

Wearing the mask: The role of imposter phenomenon in EFL learning and its effect on learner emotions and engagement

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Abstract

The imposter phenomenon (IP), which is characterized by a sense of incompetence and self-perceived intellectual inferiority due to being unable to acknowledge one's own achievements and abilities despite objective success, is widely recognized as a common experience with detrimental effects in academic settings. Yet, its role in the context of foreign language (FL) learning remains underexplored. This study investigates the role of the experience of IP among 397 tertiary-level FL learners of English,

possible effects of demographic and language use variables, as well as the extent to which IP affects students' foreign language enjoyment (FLE), their foreign language classroom anxiety (FLCA), and engagement with FL learning. Statistical analyses of data gathered with a web survey revealed that younger, female participants were more likely to experience IP, as were those who perceived their standing in the group of learners as below average. Additionally, latent modeling indicated that IP was linked to both FLCA and FLE, and it predicted the performance engagement of English as a foreign language (EFL) learners. Overall, this study provides evidence as to the presence of IP in EFL classrooms and makes a case for the variable to be included in further studies of the nomological network of individual difference variables.

Keywords: imposter phenomenon; foreign language anxiety; foreign language enjoyment; learner engagement; learner emotions

1. Introduction

Based on their insights gained from work with high-achieving, successful women, Clance and Imes (1978) described the imposter¹ phenomenon (IP) as being characterized by an individual's perceived lack of intellect despite objective evidence to the contrary. Instead of being able to acknowledge their success, imposters attribute their achievements to luck (Brauer & Proyer, 2022; Clance, 1985) and perceive themselves as "intellectual frauds" (Cisco, 2020a, p. 200), meaning imposters attribute success externally (Brauer & Wolf, 2016). Based on Clance (1985), Sakulku and Alexander (2011, p. 78) explain the imposter cycle as starting with the assignment of an achievement-related task, which makes imposters worried and anxious, and leads to doubting themselves. They typically respond by either over-preparing or procrastinating, which is then followed by intense preparation. As soon as they have accomplished the task, a brief experience of relief follows, which usually does not last long. Even when receiving praise for their accomplishments, imposters tend to be unable to acknowledge they deserve their achievements and dismiss positive feedback as they link their accomplishments to either having worked harder than others to accomplish the task, to chance and luck, or to having deceived others, and consequently feel like a fake (Clance & Imes, 1978; Langford & Clance, 1993).

Research on IP is quite abundant in general education (Ménard & Chittle, 2023), and has been addressed – though not by that name – in multilingualism (Dewaele, 2022). Researchers who have investigated feelings of difference when switching languages often referred to the passage from Eva Hoffman's (1989) autobiography in which she describes the complex emotions of frustration and rage she experienced as a young Polish teenage immigrant in Canada at being unable to

¹ The word is spelled *imposter* or *impostor* in the literature. We opt for the former variant.

project her identity through the English language: "I am enraged at the false persona I'm being stuffed into, as into some clumsy and overblown astronaut suit. I'm enraged at my adolescent friends because they can't see through the guise, can't recognize the light-footed dancer I really am" (p. 119). Using an imperfectly mastered foreign language (FL) may also have a positive, liberating effect. Lvovich (2013) described how studying French as a FL in the dreary Soviet Union allowed her to develop a sophisticated French identity. Rather than feeling like an imposter, she felt like she was joining an ideal imagined community.

The topic of IP remains underexplored in second language acquisition research (Brauer et al., 2023). We argue that IP might be one of the "upstream" psychological variables that could explain why some FL learners experience FL classroom anxiety (FLCA), limited foreign language enjoyment (FLE), low willingness to communicate (WTC) in the classroom and weak engagement in FL learning. As such, investigating how IP affects FL learners' emotions and engagement could provide the field with a missing piece of puzzle. It could also help raise FL teachers' awareness of imposterism and ways to counter its nefarious effects.

2. Literature review

2.1. The imposter phenomenon

Previous research showed that the sources of and mechanisms underlying imposter feelings are rather complex. Brauer and Proyer (2022), for instance, demonstrated that IP is unrelated to intelligence and imposters' actual performance. Experiencing high IP, the development of which may be partly supported by certain family dynamics (Clance & Imes, 1978), has been linked to feelings of self-doubt and trait anxiety (Clance, 1985; Sakulku & Alexander, 2011; Topping, 1983), but also depression, low job satisfaction and job performance, as well as burnout (cf. Bravata et al., 2020). Self-evaluative perfectionism has been linked to the phenomenon as well (e.g., Dudău, 2014), and self-esteem has been shown to function as a partial mediator in the relationship between perfectionism and IP (Cokley et al., 2018).

While Clance and Imes (1978), based on their clinical observations, initially linked experiencing imposterism to women with high performance in the professional domain, later research focusing on gender differences in this context has yielded mixed findings. While some studies pointed to small, yet significant gender differences, with women being more prone to experiencing IP than men (see, e.g., Brauer & Proyer, 2017; Cokley et al., 2015, 2018), in other studies, the likelihood to experience imposterism was not affected by gender (see, e.g., Brauer & Proyer, 2022). In her study on 285 university faculty's experience

of IP, Topping (1983) found men to report, on average, significantly higher IP scores than women. The relationship between age and IP seems to be unclear as well, with some studies revealing no such link (e.g., Brauer & Wolf, 2016) and others reporting a decline of IP with age (for an overview, see Bravata et al., 2020). In fact, previous research has shown that the phenomenon seems to be experienced widely in various contexts by various groups (for an overview, see Sakulku & Alexander, 2011).

Highly competitive environments, such as academia, provide fertile ground for the experience of IP. Prior studies have revealed that imposter concerns and, linked to them, questioning one's legitimacy, are rather common among academic faculty (e.g., Topping & Kimmel, 1985) and often seem to be part of the development, formation, and negotiation of their own professional identity (Hutchins & Rainbolt, 2017). However, imposterism seems to be a widespread phenomenon among post-secondary students as well (e.g., Bravata et al., 2020; Cisco, 2020a; Cokley et al., 2015). Ménard and Chittle's (2023) review of 60 articles on the IP in post-secondary students revealed a negative link between IP levels and various indices of self-esteem (e.g., Cokley et al., 2018; Cozzarelli & Major, 1990; Neureiter & Traut-Mattausch, 2016) and mental health (e.g., McClain et al., 2016) in most studies. Students with strong imposter feelings furthermore tend to experience shame and fear more than those scoring lower on IP (McElwee & Yurak, 2010). Additionally, Wang et al.'s (2019) research into IP among 169 Russian college students revealed that imposterism functioned as a full mediator between perfectionism and anxiety, and it partially mediated the link between perfectionism and depressiveness. Neureiter and Traut-Mattausch's (2016) study on the preconditions of IP among 212 university students furthermore showed that fear of failure as well as fear of success were positively linked to IP. Additionally, IP had particularly negative effects on students' career striving and career plans. Studies have also demonstrated positive links between imposterism and students' feeling academically unprepared (Cisco, 2020a). Negative associations between IP and academic performance have been reported, too (for an overview, see Ménard & Chittle, 2023). Overall, Brauer et al. (2023) draw the conclusion that "the IP goes along with negative experiences in the educational context" (p. 2).

Prior research has demonstrated the effectiveness of interventions in this context. Cisco (2020b), for instance, reports on four successful interventions which were aimed at helping the participating postgraduate students identify imposterism and related feelings as well as developing academic skills. Statistical analyses revealed a reduction of IP feelings by 23% in those students participating in the interventions compared to a control group. Thus, this study shows that IP feelings can be reduced and interventions might help imposters recognize what they themselves are capable of.

While the role of the IP in education has been widely explored more generally, its role in the context of FL learning remains relatively unknown. Yamini and Mandanizadeh (2011) identified a positive association between writing self-efficacy and IP among 94 tertiary-level English as a foreign language (EFL) learners. Writing self-efficacy and learners' writing ability were positively correlated, too, while IP scores were unrelated to learners' writing abilities. No gender-based difference in students' experience of IP were identified in this study, nor did learners' proficiency matter regarding their IP feelings. Brauer et al.'s (2023) study on 400 TEFL students, who had online FL classes in Iran during the Covid-19 pandemic, revealed that the IP was a direct negative predictor of learners' WTC with a small effect size. Parallel mediation analysis was used to test the indirect effect of learners' perceived competence and their communication anxiety on the link between IP and WTC. It demonstrated that perceived competence functioned as a full mediator in the model, with communication anxiety having no effect on the link between IP and WTC. No gender differences were identified in this study nor was age related to IP scores.

In a nutshell, the detrimental impact of the IP on people's flourishing and thriving has been widely established and so has been its presence and generally negative impact in the educational realm. While research into its role in the context of FL learning remains scarce, the existing studies suggest that IP has negative effects on FL learning and WTC. The present study thus aims to deepen our understanding of the IP's role in the context of FL learning by exploring if demographic and language learning variables predict its experience among tertiary-level EFL learners. Additionally, its impact on positive and negative learner emotions and emotion-related constructs will be investigated. More specifically, the present study aims to identify to what extent the IP predicts FLE, FLCA and learner engagement.

2.2. Foreign language learner emotions and engagement

Since the introduction of positive psychology into research into FL learning trajectories (Mercer & MacIntyre, 2014; Seligman & Csikszentmihalyi, 2000), the experience of positive and negative emotions when learning or using an FL has been widely explored (Dewaele, 2019b). While the role of FLCA, which is conceptualized as "the worry and negative emotional reaction aroused when learning or using a second language" (MacIntyre, 1999, p. 27), has been researched extensively since Horwitz et al.'s (1986) seminal work in the field and their development of the 33-item *Foreign Language Classroom Anxiety Scale* (FLCAS), positive psychology has had a profound impact on SLA by making researchers realize that positive and negative emotions function differently and the presence of positive

emotions does not automatically imply the absence of negative ones, illustrating the need to balance the predominant focus on FLCA (Dewaele & MacIntyre, 2014, 2016; MacIntyre & Gregersen, 2012). Horwitz (2017) argued that FLCA emerges when FL users struggle to present themselves accurately in the FL. Consequently, holistic approaches to exploring their role in the FL classroom have become more and more common since Dewaele and MacIntyre's (2014) pioneering study on FLCA and FLE, "a complex emotion, capturing interacting components of challenge and perceived ability that reflect the human drive for success in the face of a difficult task" (Dewaele & MacIntyre, 2016, p. 216). Their study revealed that the two emotions are moderately negatively correlated, yet they are different dimensions shaped by both common and different learner-internal and learner-external independent variables. Due to the different role FLE and FLCA play in FL learning trajectories, we argue a holistic approach to exploring their relationship to the IP is much needed to gain a deeper understanding of its role in FL learning.

By now, both learner emotions have been researched widely and studies have provided a nuanced understanding of their role in FL learning trajectories. For instance, research has continuously shown the great relevance of both FLE and FLCA for learners' academic achievement (see, e.g., the meta-analyses by Botes et al., 2020, 2022). Learners' self-perceived proficiency seems to be positively linked to FLE and negatively to FLCA as well, and learners' perceived relative standing in the group, the number of languages they know, their age, as well as their level of education show similar patterns (Dewaele & MacIntyre, 2014; Dewaele et al., 2018). In some studies, female participants have been shown to experience slightly higher levels of FLE as well as FLCA than their male peers (e.g., Dewaele et al., 2016). While positive relations between FLE and emotion-related constructs, such as trait emotional intelligence (Li, 2020; Resnik & Dewaele, 2020), second language (L2) grit (Resnik et al., 2021; Sudina et al., 2020), flow (Dewaele & MacIntyre, 2024), WTC (Dewaele, 2019a), and learner autonomy (Resnik & Dewaele, 2020) have been well established as well, FLCA showed an inverse relationship with the mentioned variables in these studies. Research has furthermore demonstrated that learner-external variables are influential in these processes. Dewaele and Dewaele (2020), for instance, found that teacher characteristics have a much stronger influence on learners' FLE than on their FLCA, which the authors explained with the experience of FLE being more short-lived and malleable than that of FLCA. A recent study on the relationship between learners' perceptions of themselves in the FL, psychological variables and learner emotions showed that 40% of 768 EFL learners reported feeling different when using English. Further investigation of the subgroup revealed that the shift was positive for those who experienced high levels of trait emotional intelligence and FLE, while it was negative for those who scored high on FLCA (Resnik et al., 2025).

The above-mentioned interest in exploring the connections between positive and negative emotions and other emotion-related constructs has recently galvanized researchers into investigating their relationship to motivation and learner engagement, which is often described as the “holy grail of learning” (Sinatra et al., 2015, p. 1). Engagement, which is context-dependent and linked to language learning, can be described as “the amount (quantity) and type (quality) of learners’ active participation and involvement in a language learning task or activity” (Hiver et al., 2024, p. 202). It is generally marked by complexity, partly due to its multidimensionality (Sulis, 2024), including cognitive, emotional, behavioral, and, linked to these, social facets (see, e.g., Mercer, 2019; see also Philp & Duchene, 2016). Language learner engagement is dynamic in nature, malleable and action is key to it (Hiver et al., 2021). Previous research has shown that engagement is affected by both learner-internal and learner-external factors (see, e.g., Mystkowska-Wiertelak, 2022; Sulis & Philp, 2021). High student engagement has been linked to numerous positive learning variables in the educational realm, more generally (see, e.g., Christenson et al., 2012), and has been shown to positively impact academic learning outcomes, but also social and emotional ones (Klem & Connell, 2004). In Chase et al.’s (2014) study into the link between high school students’ engagement in school and their achievement both were mutually predictive. In the context of FL learning, researchers have also pointed to the importance of high engagement for learners’ language and content achievements, as well as task performance (Egbert, 2020).

More recently, researchers have also started exploring the psychological aspects of learner engagement in FL learning. Oga-Baldwin and Nakata (2017) found in their study of young Japanese EFL learners that the students’ engagement in class predicted learners’ intrinsic motivation positively and their extrinsic motives negatively. Gender differences were identified in this study as well, with male students being significantly less engaged in class than female ones. Hamed et al. (2019) identified a positive correlation between Iranian learners’ enjoyment and their reading engagement, while boredom and anxiety showed an inverse relationship with reading engagement. Mediation analysis furthermore demonstrated that learner emotions were predictors of reading comprehension, and reading engagement functioned as a mediator in this model. In Khajavy’s (2021) research into Iranian undergraduate TEFL students, L2 grit and learners’ enjoyment were shown to be positive predictors of their engagement, while anxiety did not predict L2 engagement. Further analyses in this study additionally demonstrated the mediating role of L2 engagement in the relationship between enjoyment and L2 reading comprehension. Tsang and Dewaele’s (2024) research into young EFL learners’ FLE, FLCA, FL boredom and their engagement and proficiency showed that only FLE significantly predicted both engagement and proficiency. Dincer

et al. (2019) furthermore found that Turkish EFL learners' basic psychological needs positively predicted all types of learner engagement, conceptualized as consisting of cognitive, behavioral, emotional, and agentic engagement. Only emotional and agentic engagement negatively predicted achievement, and cognitive engagement was shown to be a negative predictor of absenteeism in this study. The great relevance of self-determination theory (see, e.g., Deci & Ryan, 1985) for a deeper understanding of learner engagement has been repeatedly stressed (see, e.g., Mercer, 2019). Learners' sense of autonomy, competence, and relatedness (e.g., Ryan & Deci, 2022) shapes their engagement in their FL learning (see, e.g., Mercer, 2019). In our view, this is where investigating experiences of imposterism becomes crucial as perceived fraudulence might be linked to, for instance, learners' perceived competence, but also their emotions, and, consequently, their engagement in FL learning.

3. Research questions

The current study aims to provide a deeper understanding of the role of IP in the context of FL learning by exploring if demographic variables and language learning history and use impact its experience among tertiary-level EFL learners. Additionally, its relationship to FL learners' emotions and engagement will be explored. The study will therefore address the following three research questions:

1. To what extent is imposter phenomenon experienced by FL learners?
2. Do demographic and language learning variables (i.e., age, gender, perceived proficiency, relative standing, multilingualism, and the use of English) predict the experience of imposter phenomenon?
3. To what extent does imposter phenomenon predict FLCA, FLE, and FL learning engagement?

4. Method

4.1. Participants

A total of $N = 397$ EFL students enrolled in English classes in Austrian universities participated in the study. The sample had a majority of female participants ($N = 316$), with $N = 68$ male participants and $N = 13$ participants who did not disclose gender or chose a non-binary gender. The average age of the sample was 24.23 years old ($SD = 6.056$). The average participant had 3.267 ($SD = .940$) number of

languages in their repertoire, with the majority reporting German as the first language ($N = 371$), followed by Serbian ($N = 13$) and Bosnian ($N = 12$). A total of $N = 309$ participants were enrolled in an English major and studied at one of the Departments of English and American Studies in Austria, while $N = 88$ students were taking English as part of their normal course load in non-English majors (e.g., trainee teachers for the primary level, who are trained as generalists, and students studying Life Sciences or International Business Studies).

4.2. Instruments

4.2.1. Imposter phenomenon

The *Short Clance Imposter Phenomenon Scale* (Wang et al., 2024) was utilized to capture IP in the EFL class ($\alpha = .910$; $\omega = .911$). The 10-item scale consisted of three subscales, namely, (1) self-doubts about one's own competence (*fake*; 4 items, e.g., "I'm afraid that I may fail at a new assignment or undertaking even though I generally do well at what I attempt;" $\alpha = .849$; $\omega = .851$), (2) difficulty acknowledging good performance and abilities (*discount*; 4 items, "When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success;" $\alpha = .815$; $\omega = .818$), and (3) contributing success to luck instead of own ability (*luck*; 2 items, "I feel or believe that my success in my life or in my job has been the result of luck instead of ability;" $\alpha = .763$; $\omega = .762$). All items were measured on a 5-point Likert scale ranging from "not true at all" to "very true."

4.2.2. Foreign language classroom anxiety

FLCA was measured with the unidimensional 8-item *Short-form FLCA Scale* (Botes et al., 2022; MacIntyre, 1992), with items such as "I get nervous and confused when I speak in my English class." All items were measured on a 5-point Likert scale from "strongly disagree" to "strongly agree" ($\alpha = .912$; $\omega = .914$).

4.2.3. Foreign language enjoyment

FLE was measured with the multidimensional 9-item *Short-form Foreign Language Enjoyment Scale* (S-FLES; Botes et al., 2021). The S-FLES consists of three subscales, namely, *personal enjoyment* (3 items; $\alpha = .754$; $\omega = .761$; e.g., "I enjoy

English class"), *social enjoyment* (3 items; $\alpha = .811$; $\omega = .812$; e.g., "We laugh a lot"), and *teacher appreciation* (3 items; $\alpha = .850$; $\omega = .856$; e.g., "The teacher is supportive"). All items were measured on a 5-point Likert scale from "strongly disagree" to "strongly agree." The scale showed high internal consistency ($\alpha = .819$; $\omega = .824$).

4.2.4. L2 engagement

Engagement in the EFL class was measured through the *Student Course Engagement Questionnaire* (Handelsman et al., 2005; $\alpha = .855$; $\omega = .858$). The 23-item, multidimensional questionnaire captures student engagement via four subscales, namely, (1) *skills engagement* (9 items; e.g., "I make sure to study on a regular basis;" $\alpha = .750$; $\omega = .762$), (2) *emotional engagement* (5 items; e.g., "I find ways to make the course interesting for me;" $\alpha = .804$; $\omega = .809$), (3) participation engagement (6 items; e.g., "I participate actively in small group discussions;" $\alpha = .754$; $\omega = .772$), and (4) performance engagement (3 items, e.g., "I am confident I can learn and do well in the class;" $\alpha = .830$; $\omega = .840$). All items were measured on a 5-point Likert scale from "strongly disagree" to "strongly agree."

4.2.5. Perceived proficiency

Participants' perceived proficiency in English was measured via a single item: "How well do you know English?" Participants rated their English knowledge on a 5-point Likert scale from "not well at all" to "very well."

4.2.6. Relative standing

The relative standing of participants in comparison to that of their peers was measured via a single item: "How would you describe your performance in your current English classes compared to your peers?" Participants rated their relative standing on a 5-point Likert scale from "far below average" to "far above average."

4.2.7. Overall use of English

The use of English was measured via a single item: "How often do you use English?" Participants rated their English use on a 5-point Likert scale from "hardly ever" to "almost always."

4.2.8. Use of English outside school

The use of English outside the classroom was measured via a single item: “How often do you use English outside the walls of the classroom?” Participants rated their extramural English on a 5-point Likert scale from “hardly ever” to “almost always.”

4.2.9. Multilingualism

Participants were asked to provide their full linguistic repertoire with their first, second, third, etc., languages. The number of languages listed by each participant was counted and used as a dummy variable for multilingualism. As such, the level of proficiency was not taken into account in the multilingualism score.

4.3. Data analysis

Descriptive statistics, correlation coefficients, regression models, *t*-tests, and reliability analyses were calculated in SPSS 25. Measurement models and structural equation models were tested in JASP (version 0.18.3; JASP Team, 2024). The first research question was explored via descriptive statistics, examining whether EFL learners reported levels of imposter phenomenon and the normal distribution of the variable. The second research question regarding the possible effect of age, multilingualism, perceived proficiency, relative standing, use of English, and extramural English on imposter phenomenon was analyzed via regression coefficients in a series of linear regression models. The possible difference between the experience of imposter phenomenon across genders (binary) was examined via a *t*-test. For the third research question, imposter phenomenon as a predictor of FLE, FLCA, and L2 engagement was examined via a structural equation model. The measurement models of each of the latent variables were tested individually as a first step. Next, the latent model was tested with FLE and imposter phenomenon, both modeled as higher-order variables, FLCA modeled as a single factor latent variable, and L2 engagement modeled as a correlational model. As all variables were ordinal, the models were estimated using diagonally weighted least squares with standard errors (Li, 2016). Model fit was assessed via the guidelines of Kenny (2020), using the comparative fit index (CFI; reasonable fit $\geq .90$; close fit $\geq .95$), Tucker-Lewis index (TLI; reasonable fit $\geq .90$; close fit $\geq .95$), root mean square error of approximation (RMSEA; reasonable fit $\leq .08$; close fit $\leq .05$), and standardized root mean square residual (SRMR; reasonable fit $\leq .08$; close fit $\leq .05$).

5. Results

The results presented below include the descriptive statistics and correlation coefficients for all variables. These descriptive statistics are used to answer the first research question regarding the prevalence of IP in EFL learners. Next, the second research question regarding predictors of IP is explored, as well as possible gender differences in the experience of IP. Then, as a precursor to the latent model, the measurement models of all latent variables are tested and presented, in order to examine the validity of the measures used in the study. Finally, the latent model is presented, where the third research question of this study is examined (i.e., IP as a predictor of FLE, FLCA, and FL engagement).

5.1. Descriptive statistics and correlation coefficients

The descriptive statistics and correlation matrix of the variables modeled can be found in Tables 1 and 2, respectively. No normality or multicollinearity concerns were found. The distribution plot of imposter phenomenon is presented in Figure 1. As can be seen in Figure 1, imposter phenomenon has a normal distribution within the EFL classroom as such a feeling of imposter phenomenon is experienced by EFL learners in the same manner as other trait variables, including FLCA and FLE.

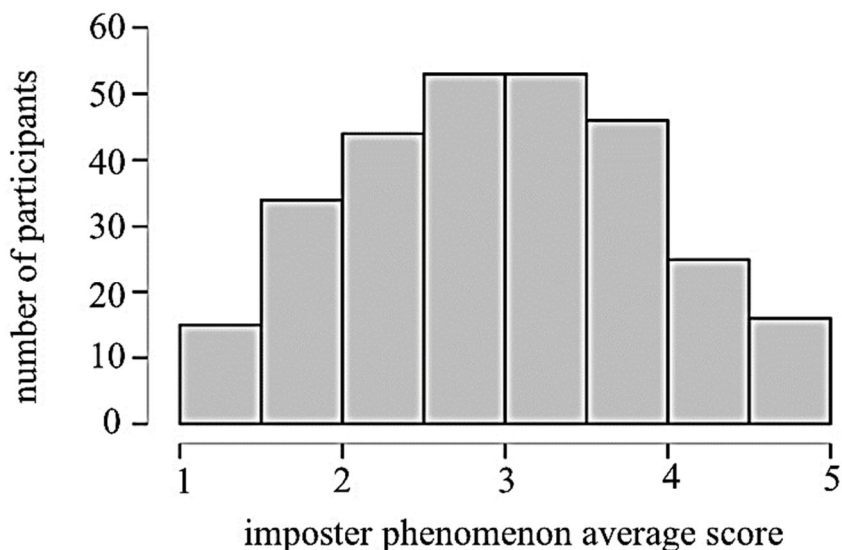


Figure 1 Distribution plot of imposter phenomenon

Table 1 Descriptive statistics

	<i>M</i>	<i>SD</i>	Min	Max	Skewness	Kurtosis
Imposter phenomenon	2.978	1.008	1.000	5.000	-.041	-.832
FLCA	2.414	.944	1.000	4.750	.426	-.694
FLE	3.825	.547	2.330	5.000	-.207	-.398
Skills engagement	3.761	.592	2.220	5.000	-.159	-.466
Emotional engagement	3.495	.787	1.800	5.000	.056	-.627
Participation engagement	3.343	.731	1.330	5.000	-.105	-.333
Performance engagement	3.915	.813	1.330	5.000	-.392	-.536
Overall English use	3.92	.801	1.000	5.000	-.500	.241
Extramural English use	3.61	.969	1.000	5.000	-.385	-.415
Perceived proficiency	4.49	.669	2.000	5.000	-1.112	.652
Relative standing	3.57	.713	1.000	5.000	.031	-.031

Table 2 Correlation matrix

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Imposter phenomenon	-										
2. FLCA	.410***	-									
3. FLE	-.102*	-.248***	-								
4. Skills engagement	-.043	-.051	.252***	-							
5. Emotional engagement	-.056	-.177***	.383***	.463***	-						
6. Participation engagement	-.273***	-.478***	.378***	.309***	.366***	-					
7. Performance engagement	-.307***	-.477***	.297***	.220***	.254***	.314***	-				
8. Overall English use	.016	-.236***	.088	.053	.086	.128*	.149**	-			
9. Extramural English use	-.006	-.239***	.156**	.080	.146**	.165***	.191***	.729***	-		
10. Perceived proficiency	-.009	-.326***	.066	.038	.136**	.186***	.265***	.430***	.320***	-	
11. Relative standing	-.160***	-.414***	.151**	.135**	.220***	.239***	.504***	.243***	.285***	.366***	-

Note. *** $p < .001$; ** $p < .01$; * $p < .05$

5.2. Predictors of imposter phenomenon

The possible demographic and language learning predictors of imposter phenomenon were analyzed via a series of linear regressions (see Table 3). Perceived proficiency in English, overall English use, extramural English use, and multilingualism were not significant predictors of imposter phenomenon ($p > .05$). The relative standing of participants in comparison to their peers significantly negatively predicted imposter phenomenon ($\beta = -.160$; $p < .01$). Age also significantly negatively predicted imposter phenomenon ($\beta = -.152$; $p < .01$), with younger EFL students experiencing more imposter phenomenon than older EFL students. Furthermore, a significant difference was found in imposter phenomenon scores between male and female EFL students (see Table 4), with female participants experiencing higher levels of imposter phenomenon ($M_{diff} = .326$; $p < .01$; Hedges' $g = .520$).

Table 3 Demographic and language predictors of imposter phenomenon

	<i>F</i>	<i>p</i> -value	<i>R</i> ²	<i>B</i>
Perceived proficiency	.029	.865	< .001	-.009
Overall English use	.103	.748	< .001	.016
Relative standing	10.386	< .01	.026	-.160
Extramural English	.013	.911	< .001	-.006
Age	9.351	< .01	.023	-.152
Multilingualism	.100	.752	< .001	.016

Table 4 Gender differences in imposter phenomenon

	<i>M</i>	<i>SD</i>	<i>M</i> _{diff}	<i>p</i> -value
Women	3.016	1.005	.326	< .01
Men	2.690	.905		

5.3. Measurement model results

The individual measurement models were tested for fit (see Table 5). The fit indices for the measurement models of imposter phenomenon, FLE, and FLCA all indicated a close fit. In regards to the measurement model of L2 engagement, three items were found to have low inter-item correlations and low factor loadings. As such, two items were removed from the skills engagement subscale (item 3: "I do all the assignments for my English class;" item 9: "I attend my English class on a regular basis") and one item was removed from the participation engagement subscale (item 19: "I attend the professor's office hours to review assignments or tests or to ask questions"). The adapted L2 engagement scale showed improvement in fit statistics and achieved a reasonable fit (see Table 5).

Table 5 Fit indices of measurement models

	χ^2	<i>df</i>	RMSEA	SRMR	CFI	TLI
Imposter phenomenon	85.224	32	.076	.053	.994	.992
FLCA	41.474	19	.064	.041	.998	.997
FLE	47.430	24	.059	.060	.995	.993
Engagement	692.646	203	.092	.093	.966	.962
Engagement (adapted)	564.300	164	.093	.087	.972	.967

5.4. Structural equation model

The structural equation model tested showed a close to reasonable fit (χ^2 (1006) = 2478.604; p < .001; see Figure 2), with the CFI (.970) and TLI (.968) indicating

a close fit ($> .95$; Kenny, 2020). In addition, the RMSEA (.072) showed a reasonable fit ($< .08$), whereas the SRMR (.083) narrowly exceeded the fit guidelines of Kenny (2020; $< .08$). As such, the model overall was seen as a reasonable fit to the data. In terms of the individual regression paths, imposter phenomenon significantly positively predicted FLCA ($\beta = .522$; $p < .001$) and significantly negatively predicted performance engagement ($\beta = -.131$; $p < .001$) and FLE ($\beta = -.178$; $p < .001$). Imposter phenomenon did not significantly predict skills engagement, emotional engagement, or participation engagement ($p > .05$). Furthermore, FLE positively predicted all subfactors of L2 engagement: skills engagement ($\beta = .421$; $p < .001$), emotional engagement ($\beta = .482$; $p < .001$), participation engagement ($\beta = .513$; $p < .001$) and performance engagement ($\beta = .319$; $p < .001$). In turn, FLCA significantly negatively correlated with FLE ($r = -.113$; $p < .001$) and negatively predicted participation engagement ($\beta = -.390$; $p < .001$) and performance engagement ($\beta = -.333$; $p < .001$).

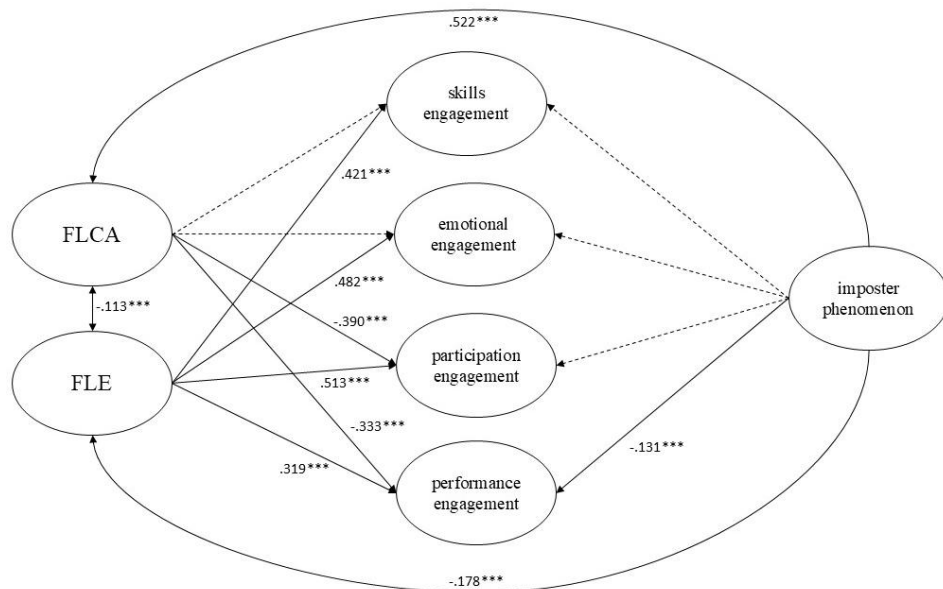


Figure 2 Structural equation model (All factor loadings significant at a $p < .001$ level. $^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$)

Correlation between subfactors of the L2 engagement scale are not visually depicted for clarity (see Figure 2), but the latent correlations are shown in Table 6.

Table 6 Latent correlation matrix of L2 engagement subfactors

	1.	2.	3.	4.
1. Skills engagement	-			
2. Emotional engagement	.541***	-		
3. Participation engagement	.371***	.133***	-	
4. Performance engagement	.074*	.010	-.024	-

6. Discussion

The answer to the first research question is affirmative as our participants’ mean scores for IP were well above the mid-way point on a 5-point Likert scale ($M = 2.98$, $SD = 1.0$). They were thus higher than the mean scores for FLCA ($M = 2.41$). This suggests that many FL learners feel like imposters to a certain extent. This finding confirms that in this respect FL learners do not diverge from learners in other disciplines (e.g., Bravata et al., 2020; Cisco, 2020a; Cokley et al., 2015), possibly due to the generally competitive nature of academic contexts, students’ commonly observed fear of failure (Neureiter & Traut-Mattausch, 2016) and feeling academically unprepared (Cisco, 2020a), as well as rather low self-esteem (Ménard & Chittle, 2023). It also shows that learners who experience feelings of difference when switching languages were more likely to feel the frustration described by Hoffman (1989) rather than the joy described by Lvovich (2013).

The second research question addressed the demographic and language learning predictors of IP. Linear regression analyses showed that frequency of overall English use and extramural English use, English proficiency and multilingualism were unrelated to IP. In other words, relatively fluent and frequent multilingual users of English might still feel they were imposters when using the language. The strongest predictor of IP was of a social nature, namely, the relative standing. Those who felt they were below average in their group were more likely to feel like imposters. This fits in with the finding that those who feel that their peers are better than them experience more FLCA and less FLE (Dewaele et al., 2018). While learner emotions and imposterism are experienced by an individual learner as such, the findings illustrate the crucial role of self-perceptions and group dynamics in learning trajectories. Two demographic variables also emerged as significant predictors of IP. Younger EFL learners were more likely to suffer from IP than their older counterparts. Previous research on self-esteem has found that self-esteem tends to be low in adolescence and gradually increases over adulthood (Robins et al., 2002). One possible explanation of the higher IP in younger participants can therefore be that teenagers and young adults have lower levels of self-esteem and are more worried about their level of skill. The

gender difference reflects the findings of FLE and FLCA in Dewaele and MacIntyre (2014) and Dewaele et al. (2016). Our finding that younger and female participants were more likely to experience IP diverges from that reported in Yamini and Mandanizadeh (2011) and Brauer et al. (2023). It serves as a reminder that the effects of demographic variables are difficult to generalize because they are entangled in a web of socio-educational and cultural variables (Dewaele & Botes, 2024).

The third research question expanded the search for predictors of IP to classroom emotions and engagement. IP was found to be a strong predictor of FLCA. This finding echoes patterns reported in previous research outside applied linguistics (McElwee & Yurak, 2010; Neureiter & Traut-Mattausch, 2016; Wang et al., 2019). It is thus possible that feeling like an imposter triggers learners' FLCA (Resnik et al., 2025), which then negatively affects their FL proficiency and achievement. This finding independently confirms Horwitz's (2017) speculation that the main cause of FLCA is the fear of coming across as inauthentic and being perceived as a fraud when using the FL. The finding that IP was a significant negative predictor of FLE was expected considering the previous research (e.g., Cokley et al., 2018; Cozzarelli & Major, 1990; McClain et al., 2016; Neureiter & Traut-Mattausch, 2016; Resnik et al., 2025). Indeed, to experience enjoyment, learners must be able to rise to the linguistic and communicative challenge. To do so requires trait emotional intelligence and a healthy amount of confidence, self-belief and self-esteem. IP may clip the metaphorical wings of these students and stop them from experiencing flow in the FL classroom (Dewaele & MacIntyre, 2024). IP also negatively predicted performance engagement, but not skills engagement, emotional engagement and participation engagement, which were all positively predicted by FLE, while participation engagement and performance engagement were -more weakly- negatively predicted by FLCA. This is further evidence that FLE is more linked to what happens in the classroom, while FLCA is more linked to learner-internal sources (Dewaele & Dewaele, 2020; Dewaele et al., 2018).

The current study has clear pedagogical implications. Rather than fighting FLCA, teachers can address one of its main causes, namely, the fact that many FL learners feel like imposters when they use the FL. Previous interventions in other fields specifically targeting IP have shown success, with interventions aimed at reducing IP for medical professionals using self-reflection workshops, group-guided exercises, and coaching (Siddiqui et al., 2024). Furthermore, an intervention using gamification aimed at computer science students (Telje & Wilhelmsen, 2024) and an intervention using relatable narratives aimed at science undergraduates (Grasse et al., 2024) were both successful in reducing IP. Future research aimed at developing and implementing targeted interventions to reduce IP in the FL classroom is much needed. The core idea of such an intervention would be that everybody is a legitimate user of a FL as legitimacy is unrelated

to proficiency. Nobody expects an FL learner and user to sound like a first language user of that language. Rather than feeling like imposters, FL learners should develop a more positive perspective, which is that of being proud of the first steps into the journey of a new alternative identity.

As with all studies, there are several limitations that ought to be considered. The study was cross-sectional and did not consider language proficiency gains. Future research on the long-term impact of IP on the development of language proficiency is needed. The study also only considered direct effects of IP. It is likely that more complex, indirect effects can be expected as IP is often associated with highly competent individuals (Grasse et al., 2024), while language competence and achievement are negatively associated with FLCA (Botes et al., 2021), and in our study IP was positively associated with FLCA. Future research examining possible indirect effects between IP, FLCA, and language proficiency or academic achievement might therefore be a fruitful avenue to explore. In addition, the study utilized a sample from Western Europe. Given that IP has been found to vary across cultures (Chae et al., 1995), future research examining the phenomenon across different culture and language settings is needed. Furthermore, in the present study, IP was measured with the 10-item *Short Clance Imposter Phenomenon Scale* (Wang et al., 2024), which did not allow an analysis of the role of the different sub-facets of IP (Brauer & Proyer, 2023). Future research should thus explore the role of IP based on the full scale (Clance, 1985) in order to gain a more granular understanding of its role in FL learning. Lastly, the study is purely quantitative and as such fine-grained insights into the mechanisms underlying IP and possible routes for a targeted intervention to address IP cannot be made on the basis of the current findings. Qualitative research is needed to fully understand how IP manifests within the FL classroom and within FL learners.

7. Conclusion

In his famous poem, *we wear the mask*, the poet Paul Dunbar writes about concealing self-doubts and insecurities in order to appear competent. With lines such as “we wear the mask that grins and lies, that hides our cheeks and shades our eyes,” Dunbar highlights the pressure to hide true feelings behind a façade. Those experiencing IP often feel compelled to present a different “mask” to others despite internal struggles of self-worth, including the experience of IP in FL learning. This study is among the first to present evidence of the existence of IP in FL classrooms. While linear regression analyses revealed that IP was unrelated to participants’ use of EFL inside and outside the walls of the FL classroom, their self-rated proficiency in the FL, as well as their overall number of languages known

the perceived relative standing in the group of learners predicted imposter feelings. This demonstrates the social nature of FL learning and the crucial role of group dynamics in (un-)successful FL learning. Younger, female learners were furthermore more prone to experiencing IP. While the former might be linked to lower self-esteem, similar gender-based differences have been observed in some studies for FLE and FLCA (Dewaele et al., 2016). Yet, gender differences are difficult to generalize.

Latent modeling revealed that IP strongly predicted FLCA and higher levels of imposter experiences were also linked to lower FLE. While FLE was a positive predictor of all engagement subdimensions, FLCA was related to participation and performance engagement. IP was only a negative predictor of performance engagement. Because IP affects both learner emotions and their engagement, there is an urgent need to expand this area of research to better understand its role in FL learning and to be able to develop successful interventions targeting detrimental imposter feelings in the FL classroom as this will likely have a positive effect on learner emotions and, linked to it, learners' engagement, but also their achievement. Thus, IP needs to be included in further studies of the nomological network of individual difference variables. It is of crucial importance to convince FL learners that using the language imperfectly does not mean that they are faking it. In other words, they need to develop a more positive mindset, control their anxiety, boost their enjoyment and – in doing so – embrace the new language and its community of first and foreign language users and not wear a “mask” where insecurities and self-doubts lie just below the surface of the emotional experiences of FL learners.

References

- Botes, E., Dewaele, J.-M., & Greiff, S. (2022). Taking stock: A meta-analysis of the effects of foreign language enjoyment. *Studies in Second Language Learning and Teaching*, 12(2), 205-232. <https://doi.org/10.14746/sslit.2022.12.2.3>
- Botes, E., Dewaele, J.-M., & Greiff, S. (2021). The development and validation of the Short-form Foreign Language Enjoyment Scale (S-FLES). *Modern Language Journal*, 105, 858-876. <https://doi.org/10.1111/modl.12741>
- Botes, E., Dewaele, J.-M., & Greiff, S. (2020). The foreign language classroom anxiety scale and academic achievement: An overview of the prevailing literature and a meta-analysis. *Journal for the Psychology of Language Learning*, 2(1), 26-56. <https://www.jppll.org/index.php/journal/article/view/botesetal>
- Botes, E., van der Westhuizen, L., Dewaele, J.-M., MacIntyre, P. D., & Greiff, S. (2022). Validating the short-form foreign language classroom anxiety scale (S-FLCAS). *Applied Linguistics*, 43(5), 1006-1033. <https://doi.org/10.1093/applin/amac018>
- Brauer, K., Barabadi, E., Aghaee, E., Alrabai, F., Elahi Shirvan, M., Sendatzki, R., & Vierow, L. M. (2023). Impostor phenomenon and L2 willingness to communicate: Testing communication anxiety and perceived L2 competence as mediators. *Frontiers in Psychology*, 13, 1060091. <https://doi.org/10.3389/fpsyg.2022.1060091>
- Brauer, K., & Proyer, R. T. (2017). Are impostors playful? Testing the association of adult playfulness with the impostor phenomenon. *Personality and Individual Differences*, 116, 57-62. <https://doi.org/10.1016/j.paid.2017.04.029>
- Brauer, K., & Proyer, R. T. (2022). The impostor phenomenon and causal attributions of positive feedback on intelligence tests. *Personality and Individual Differences*, 194, 111663. <https://doi.org/10.1016/j.paid.2022.111663>
- Brauer, K., & Proyer, R. T. (2023). Understanding the Clance Impostor Phenomenon Scale through the lens of a bifactor model. *European Journal of Psychological Assessment*. Advance online publication. <https://doi.org/10.1027/1015-5759/a000786>
- Brauer, K., & Wolf, A. (2016). Validation of the German-language Clance Impostor Phenomenon Scale (GCIPS). *Personality and Individual Differences*, 102, 153-158. <https://doi.org/10.1016/j.paid.2016.06.071>
- Bravata, D. M., Watts, S. A., Keefer, A. L., Madhusudhan, D. K., Taylor, K. T., Clark, D. M., Nelson, R. S., Cokley, K. O., & Hagg, H. K. (2020). Prevalence, predictors, and treatment of impostor syndrome: A systematic review. *Journal of General Internal Medicine*, 35(4), 1252-1275. <https://doi.org/10.1007/s11606-019-05364-1>
- Chae, J. H., Piedmont, R. L., Estadt, B. K., & Wicks, R. J. (1995). Personological evaluation of Clance's Impostor Phenomenon Scale in a Korean sample. *Journal of Personality Assessment*, 65(3), 468-485. https://doi.org/10.1207/s15327752jpa6503_7

- Chase, P. A., Hilliard, L. J., Geldhof, G. J., Warren, D. J. A., & Lerner, R. M. (2014). Academic achievement in the high school years: The changing role of school engagement. *Journal of Youth and Adolescence*, 43, 884-896. <https://doi.org/10.1007/s10964-013-0085-4>
- Christenson, S. L., Reschly, A. L., & Wylie, C. (Eds.) (2012). *Handbook of research on student engagement*. Springer.
- Cisco, J. (2020a). Exploring the connection between impostor phenomenon and postgraduate students feeling academically-unprepared. *Higher Education Research & Development*, 39(2), 200-214. <https://doi.org/10.1080/07294360.2019.1676198>
- Cisco, J. (2020b). Using academic skill set interventions to reduce impostor phenomenon feelings in postgraduate students. *Journal of Further and Higher Education*, 44(3), 423-437. <https://doi.org/10.1080/0309877X.2018.1564023>
- Clance, P. R. (1985). *The impostor phenomenon: Overcoming the fear that haunts your success*. Peachtree.
- Clance, P. R., & Imes, S. A. (1978). The imposter phenomenon in high achieving women: Dynamics and their therapeutic intervention. *Psychotherapy: Theory, Research and Practice*, 15(3), 241-247. <https://doi.org/10.1037/h0086006>
- Cokley, K., Awad, G., Smith, L., Jackson, S., Awosogba, O., Hurst, A., Stone, S., Blondeau, L., & Roberts, D. (2015). The roles of gender stigma consciousness, imposter phenomenon and academic self-concept in the academic outcomes of women and men. *Sex Roles*, 73, 414-426. <https://doi.org/10.1007/s11199-015-0516-7>
- Cokley, K., Stone, S., Krueger, N., Bailey, M., Garbe, R., & Hurst, A. (2018). Self-esteem as a mediator of the link between perfectionism and the impostor phenomenon. *Personality and Individual Differences*, 135, 292-297. <https://doi.org/10.1016/j.paid.2018.07.032>
- Cozzarelli, C., & Major, B. (1990). Exploring the validity of the impostor phenomenon. *Journal of Social and Clinical Psychology*, 9(4), 401-417.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.
- Dewaele, J.-M. (2019a). The effect of classroom emotions, attitudes toward English, and teacher behavior on willingness to communicate among English foreign language learners. *Journal of Language and Social Psychology*, 38(4), 523-535. <https://doi.org/10.1177/0261927X198649>
- Dewaele, J.-M. (2019b). When elephants fly: The lift-off of emotion research in applied linguistics. *Modern Language Journal*, 103, 533-536. <https://doi.org/10.1111/modl.12576>
- Dewaele, J.-M. (2022). Research into multilingualism and emotions. In G. L. Schiewer, J. Altarriba, & B. Chin Ng (Eds.), *Language and emotion: An international handbook* (pp. 1217-1237). Mouton De Gruyter. <https://doi.org/10.1515/9783110347524-058>

- Dewaele, J.-M., & Botes, E. (2024). *Socio-demographic variables as sources of variation in foreign language emotions: A cautionary tale about non-random sampling*. Unpublished paper.
- Dewaele, J.-M., & Dewaele, L. (2020). Are foreign language learners' enjoyment and anxiety specific to the teacher? An investigation into the dynamics of learners' classroom emotions. *Studies in Second Language Learning and Teaching*, 10(1), 45-65. <https://doi.org/10.14746/ssl.t.2020.10.1.3>
- Dewaele, J.-M., & MacIntyre, P. D. (2014). The two faces of Janus? Anxiety and enjoyment in the foreign language classroom. *Studies in Second Language Learning Teaching*, 4(2), 237-274. <https://doi.org/10.14746/ssl.t.2014.4.2.5>
- Dewaele, J.-M., & MacIntyre, P. D. (2016). Foreign language enjoyment and foreign language classroom anxiety: The right and left feet of FL learning? In P. D. MacIntyre, T. Gregersen, & S. Mercer (Eds.), *Positive psychology in SLA* (pp. 215-236). Multilingual Matters.
- Dewaele, J.-M., & MacIntyre, P. D. (2024). "You can't start a fire without a spark": Enjoyment and the emergence of flow in foreign language classrooms. *Applied Linguistics Review*, 15(2), 403-426. <https://doi.org/10.1515/applirev-2021-0123>
- Dewaele, J.-M., MacIntyre, P. D., Boudreau, C., & Dewaele, L. (2016). Do girls have all the fun? Anxiety and enjoyment in the foreign language classroom. *Theory and Practice of Second Language Acquisition*, 2(1), 41-63.
- Dewaele, J.-M., Witney, J., Saito, K. & Dewaele, L. (2018). Foreign language enjoyment and anxiety in the FL classroom: The effect of teacher and learner variables. *Language Teaching Research*, 22(6), 676-697. <https://doi.org/10.1177/1362168817692>
- Dincer, A., Yeşilyurt, S., Noels, K. A., & Vargas Lascano, D. I. (2019). Self-determination and classroom engagement of EFL learners: A mixed-methods study of the self-system model of motivational development. *Sage Open*, 9(2), 1-15. <https://doi.org/10.1177/2158244019853>
- Dudău, D. P. (2014). The relation between perfectionism and impostor phenomenon. *Procedia – Social and Behavioral Sciences*, 127, 129-133. <https://doi.org/10.1016/j.sbspro.2014.03.226>
- Egbert, J. L. (2020). The new normal? A pandemic of task engagement in language learning. *Foreign Language Annals*, 53, 314-319. <https://doi.org/10.1111/flan.12452>
- Grasse, K. M., Junius, N., Weatherwax, K., Sisodiya, S., Martin, A., & Carstensdotir, E. (2024). Pseudo-Scientist: Towards narrative interventions for Imposter Syndrome. *Proceedings of the ACM on Human-Computer Interaction*, 8, 1-29. <https://doi.org/10.1145/3677099>
- Hamed, S. M., Pishghadam, R., & Fadardi, J. S. (2019). The contribution of reading emotions to reading comprehension: The mediating effect of reading

- engagement using a structural equation modeling approach. *Educational Research for Policy and Practice*, 19, 211-238. <https://doi.org/10.1007/s10671-019-09256-3>
- Handelsmann, M. M., Briggs, W., Sullivan, N., & Towler, A. (2005). A measure of college student course engagement. *The Journal of Educational Research*, 98(3), 184-191. <https://doi.org/10.3200/JOER.98.3.184-192>
- Hiver, P., Al-Hoorie, A. H., Vitta, J. P., & Wu, J. (2024). Engagement in language learning: A systematic review of 20 years of research methods and definitions. *Language Teaching Research*, 28(1), 201-230. <https://doi.org/10.1177/13621688211001289>
- Hiver, P., Mercer, S., & Al-Hoorie, A. (2021). Introduction. In P. Hiver, A. H. Al-Hoorie, & S. Mercer (Eds.), *Student engagement in the language classroom* (pp. 1-13). Multilingual Matters.
- Hoffman, E. (1989). *Lost in translation: A life in a new language*. Penguin Books.
- Horwitz, E. K. (2017). On the misreading of Horwitz, Horwitz and Cope (1986) and the need to balance anxiety research and the experiences of anxious language learners. In C. Gkonou, M. Daubney, & J.-M. Dewaele (Eds.), *New insights into language anxiety: Theory, research and educational implications* (pp. 31-50). Multilingual Matters.
- Horwitz, E. K., Horwitz, M., & Cope, J. (1986). Foreign language classroom anxiety. *Modern Language Journal*, 70, 125-132. <https://doi.org/10.1111/j.1540-4781.1986.tb05256.x>
- Hutchins, H. M., & Rainbolt, H. (2017). What triggers imposter phenomenon among academic faculty? A critical incident study exploring antecedents, coping, and development opportunities. *Human Resource Development International*, 20(3), 194-214. <https://doi.org/10.1080/13678868.2016.1248205>
- JASP Team (2024). JASP (Version 0.18.3) [Computer software]. JASP.
- Kenny, D. A. (2020). *Measuring model fit*. <http://davidakenny.net/cm/fit.htm>
- Khajavy, H. G. (2021). Modeling the relations between foreign language engagement, emotions, grit and reading achievement. In P. Hiver, A. H. Al-Hoorie, & S. Mercer (Eds.), *Student engagement in the language classroom* (pp. 241-259). Multilingual Matters.
- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74(7), 262-273. <https://doi.org/10.1111/j.1746-1561.2004.tb08283.x>
- Langford, J., & Clance, P. R. (1993). The imposter phenomenon: Recent research findings regarding dynamics, personality and family patterns and their implication for treatment. *Psychotherapy*, 30(3), 495-501.
- Li, C. (2020). A positive psychology perspective on Chinese EFL students' trait emotional intelligence, foreign language enjoyment and EFL learning achievement.

- Journal of Multilingual and Multicultural Development*, 41(3), 246-263. <https://doi.org/10.1080/01434632.2019.1614187>
- Li, C. H. (2016). The performance of ML, DWLS, and ULS estimation with robust corrections in structural equation models with ordinal variables. *Psychological Methods*, 21(3), 369-387. <https://doi.org/10.1037/met0000093>
- Lvovich, N. (2013). *The multilingual self: An inquiry into language learning*. Routledge.
- MacIntyre, P. D. (1992). *Anxiety and language learning from a stages of processing perspective* [Doctoral dissertation, The University of Western Ontario, London, ON, Canada]. <https://ir.lib.uwo.ca/digitizedtheses/2155>
- MacIntyre, P. D. (1999). Language anxiety: A review of the research for language teachers. In D. J. Young (Ed.), *Affect in foreign language and second language teaching: A practical guide to creating a low-anxiety classroom atmosphere* (pp. 24-45). Mc Graw-Hill.
- MacIntyre, P. D., & Gregersen, T. (2012). Emotions that facilitate language learning: The positive-broadening power of the imagination. *Studies in Second Language Learning and Teaching*, 2(2), 193-213. <https://doi.org/10.14746/sslit.2012.2.2.4>
- McClain, S., Beasley, S. T., Jones, B., Awosogba, O., Jackson, S., & Cokley, K. (2016). An examination of the impact of racial and ethnic identity, impostor feelings, and minority status stress on the mental health of black college students. *Journal of Multicultural Counseling and Development*, 44(2), 101-117. <https://doi.org/10.1002/jmcd.12040>
- McElwee, R., & Yurak, T. J. (2010). The phenomenology of the impostor phenomenon. *Individual Differences Research*, 8(3), 184-197.
- Mercer, S. (2019). Language learner engagement: Setting the scene. In X. Gao (Ed.), *Second handbook of English language teaching* (pp. 643-660). Springer.
- Mercer, S., & MacIntyre, P. D. (2014). Introducing positive psychology to SLA. *Studies in Second Language Learning and Teaching*, 4(2), 153-172. <https://doi.org/10.14746/sslit.2014.4.2.2>
- Ménard, D. A., & Chittle, L. (2023). The impostor phenomenon in post-secondary students: A review of the literature. *Review of Education*, 11(2), e3399. <https://doi.org/10.1002/rev3.3399>
- Mystkowska-Wiertelak, A. (2022). Teachers' accounts of learners' engagement and disaffection in the language classroom. *The Language Learning Journal*, 50(3), 393-405. <https://doi.org/10.1080/09571736.2020.1800067>
- Neureiter, M., & Traut-Mattausch, E. (2016). An inner barrier to career development: Pre-conditions of the impostor phenomenon and consequences for career development. *Frontiers in Psychology*, 7, 48. <https://doi.org/10.3389/fpsyg.2016.00048>

- Oga-Baldwin, W. L. Q., & Nakata, Y. (2017). Engagement, gender, and motivation: A predictive model for Japanese young language learners. *System*, 65, 151-163. <https://doi.org/10.1016/j.system.2017.01.011>
- Philp, J., & Duchesne, S. (2016). Exploring engagement in tasks in the language classroom. *Annual Review of Applied Linguistics*, 36, 50-72. <https://doi.org/10.1017/S0267190515000094>
- Resnik, P., & Dewaele, J.-M. (2020). Trait emotional intelligence, positive and negative emotions in first and foreign language classes: A mixed-methods approach. *System*, 94, 102324. <https://doi.org/10.1016/j.system.2020.102324>
- Resnik, P., Moskowitz, S., & Panicacci, A. (2021). Language learning in crisis mode: The connection between LX grit, trait emotional intelligence and learner emotions. *Journal for the Psychology of Language Learning*, 9(3), 99-117. <https://doi.org/10.52598/jpll/3/2/7>
- Resnik, P., Panicacci, A., & Dewaele, J.-M. (2025). How trait emotional intelligence and emotions shape learners' self-perceptions in the target language. *The Language Learning Journal*, 1-14. <https://doi.org/10.1080/09571736.2024.2447322>
- Robins, R. W., Trzesniewski, K. H., Tracy, J. L., Gosling, S. D., & Potter, J. (2002). Global self-esteem across the life span. *Psychology and Aging*, 17(3), 423. <https://doi.org/10.1037/0882-7974.17.3.423>
- Ryan, R. M., & Deci, E. L. (2022). Self-determination theory. In F. Maggino (Ed.), *Encyclopedia of quality of life and well-being research* (pp. 1-7). Springer. https://doi.org/10.1007/978-3-319-69909-7_2630-2
- Sakulku, J., & Alexander, J. (2011). The impostor phenomenon. *International Journal of Behavioral Science*, 6(1), 75-97. <https://doi.org/10.14456/ijbs.2011.6>
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1), 5-14. <https://doi.org/10.1037/0003-066X.55.1.5>
- Siddiqui, Z. K., Church, H. R., Jayasuriya, R., Boddice, T., & Tomlinson, J. (2024). Educational interventions for imposter phenomenon in healthcare: A scoping review. *BMC Medical Education*, 24(1), 43. <https://doi.org/10.1186/s12909-023-04984-w>
- Sinatra, G. M., Heddy, B. C., & Lombardi, D. (2015). The challenges of defining and measuring student engagement in science. *Educational Psychology*, 50(1), 1-13. <https://doi.org/10.1080/00461520.2014.1002924>
- Sudina, E., Brown, J., Datzman, B., Oki, Y., Song, K., Cavanaugh, R., Tiruchelvam, B., & Plonsky, L. (2020). Language-specific grit: Exploring psychometric properties, predictive validity, and differences across contexts. *Innovation in Language Learning and Teaching*, 15(4), 334-351. <https://doi.org/10.1080/17501229.2020.1802468>
- Sulis, G. (2024). Exploring the dynamics of engagement in the language classroom: A critical examination of methodological approaches. *Research*

- Methods in Applied Linguistics*, 3(3), 100162. <https://doi.org/10.1016/j.mal.2024.100162>
- Sulis, G., & Philp, J. (2021). Exploring connections between classroom environment and engagement in the foreign language classroom. In P. Hiver, A. H. Al-Hoorie, & S. Mercer (Eds.), *Student engagement in the language classroom* (pp. 101-119). Multilingual Matters.
- Telje, E. A., & Wilhelmsen, Å. M. R. (2024). *Designing and evaluating an intervention to alleviate Imposter Syndrome in CS education* [Master's thesis, Norwegian University of Science and Technology].
- Topping, M. E. H. (1983). *The impostor phenomenon: A study of its construct and incidence in university faculty members* [Doctoral dissertation, University of South Florida, Tampa, Florida].
- Topping, M. E., & Kimmel, E. B. (1985). The imposter phenomenon: Feeling phony. *Academic Psychology Bulletin*, 7(2), 213-226.
- Tsang, A., & Dewaele, J.-M. (2024). The relationships between young FL learners' classroom emotions (anxiety, boredom, & enjoyment), engagement, and FL proficiency. *Applied Linguistics Review*, 15(5), 2015-2034. <https://doi.org/10.1515/applirev-2022-0077>
- Wang, B., Andrews, W., Bechtoldt, M. N., Rohrmann, S., & de Vries, R. E. (2024). Validation of the Short Clance Impostor Phenomenon Scale (CIPS-10). *European Journal of Psychological Assessment*, 40(2), 158-168. <https://doi.org/10.1027/1015-5759/a000747>
- Wang, K. T., Sheveleva, M. S., & Permyakova, T. M. (2019). Imposter syndrome among Russian students: The link between perfectionism and psychological distress. *Personality and Individual Differences*, 143, 1-6. <https://doi.org/10.1016/j.paid.2019.02.005>
- Yamini, M., & Mandanizadeh, F. B. (2011). Relationship between EFL learners' self-efficacy and imposter phenomenon and their effects on learners' writing ability. *Advances in Language and Literary Studies*, 2, 70-80. <https://doi.org/10.7575/aial.v.2n.1p.70>