening anxiety, improving their confidence, motivation, metacognitive awareness and listening performance (Fathi et al., 2020; Goh, 2008; Movahed, 2014). The negative correlation between listening anxiety and metacognitive awareness has been well established; however, no study to date has examined the role of positive emotions in listening self-efficacy and use of metacognitive strategies. Studying the relationship between enjoyment and metacognitive awareness may help learners and teachers identify ways to overcome negative effects of anxiety, choose appropriate listening strategies, and reflect on their successes.

Taken together, research findings concerning the broadening and building effects of positive emotions such as enjoyment can be applied to listening comprehension and

considered in conjunction with the negative effects of anxiety arousal. L2 learners may experience anxiety and/or enjoyment at any time during L2 learning and communication; however, research has not yet looked at positive emotions specifically in L2 listening. It is well worth asking how listening performance and the components of listening metacognitive awareness relate to emotions such as listening anxiety and enjoyment.

### 3. The present study

Building on prior research, the present study looks at the relationships among listening anxiety, listening enjoyment, listening proficiency test scores, and metacognitive awareness of listening. More specifically, we will investigate the following research questions:

1. What is the factor structure of the MALQ?
2. What are the interrelationships among students' listening anxiety, listening enjoyment, and MALQ sub-components?
3. What are the relationships between emotion, MALQ sub-components, and previous achievement in English?

### 4. Method

#### 4.1. Participants

Participants included 410 international students at Cape Breton University, Canada, who speak English as an L2. The sample included 237 females, 164 males, and nine whose gender was unspecified, ranging in age from 18 to 50, with a mean age of 25.14 ( $SD = 4.42$ ). Nearly half (44.1%) of the sample was from India, 39.8% from China, and 11% from Vietnam. The rest of the participants were from Philippines ( $N = 4$ ), Bangladesh ( $N = 2$ ), Egypt ( $N = 1$ ), Uzbekistan ( $N = 1$ ), South Korea ( $N = 1$ ), and Japan ( $N = 1$ ), with 11 participants not specifying their home country. Participants reported varying degrees of self-perceived English proficiency (on a scale of 1 to 5;  $M = 3.42$ ,  $SD = 0.73$ ) and different levels of experience learning English (ranging in years from 0.5 to 40,  $M = 13.84$ ;  $SD = 7.18$ ).

#### 4.2. Measures

The data for the study were collected by means of the following instruments employed in previous empirical investigations:

- *Foreign Language Listening Anxiety Scale* (FLLAS, Elkhafaifi, 2005). The FLLAS is a 20-item scale measuring listening anxiety. Responses are made on a five-point Likert (1 = *strongly disagree*, 5 = *strongly agree*). An example item is: "When listening to English I get nervous and confused when I don't understand every word." Elkhafaifi (2005) reported strong internal consistency reliability (Cronbach's  $\alpha = .96$ ,  $N = 233$ ). The reliability of the FLLAS in the current study was acceptable, with a Cronbach's alpha of .86.
- *Foreign Language Listening Enjoyment* (FLE) *Questionnaire* (adapted from Dewaele & MacIntyre, 2014; see Appendix). The original FLE questionnaire has 21 items reflecting social and private dimensions of enjoyment. Given the intrapersonal quality of listening, the present study focused only on private enjoyment, adapting six items to reflect enjoyment related to L2 listening comprehension. An example item is: "It's fun learning to understand spoken English." The reliability of the FLE scale was acceptable (Cronbach'  $\alpha = .80$ ).
- *Metacognitive Awareness Listening Questionnaire* (MALQ; Vandergrift et al., 2006). The 21-item MALQ assesses metacognitive awareness concerning use of strategies while listening to oral text, and their sense of themselves as L2 listeners. Responses to the MALQ were made using a six-point Likert response (1 = *strongly disagree*, 6 = *strongly agree*). The overall reliability of the MALQ in the current study was low ( $\alpha = .60$ ). The MALQ is divided into five subscales, four of which showed adequate reliability coefficients that are comparable to prior studies (see Goh & Hu, 2014; Xu, 2017): planning and evaluation (five items,  $\alpha = .71$ ), person knowledge (three items,  $\alpha = .69$ ), mental translation (three items,  $\alpha = .74$ ), and problem solving (six items,  $\alpha = .69$ ). However, in the present sample, the directed attention subscale (four items,  $\alpha = .33$ ) showed poor reliability.<sup>1</sup>
- *Previous listening performance*. When applying to the university at which the study was conducted, students whose first language is not English must furnish evidence of the English proficiency, most commonly by providing the International English Language Testing Service (IELTS) score. Thus, the listening component of the IELTS test served as the measure of the test-

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<sup>1</sup> The low reliability may have resulted from low inter-item correlations due to ceiling and floor effects which can be tied to the context in which the respondents live. The four "directed attention" items refer to recovering attention when difficulties arise. Item DA1 and DA3 received very high endorsement (in this sample, 57% and 67%, respectively scored 5 or 6 out of 6 on these items). DA4 is a reverse coded item indicating that one gives up when facing listening difficulties and most people disagreed with this, 58% of the sample scored either 1 or 2 on this item. ESL students living in an overwhelmingly English speaking community do not seem to feel they have the option to give up when attention difficulties arise.



takers' previous English listening proficiency in the present study. IELTS listening is scored on a nine-band scale; half scores such as 6.5 are possible. Zhang (2013) noted that the IELTS listening score has a good predictive power over participants' listening proficiency in terms of listening to lectures or instructions. A total of 306 participants in the current study (74.6%) self-reported their latest IELTS listening score, ranging from 4.5 to 9.

### 4.3. Procedure

Participants in the current study were students recruited within university classes, with the instructors' permission. After providing informed consent, students participated in a testing session during which the FLLAS (anxiety), FLE (enjoyment), MALQ, and demographic information sheet were distributed. Participants were encouraged to answer items honestly and were reminded that all answers would remain anonymous.

### 4.4. Data coding

For 17 of the 20 FLLAS items, responses were coded as the Likert-scale points chosen by the participants. The remaining three items (#12, #13, and #18) were reversed coded (Elkhafaifi, 2005). All six items in the adapted listening enjoyment scale FLE were positively worded. Three items for the MALQ scale (#3 and #8 for person knowledge, and #16 for directed attention) were negatively worded, thus the responses were reverse coded. Because mental translation represents strategies contribute negatively to overall metacognitive awareness, the mental translation subscale was reversed and coded as (no) mental translation following Vandergrift et al. (2006). However, even with recoding mental translation scores, the internal consistency of the MALQ scale was poor (Cronbach'  $\alpha = .54$ ), suggesting that a psychometric issue might exist when this scale is used as a composite measure.

### 4.5. Data analysis

Preliminary analysis assessed the factor structure of the MALQ to evaluate evidence supporting the use of its five subscales in the present sample. Due to the poor internal consistency of the MALQ and its subscales (e.g., directed attention, Cronbach's  $\alpha = .33$ ), the current study will propose an alternative two-factor solution to explore a novel combination of subscales. Following that, the two proposed sub-components and five original subscales of the MALQ were correlated with listening anxiety, listening enjoyment, and prior listening achievement. Pearson correlation analyses was conducted among all these variables.

For interpretation of the magnitude of the correlations ( $r$ ), we use benchmarks provided by Plonsky and Oswald (2014) who “. . . suggest that  $r$ s close to .25 be considered small, .40 medium, and .60 large (Plonsky & Oswald, 2014, p. 889)

## 5. Results

### 5.1. MALQ factor solution and subscales

The first step in data analysis was a principal components analysis of the MALQ (see Table 1). Both the measure of sampling adequacy ( $KMO = .83$ ) and Bartlett's test ( $\chi^2(280) = 2060.5, p < .001$ ) indicated the correlation matrix was suitable for factoring. Following Vandergrift et al. (2006), we extracted five factors with a promax rotation. Results of the five-factor solution emerged similar to the original Vandergrift factors but with elevated cross-loadings (i.e., variables loading on two or more factors). Factor I (*planning*) received high loadings ( $> .50$ ) from all five of the planning and evaluation items and one of the problem-solving items. Factor II (*difficulty*) received high loadings from all three of the person knowledge items, focusing on difficulty, challenge, and nervousness, plus one directed attention item that reflected giving up when difficulties arise. Factor III (*concentration*) received loadings from two of three Directed Attention scale items (the third loaded at .49), plus a problem-solving item. Factor IV (*translation*) had high loadings from all the mental translation items. Factor V (*problem-solving*) showed high loadings from four of the six problem solving items. In addition, there were three correlations among the factors that were greater than .30. Although the MALQ scales did not replicate the clear factor structure reported by Vandergrift et al. (2006), the factor analysis results were substantially similar and approached simple structure (defined by loadings  $> .50$ ).

To address the low reliability of the MALQ in general and the DA subscale in particular, and to avoid redundancy by simplifying the MALQ structure, we created a novel combination of subscales. On the one hand, the three subscales of the MALQ which represent relatively effective strategies L2 listeners use to facilitate information processing and understanding, that is, planning and evaluation, directed attention, and problem-solving, were combined to form a scale labelled *listening strategies*. On the other hand, the mental translation subscale, representing lower-level, less effective strategies used by listeners struggling with higher-level processing, was combined with a reverse-scored person knowledge subscale, which was scored to represent L2 learners discomfort with listening to English. The combination of measures was renamed as *comprehension difficulties*. Cronbach's reliability for the seven-item comprehension difficulties scale was acceptable ( $\alpha = .73$ ). The fourteen-item listening strategies scale also showed acceptable internal consistency ( $\alpha = .78$ ).

For comparison to the five factors originally proposed to underlie the MALQ, we conducted a second principal components analysis extracting two factors with a promax rotation (see Table 2). Results showed patterns that generally supported the newly combined subscales, except for a few items. Factor I (*strategies*) received high loadings (>.50) from planning and evaluation, directed attention, and problem-solving subscales. Factor II (*difficulties*) had high loadings (> .50) from perceived difficulty and mental translation items, plus an unexpected directed attention item. Additionally, these two factors showed a positive correlation of .34. These results suggest potential use of the MALQ as a two-factor solution.

Table 1 Factor loadings and communalities based on a principal components analysis with Promax rotation for MALQ items (five-factor)

Items	Factor loadings					Communality
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	
Planning/evaluation #5	.75*	-.03	.26	.34*	.02	.61
Planning/evaluation #3	.61*	-.10	.46*	.11	.18	.48
Planning/evaluation #4	.61*	.05	.39*	.36*	.18	.52
Planning/evaluation #2	.60*	-.42*	.05	.37*	.32*	.47
Problem-solving #6	.59*	-.09	.22	.10	.46*	
Planning/evaluation #1	.59*	-.28	.14	.30*	.19	.39
Person knowledge #2	-.15	.82*	.03	-.28	-.16	.67
Person knowledge #1	-.15	.75*	-.09	-.27	-.13	.58
Person knowledge #3	-.03	.67*	.23	-.15	-.07	.49
Directed attention #4	-.16	.52*	.05	-.27	.28	.43
Directed attention #2	.26	.08	.70*	.25	.10	
Directed attention #3	.19	.00	.64*	.12	.31*	
Problem-solving #4	.46*	.03	.63*	.01	.22	.58
Directed attention #1	.16	-.37*	.49*	.19	.40*	.58
Mental translation #1	.22	-.28	.14	.83*	.23	.72
Mental translation #2	.39*	-.24	.25	.77*	.27	.65
Mental translation #3	.35*	-.32*	.13	.74*	-.13	.62
Problem-solving #5	.38*	-.06	.15	.00	.70*	.52
Problem-solving #1	.20	-.39*	.20	.33*	.68*	.43
Problem-solving #2	.12	-.02	.45*	.24	.65*	.51
Problem-solving #3	.18	.12	.55*	.05	.58*	.53
Eigenvalues	4.82	2.59	1.62	1.20	1.04	
% of Total Variance	22.95	12.34	7.70	5.70	4.95	
Total Variance						53.63

Note. \* = factor loadings over .30

Factor correlations

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	1.00				
Factor 2	-.17	1.00			
Factor 3	.31	.06	1.00		
Factor 4	.32	-.34	.19	1.00	
Factor 5	.21	-.14	.29	.11	1.00

Table 2 Factor loadings and communalities based on a principal components analysis with Promax rotation for MALQ items (two-factor)

Items	Factor loadings		Communalities
	Factor I	Factor II	
Problem-solving #3	.70*	-.27	.43
Problem-solving #4	.61*	-.14	.34
Problem-solving #2	.60*	-.08	.33
Directed attention #2	.57*	-.11	.30
Directed attention #3	.58*	-.15	.30
Planning/evaluation #4	.56*	.09	.35
Problem-solving #5	.56*	-.05	.29
Problem-solving #6	.55*	.06	.32
Planning/evaluation #3	.54*	.08	.32
Planning/evaluation #5	.40*	.22	.27
Directed attention #1	.39*	.22	.26
Problem-solving #1	.36*	.35*	.34
Planning/evaluation #1	.30*	.37*	.31
Perceived difficulty #2	-.18	.76*	.52
Perceived difficulty #1	-.11	.69*	.44
Perceived difficulty #3	-.35	.62*	.36
Directed attention #4	.29	-.61*	.33
Mental translation #3	.04	.60*	.38
Mental translation #1	.18	.55*	.42
Planning/evaluation #2	.28	.48*	.40
Mental translation #2	.33*	.48*	.45
Eigenvalues	4.90	2.55	
% of Total Variance	23.3	12.2	
Total Variance			35.5

Note. \* = factor loadings over .30

## Factor correlations

	Factor 1	Factor 2
Factor 1	1.00	
Factor 2	.34	1.00

## 5.2. Correlations of listening anxiety and enjoyment with MALQ subscales

The two measures of emotion, listening anxiety and listening enjoyment, were significantly, negatively correlated ( $r = -.43$ ), but only to a medium or moderate degree. Correlations were also computed between listening anxiety and listening enjoyment with comprehension difficulties and listening strategies, the two new composite scales described in section 4.1 (see Table 3). On the one hand, comprehension difficulties correlated strongly (positively) with listening anxiety and moderately-to-strongly (negatively) with listening enjoyment. On the other hand, listening strategies showed a slightly different pattern of correlation. Both anxiety and enjoyment correlated positively with greater use of listening strategies. In other words, students who used more listening strategies experienced both higher anxiety and higher enjoyment while listening to English, though these correlations tended to be small.

Table 3 Listening anxiety, listening enjoyment, comprehension difficulties, listening strategies, and IELTS listening scores: Correlations and descriptive statistics ( $N = 410$ )

Variables	1	2	3	4
1. Listening anxiety	-			
2. Listening enjoyment	-.43***	-		
3. Comprehension difficulties	.67***	-.32***	-	
4. Listening strategies	.19*	.23**	.35***	-
<i>M</i>	54.68	23.99	19.37	64.20
<i>SD</i>	12.17	4.34	6.03	9.76
Range	24-85	9-30	5-35	32-90

For comparison we also include the correlations of listening anxiety and listening enjoyment with the original five factors of the MALQ (i.e., directed attention, problem-solving, planning and evaluation, mental translation, and person knowledge). Results suggest that emotions play a potentially complex role in metacognition about listening comprehension (see Table 4). Person knowledge had the strongest correlations with emotion, a strong negative correlation with listening anxiety and a strong positive correlation with listening enjoyment. Mental translation showed a medium-sized correlation with listening anxiety, but was not significantly correlated with listening enjoyment. In a reverse pattern, directed attention showed a significant, small-to-medium-sized correlation with listening enjoyment but was not correlated significantly with anxiety. Finally, both the problem-solving and planning/evaluation subscales showed significant and positive correlations (but weak) with both listening anxiety and enjoyment.

Table 4 Listening anxiety, listening enjoyment, MALQ subscales, and IELTS listening scores: Correlations and descriptive statistics ( $N = 410$ )

Variables	L. anxy	L. enjoy	PE	DA	PK	PS	MT
1. L. anxy	-						
2. L. enjoy	-.43***	-					
3. PE	.27***	.12*	-				
4. DA	-.06	.31***	.26***	-			
5. PK	-.68***	.45***	-.20***	.10*	-		
6. PS	.15**	.18***	.48***	.50***	-.11*	-	
7. MT	.42***	-.09	.47***	.12*	-.32***	.30***	-
<i>M</i>	54.68	23.99	19.77	17.61	12.13	26.82	10.62
<i>SD</i>	12.17	4.34	4.87	2.99	3.52	4.55	3.83
Range	24-85	9-30	5-30	8-24	3-18	10-36	3-18

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; l. anxy = listening anxiety, l. enjoy = listening enjoyment, PE = planning and evaluation, DA = directed attention, PK = person knowledge, PS = problem-solving, MT = mental translation

### 5.3. Correlations of listening anxiety and enjoyment and metacognitive awareness with prior achievement

For the final analysis, we correlated the self-reported measure of prior achievement, IELTS listening score, with the other variables in the study. IELTS scores were significantly ( $p < .001$ ) negatively correlated with listening anxiety ( $r = -.52$ , a medium-to-large sized correlation) and positively correlated with enjoyment ( $r = .31$ ), in the small-to-medium size range. Further, IELTS showed a negative, medium-sized correlation with the aggregate measure of comprehension difficulties ( $r = -.48$ ,  $p < .001$ ) but was not significantly correlated with the aggregate measure of listening strategies ( $r = -.09$ , *ns*). For completeness, IELTS also correlated significantly, positively with person knowledge ( $r = .42$ ,  $p < .001$ , medium size) and negatively with the use of mental translation ( $r = -.32$ ,  $p < .001$ , small size). Self-reported IELTS scores showed weaker correlations with the other MALQ subscales (PE  $r = -.14$ ,  $p = .012$ ; PS  $r = -.10$ ,  $p = .084$ , DA  $r = .09$ ,  $p = .102$ ).

## 6. Discussion

Although listening is a crucial skill for language learning, it has been the focus of less research attention than other L2 skills. One reason for this situation may be that there are fewer measures of listening comprehension, which may limit the understanding of factors related to this crucial skill. The first research question of this study deals with the underlying structure of one of the few available measures focused on L2 listening, the MALQ. The factor analytic results here suggest that the MALQ seems to have a more complex factor structure than originally reported (Vandergrift et al., 2006). The original scale showed a clear and simple factor structure in both exploratory and confirmatory modelling. However, since the original scale was published, research has hinted at psychometric anomalies (Aryadoust, 2015; Ehrich & Henderson, 2019; Rahimi & Katal, 2012).

Extraction criteria for the data in the present study suggested either a five-factor solution (according to eigenvalues-greater-than-one rule) or a three-factor solution (from a parallel analysis). However, even the five-factor solution showed slight discrepancies from the originally reported factor structure. The directed attention subscale in particular showed low internal consistency reliability. As an alternative approach, based on interpretability and simple structure, we also attempted a two-factor, exploratory solution. The two aggregate subscales were called *listening strategies* and *comprehension difficulties*. The new subscales showed improved and acceptable reliability, as well as interpretable correlations with listening anxiety, enjoyment, and prior achievement. Future research involving the MALQ should routinely test its factor structure and report

complete loading matrices, building a body of evidence that would support the continued and informed use of this measure.

The second research question considers the relationships among listening anxiety, enjoyment, and MALQ sub-components. Consistent with previous studies (Dewaele & MacIntyre, 2014; Dewaele et al., 2018), the present results revealed a significant negative correlation between listening anxiety and enjoyment. However, these two variables correlated moderately, with only 18% shared variance, indicating that listening anxiety and enjoyment are related but independent emotions. The results are in line with Dewaele and MacIntyre (2014), who showed that anxiety and enjoyment in the L2 classroom shared only 12.9% of their variance. Anxiety and enjoyment are not opposite ends of the same emotional continuum, but each serves a different purpose. Enjoyment and anxiety may even cooperate from time to time in L2 listening; enjoyment serves to broaden listeners' thoughts and encourage them to approach interesting listening materials, whereas anxiety serves to narrow their focus to specific information (Fredrickson, 2001, 2013).

The two emotions included in the present data, anxiety and enjoyment, correlated with the first newly constructed MALQ subscale, comprehension difficulties. The correlation was large and positive with listening anxiety but somewhat weaker and negative with listening enjoyment. L2 listening is a cognitively demanding receptive skill, compared to L2 reading for example. Listening requires attending to additional factors such as stress, pause, and rhythmic patterns that can complicate the comprehension process. Listening takes place in real time and is ephemeral; listeners often cannot review what has been heard and have little control over the speed of the input (Vandergrift & Baker, 2015). L2 listeners who repeatedly encounter comprehension difficulties are likely to form a strong association between listening activities and the feelings of being worried and develop anticipatory fear (Kimura, 2008; Zhang, 2013). In addition, the present results suggest that those with higher levels of comprehension difficulties also experience less enjoyment in L2 listening, though the correlation is not as strong as it is with anxiety. This may be part of a vicious cycle wherein high anxiety and low enjoyment might consume cognitive resources, and narrow the material available for cognitive processing, leading to greater comprehension difficulties and poorer performance. In contrast, positive experiences of successfully applying tools to crack the code of L2 speech potentially boost listeners' self-efficacy (Graham, 2011). These experiences might reinforce listeners' sense of control over the process of listening and generate greater feelings of enjoyment. Consistent with the broaden-and-build emotion theory (Fredrickson, 2013), enjoyment may facilitate exploration of new listening material and deeper analysis of the information, which further enhances enjoyment in listening activities in a "virtuous cycle."

The second aggregate MALQ subscale emerging from the present study, listening strategies, represents relatively effective strategies used by L2 listeners to facilitate comprehension. Results indicated a small but significant positive correlation between listening strategies and listening enjoyment but also a small, positive correlation with listening anxiety, which seems to contradict some previous research suggesting that those who use more strategies tend to be more effective listeners (O'Malley et al., 1989) and experience less anxiety (Golchi, 2012; Golzadeh & Moiiinvaziri, 2017). This incongruence might be explained by the positive relationship between listening strategies and comprehension difficulties found in this study. In the social context where learners are frequently using the L2 for authentic communication, learners who use more listening strategies might be those who are encountering more difficulties in listening comprehension. As a result of becoming anxious, they may actively use strategies to help cope with difficulties and distractions. Bang and Hiver (2016) found that it was only through the mediation of L2 linguistic knowledge that L2 listening strategy use was linked to low L2 listening anxiety, meaning that listening strategies might alleviate anxiety only if L2 knowledge has reached a certain threshold or level. Intentionally using strategies can be a source of distraction from the meaning of what is being said, so over-reliance on strategies might lead to cognitive overload associated with greater anxiety. Skilled listeners rely on the orchestration of varied strategies instead of serial deployment of such strategies (Vandergrift, 2003). Therefore, more skilled, less anxious listeners in the current study might have reported less use of strategies because they do not intentionally employ such strategies but use them in a natural way. The pattern of correlations suggests that, as the learning process moves along leading to more experience and higher levels of proficiency, greater emotional arousal is likely to occur (both positive and negative, see also Dewaele & MacIntyre, 2016). Learners who use planning and problem-solving types of strategies may be experiencing both positive and negative emotional experiences.

The third research question examined the relationship between participants' previous listening achievement, emotions, and metacognitive awareness subscales. In the present study, participants' latest IELTS listening scores were found to be moderately positively correlated with listening enjoyment and moderately-to-strongly negatively correlated with listening anxiety. These results were largely consistent with previous studies (Dewaele & Alfawzan, 2018; Elkhafaifi, 2005; Kim, 2000; Li, 2019; Zhang, 2013); L2 learners who had better listening performance tended to experience more enjoyment and less anxiety when listening to English, compared to those who had poorer performance. This pattern of correlations suggests that individuals who scored higher on previous listening tests experience more enjoyment, which in turn helps to broaden their



perspective, absorb more linguistic input in L2 from listening, and experience less worry and distracting self-doubt. Additionally, results indicate a medium-sized negative relationship between previous listening achievement and comprehension difficulties. Students who had poorer listening achievement tended to be those who experience more difficulties in L2 listening. However, prior achievement scores (IELTS) did not correlate significantly with the use of listening strategies, and showed weak correlations with the original MALQ subscales (planning and evaluation, problem solving, and directed attention). Although non-significant correlations are inherently ambiguous and difficult to interpret because they show a lack of a relationship between variables, previous research suggests a positive association between metacognitive strategy use and listening performance (Golchi, 2012; Golzadeh & Moivaziri, 2017). Future studies could further examine metacognitive strategy use and listening performance to provide a clearer understanding of this relationship.

## 7. Pedagogical implications

Understanding the role(s) played by emotion in L2 listening and its relationship with metacognitive awareness allows for a better understanding of how listeners' self-perceptions, and how they perceive the listening tasks affects their use of listening strategies. Li (2019) found that students who were more cognizant of their emotions may be better able to manage their anxiety, and generate more enjoyment during L2 learning, which can lead to higher self-confidence and better actual performance. Understanding their own emotions can help learners prepare for listening tasks, monitor their mental processes during listening, and evaluate their listening performance to develop future goals. On the other hand, L2 teachers can help learners to know more about their feelings and reinforce positive emotions. Results of the present study suggest that positive and negative emotions are not opposite ends of the same spectrum, but work in different ways in L2 listening. Language teachers and learners should focus not only on reducing anxiety but also working out intriguing and enjoyable experiences in language learning (see Dewaele et al., 2018). The current study highlighted the importance of positive emotions in promoting L2 learners' psychological resilience and raising self-confidence, in the form of person knowledge. Listening can be an anxiety provoking activity; positive emotions may even serve a protective function against negative emotions associated with comprehension difficulties.

Furthermore, the current study emphasized the importance of teaching strategy use in L2 listening. However, it should be noted that listening proficiency is not determined solely by strategy use. Although several studies have found that metacognitive strategy instruction produced positive outcomes in students' listening

performance (Fathi et al., 2020; Goh, 2008; Movahed, 2014), Field (1998) suggested that teaching strategies may promote the use of strategies, but may not necessarily lead to listening ability improvement. The present study found that use of strategies is positively correlated with listening anxiety; being preoccupied with strategy use may take up limited cognitive resources and distract listeners from the actual linguistic input itself. Furthermore, some strategies (e.g., mental translation) serve as a crutch that can get listeners over a difficult moment, but generally should not become routinized because they can distract from the meaningful input (Vandergrift, 2003). Strategy use might be considered as a double-edged sword, which could help with comprehension and generate enjoyment, but also serve as a source of distraction and at times create anxiety.

## 8. Limitations and future research directions

Before concluding, two key limitations of the study should be noted. First, the use of self-report always raises questions about the veracity of responses. Specifically, the IELTS listening scores collected in this study were self-reported and thus might not accurately represent participants' current listening performance. Approximately one-in-four participants in the present study did not take the IELTS test or might have refused or neglected to report their score (104 of 410 participants were missing IELTS scores). Future research could employ alternative measures to assess L2 learners' listening achievement, such as administering a listening test as part of data collection. Nevertheless, the reliability of scales and pattern of results, including the IELTS scores, seems to suggest that the data are credible.

A second consideration is the social context in which the present study took place. The sample of international students living in an English-speaking community and taking all of their university classes in English provides a context in which listening is critically important. This study extended beyond the classroom context to investigate L2 listeners' experience of anxiety and enjoyment in their daily lives. However, the nature of the context also might have affected scores, including generating more occasions for intense emotional arousal (both positive and negative), but also making some scores problematic due to restricted range, especially the directed attention subscale (see Footnote 1). Additionally, the social context of the current study suggests that the findings might not be applicable to other populations or languages. Participants in this research were international students who study and live in an English-speaking country, thus their self-reported levels of listening anxiety and enjoyment likely targeted emotions both inside and outside the classroom. Considering that high exposure to the target culture might alleviate language anxiety and increase enjoyment (Aneiro; 1989; Resnik & Schallmoser, 2019), students who study the L2

in their home country may use the L2 only in classrooms. Thus, they may have different emotional experiences and different patterns of strategy use. Future studies should be conducted with participants with different L2 learning background to further investigate the relationship between emotion and metacognitive awareness in L2 listening.

## 9. Conclusion

This study was among the first attempts to investigate the relationship between metacognitive awareness and both positive and negative emotions in listening comprehension. Results indicated that anxiety and enjoyment are related but independent emotions and may serve different functions in L2 listening. This finding is further supported by listening anxiety and enjoyment showing different patterns of correlation with aspects of metacognitive awareness. Moreover, this study found that use of listening strategies was positively related with both listening anxiety and enjoyment, which calls for a more detailed consideration in how to teach and use listening strategies as it could potentially create anxiety for listeners. Being aware of the emotional experiences, the use of strategies, and comprehension difficulties in L2 listening can have implications in improving learners' listening performance and enhancing their general listening ability.

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APPENDIX

Foreign Language Listening Enjoyment (FLE) questionnaire

Statement (1) through (5) described how enjoyable you find listening to English. Please read each statement, give your first reaction to each statement, and mark an answer for every statement.

Please indicate whether you 1 – strongly disagree, 2 – disagree, 3 – undecided, 4 – agree, 5 – strongly agree

1. I don't get bored listening to English.	1 2 3 4 5
2. I enjoy listening to someone speaking English	1 2 3 4 5
3. I've learnt interesting things when listening to English	1 2 3 4 5
4. I feel proud of my ability to understand spoken English	1 2 3 4 5
5. It's fun learning to understand spoken English	1 2 3 4 5
6. Listening to English makes me feel happy	1 2 3 4 5