

## The Effect of L2 Proficiency on Basic Psychological Needs, Classroom Engagement, and L2 Speaking Performance from SDT Perspectives

Yanning Wang<sup>1</sup>, Yeping Liu<sup>1</sup> & Jie Wang<sup>2</sup>

<sup>1</sup> Dalian Maritime University, Liaoning 116026, China

<sup>2</sup> Qingdao Ocean Shipping Mariners College, Shandong 266071, China

Correspondence: Yanning Wang, Dalian Maritime University, Liaoning 116026, China.

doi:10.56397/JLCS.2023.12.12

#### Abstract

As globalization continues to shape the world, fluency in English is becoming increasingly important for academic and career success among university students. This research study aims to investigate the impact of second language (L2) proficiency on Chinese students' basic psychological needs, classroom engagement, and L2 speaking performance, drawing on the Self-Determination Theory (SDT) which prioritizes personal well-being in a specific context. The study surveyed 230 Chinese freshmen English learners at a university, analyzing how L2 proficiency impacts students' English-speaking performance from an SDT perspective within a classroom context. The data was gathered through descriptive analysis and a two-stage structural equation modeling approach. Results showed a statistically significant relationship between L2 proficiency, basic psychological needs, L2 classroom engagement, and L2 speaking performance. L2 proficiency directly predicts L2 speaking performance and indirectly affects it through a mediating path (L2 proficiency  $\rightarrow$  basic psychological needs  $\rightarrow$  classroom engagement  $\rightarrow$  L2 speaking performance). The study offers empirical evidence supporting the positive impact of L2 proficiency in an L2-speaking classroom and highlights the indirect effect of L2 proficiency on L2 speaking performance through basic psychological needs and classroom engagement. High levels of proficiency and satisfaction in basic psychological needs (autonomy, relatedness, and competence) lead to greater psychological and behavioral engagement, particularly in higher-quality speaking assignments.

**Keywords:** L2 proficiency, basic psychological needs, classroom engagement, Chinese L2 learners, L2 speaking

#### 1. Introduction

In the current globalized scenario, possessing strong English communication skills is of utmost importance for excelling in both professional and academic domains (Baumgarten, 2016; Zhang et al., 2020). The good news is that modern education has brought in a plethora of resources and technologies that can help students improve their English proficiency. However, universities often face the challenge of striking the right balance between practical application and a personalized approach while offering English courses. To equip students with the necessary language skills to communicate effectively in both academic and professional settings, researchers from both domestic and international institutions have identified various individual factors that impact second language (L2) speaking performance, including basic psychological needs (BPN) (Joe et al., 2017) and learning engagement (Hiver, 2021). Studies suggest that L2 learners who are autonomously motivated and actively engaged in their studies tend to possess higher speaking proficiency levels (e.g., Huang, 2022; Wu & Hung, 2022).

Self-determination theory (SDT) suggests that meeting students' basic psychological needs increases their proactive engagement in learning (Ryan & Deci, 2017). Engaging in learning is also positively correlated with academic achievement (Fredricks et al., 2004; Jang et al., 2016; Schlenker et al., 2013). However, motivation and engagement can vary depending on the learning context, such as in the classroom environment (Hilver et al., 2021). It is important to investigate the impact of basic psychological needs and oral learning engagement on speaking proficiency from a classroom perspective. In the domain L2 acquisition, research on basic psychological needs and learning engagement is on the rise (Noels et al., 2019; Oga-Baldwin & Nakata, 2017). Nevertheless, the impact of L2 proficiency on basic psychological needs and classroom engagement within the domestic domain of L2 speaking remains elusive. We still cannot capture a holistic picture of the mechanism underlying L2 speaking learners' basic psychological needs, classroom engagement, L2 proficiency, and L2 speaking performance. Therefore, this study, grounded in SDT, aims to examine the effect of L2 proficiency on basic psychological needs and classroom learning engagement, providing insights for L2 English speaking instruction.

## 2. Literature Review

# 2.1 Basic Psychological Needs and Language Learning

As the SDT framework outlines, basic psychological needs encompass autonomy, competence, and relatedness. These components are vital for individuals' integration, growth, and healthy development (Ryan & Deci, 2017). Autonomy involves learners independently managing their actions to achieve academic goals (Ryan & Deci, 2000), fulfilled when tasks are perceived as valuable. Competence is met through active participation in challenging learning, aided by successful comprehension (Dincer, 2019). Relatedness is achieved when learners feel connected and internalize learning principles (Dincer, 2019). According to SDT, a social learning environment meeting these needs promotes autonomous performance, enhancing learning outcomes (Vansteenkiste et al., 2019). Despite the potential of investigating these (McEown Oga-Baldwin, needs & 2019), exploring the link between basic psychological needs and L2 proficiency has been limited. BPN's role in predicting engagement and L2 achievement was emphasized by Dincer et al. (2019).

The interplay between L2 proficiency and an individual's basic psychological needs has been explored (e.g., Shirvan & Alamer, A., 2022). Autonomy is enhanced through expanded language choice, access to information, and learning opportunities; competence is bolstered by improved communication skills, academic and career success, and cross-cultural competence; relatedness is fostered by social integration, inclusivity, and cultural understanding linguistic in communities. Therefore, language proficiency, particularly in a second language, can be a powerful tool for personal growth, social interaction, and overall well-being by fulfilling these basic psychological needs.

Research shows that self-determination theory (SDT) can help nurture learners' intrinsic and autonomous motivations by fulfilling their basic psychological needs (Reeve, 2016; Ryan & Deci, 2017; Vansteenkiste et al., 2019). When individuals perceive an activity as aligned with their basic psychological needs, they are more likely to engage in it voluntarily. In recent years, SDT has been increasingly applied in language education (Noels et al., 2019; Dincer et al., 2019), providing robust explanations for learning motivation and engagement, which can aid in understanding Chinese students' authentic learning experiences in English language speaking. McEown et al. (2014) found that Canadian undergraduates who demonstrated higher levels of autonomy, competence, and relatedness achieved better language outcomes than those with lower levels. This finding was further substantiated by Oga-Baldwin et al. (2017) in their investigation of 515 fifth-grade Japanese L2 students, revealing a positive and

dynamic relationship between basic psychological needs and engagement. However, if these basic psychological needs are unmet, learning engagement may be compromised, leading to suboptimal learning outcomes (Noels, 2017). Zhen et al. (2017) discovered associations between basic psychological needs and engagement in a survey of 605 Chinese junior school L2 students, demonstrating significant direct predictive effects of competence and relatedness satisfaction on learning engagement within the intricacy of these three dimensions of basic psychological needs. In summary, students with their basic psychological needs satisfied tend to exhibit greater autonomy and engagement, thereby increasing the likelihood of success in language learning.

## 2.2 L2 Proficiency and Language Learning

The study of L2 proficiency holds a central place in the field of second language acquisition (SLA) (Hulstijn, 2015). L2 proficiency, a multifaceted construct encompassing elements such as fluency, accuracy, vocabulary mastery, and syntactic complexity (Iwashita et al., 2008; Skehan, 2009), plays a pivotal role in an individual's determining capacity to effectively communicate in the target language. The significance of L2 proficiency is widely recognized among researchers, who have acknowledged its far-reaching implications for the overall language learning experience (Ryan & Deci, 2000), classroom engagement, and ultimately, speaking performance (Asfar & Rahimi, 2016).

Furthermore, the relationship between L2 proficiency and these critical psychological facets of language acquisition has been the subject of investigation from a variety of angles (Milton & Hopkins, 2010; Huang et al., 2016). In this literature review, we embark on a comprehensive examination of this intricate relationship. Our objective is to shed light on the interplay between L2 proficiency and the fundamental psychological needs of autonomy, competence, and relatedness. By doing so, we seek to elucidate the intricate dynamics that underlie L2 learning and the subsequent impact classroom engagement and speaking on performance.

## 2.3 Classroom Engagement and Language Learning

Engagement refers to a student's active participation and emotional involvement in learning tasks (Reeve et al., 2004). With the

increasing recognition of the significance of engagement in modern education, it has become a highly researched subject, often described as 'the ultimate goal of learning' (Sinatra et al., 2015). Different engagement typologies have been presented in the literature, focusing on behavioral and emotional aspects (Uden et al., 2014). In contrast, others propose a three-part framework involving behavioral, emotional, and cognitive facets (Fredricks et al., 2005; Fredricks et al., 2004), where these elements are interconnected to create a comprehensive construct.

However, the three-dimensional engagement model overlooks learners' proactive and constructive contributions to their learning experiences, which is termed agentic engagement (Reeve, 2013; Reeve & Tseng, 2011). Agentic engagement stands apart from other forms of engagement as it has distinct implications for outcomes compared to the established three dimensions (Eccles, 2016). It signifies learners' active and constructive involvement in their learning tasks, aligning with the principles of SDT that emphasize autonomy and the fulfillment of fundamental psychological needs.

A study conducted by McEown et al. (2014) observed that among a group of 128 Canadian undergraduate students, those who felt supported in autonomy, competence, and relatedness displayed increased levels of engagement within the L2 classroom. This result contrasted with individuals who perceived low levels of basic psychological needs, indicating lower engagement. This observation was corroborated in an examination involving 515 fifth-grade Japanese L2 students. The study revealed a positive and dynamic correlation between basic psychological needs and engagement. Even with these needs adequately addressed, engagement in the learning process can be protected, resulting in favorable or below-par educational outcomes (Noels, 2013).

The examination of engagement combines perspectives on teaching and learning, making it valuable for identifying the classroom and instructional factors that shape students' academic outcomes and promote meaningful participation and involvement. However, a limited body of research exists exploring engagement in language learners' speaking classrooms. Hence, there is a need for a better understanding of how engagement contributes to fostering active involvement and performance in language speaking classrooms. To this end, this study explores how L2 proficiency affects Chinese L2 students' basic psychological needs, classroom engagement, and L2 speaking performance (see Figure 1).



Figure 1. Conceptualized Model

Two research questions are proposed to correspond to the above research concern and interest.

- 1) Is there any direct effect of L2 proficiency on basic psychological needs, classroom engagement, and L2 speaking performance?
- 2) Does L2 proficiency predict L2 speaking performance indirectly?

## 3. Method

A quantitative method is applied to better illustrate English speaking learners' experience of classroom BPN satisfaction and engagement and to elaborate an understanding of how students' L2 proficiency could predict psychological needs, classroom engagement, and speaking performance. Through statistical analyses, we aim to clarify the impact of BPN on English speaking achievement.

#### 3.1 Participants

The setting is an engineering school of a key university in northeast China. This school delivers English speaking courses to first-year classes. Before this study, students obtained their English scores in gaokao and their Duolingo English Test (DET) measurement scores. In the spring semester, from March 2023 to June 2023, students are required to learn how to describe an event, an item, or a person. Participants for the quantitative phase were 263 freshmen (85% men) studying college English speaking. They volunteered to take part in this research. They were selected according to a convenience sampling strategy, a non-probability sampling technique adopted because of the target groups' ready access and availability. The students' ages ranged from 18 to 20 years (M = 18.62; SD = 1.17). The participants were all born in China and, like all Chinese high school graduates, had a minimum of 9 years of general English studies. Within this school, first-year students are required to study college English speaking for one year to prepare for English Medium Instruction in all subjects in the second year. There are over 20 English teachers, and each class has 28 to 32 students. Moreover, this context provides a diverse pool of English speakers.

Before collecting data from the learners, the study ensured that ethical considerations were taken into account. Informed consent was obtained from the learners to participate in the study, and they were given assurance of the confidentiality of the data collected. Out of the 263 questionnaires distributed among the learners, 33 incomplete questionnaires were removed to ensure that the data collected was accurate and reliable.

3.2 Instrument

The Basic Psychological Needs of Second Language (BPN-L2) Scale was developed based on Alamer's (2022) design, employing a 7-point Likert-style scale ranging from 1 (strongly disagree) to 7 (strongly agree). This scale was subsequently translated into Chinese. The scale comprises 12 items evenly distributed among three constructs: autonomy, competence, and relatedness. The internal reliability of the scale was found to be acceptable, with a Cronbach's alpha coefficient of 0.88. Illustrative items include: under autonomy, "I have the freedom to determine my own learning pace in English"; under competence, "I believe I am capable of acquiring English"; and under relatedness, "My English speaking teacher demonstrates concern for my progress."

A variation of Reeve et al.'s (2011) instrument was employed to gauge classroom engagement. This adapted version utilized Skinner et al.'s (2009) 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). The measurement encompassed four dimensions: behavioral, cognitive, emotional, and agentic engagement. The scale exhibited acceptable internal consistency, with a Cronbach's alpha coefficient of 0.95. In order to align with the specific research context, several adjustments were made to the original 22 questionnaire items, clarifying the context as "English speaking." For example, new statements were introduced, such as "During my English speaking class, I can focus on the content," "I find my English speaking class to be fun," and "I invest efforts when encountering new material in the English speaking class."

These participants were given an IELTS-style speaking test concerning the English speaking task. The examiners recorded the sound of the English speaking tasks scheduled in May.

## 3.3 Scoring Rubric

For the scoring session, two IELTS trainers, one with seven years of experience and the other with five years of experience preparing candidates for the IELTS speaking test, examined the tests via sound record. The two IELTS trainers administered the whole process of the speaking task. The final scores assigned by both trainers to each student were reliable, as indicated by a high level of inter-rater reliability ( $\alpha$  = .849). In evaluating the IELTS speaking task, examiners gauge students' performance based on four core criteria: fluency and how ideas

connect logically, vocabulary richness, the extent of grammatical variety and accuracy, and the clarity of pronunciation (IELTS, 2017). The outcomes in the speaking section are presented as band scores, ranging from 0 to 9, with each score corresponding to specific attributes outlined in the band descriptors for that level (IELTS, 2005). These four criteria carry equal weight, and their scores are averaged to determine the overall score for this section. To illustrate, if a student's scores are as follows: fluency and coherence - 7, pronunciation - 8, vocabulary usage - 7, and grammatical range - 6, the combined score would be calculated as (7 + 8 + 7 + 6) / 4 = 7.

## 3.4 Procedures

## 3.4.1 Data Collection

The participants were provided with online versions of the questionnaires to facilitate a more convenient data collection process. The data collection phase occurred in May 2023 and spanned approximately ten days. The items from previously validated measures of the two constructs (BPN and Classroom Engagement) were included in the electronic survey created using the Wenjuanxing platform(www.wjx.com), an online questionnaire website. Convenience employed, involving sampling was the voluntary participation of 30 students. The participants were kindly requested to complete the survey diligently, and they were assured that the confidentiality of their information would be upheld.

In the context of college admissions for Chinese L2 learners, gaokao as a predictor of English proficiency is a sound practice. This examination is grounded in the principles of standardized assessment, offering an objective and quantifiable means of evaluating language skills. However, there is a lack of speaking assessment in Gaokao. Duolingo English Test (DET) was supplemented as the other predictor, proving to be a validated standardized English language test (Isaacs & Varga, 2023). This test has gained popularity as an alternative to other English proficiency exams like TOEFL and IELTS, with speaking measurement as an essential part. In this study, incorporating Gaokao and Duolingo scores to predict L2 proficiency presents a comprehensive gauge for students' L2 proficiency. They combine objectivity, practicality, and transparency in assessing language proficiency among Chinese L2 learners, making it a valuable tool for informed college admissions decisions.

The assessment inquiries for speaking tasks are drawn from the academic segment (Part Two) of the International English Language Testing System's (IELTS) speaking sub-tests (IELTS, 2017). These question items are carefully selected from genuine IELTS tests and have been subjected to examination and endorsement by a panel of five expert IELTS instructors. Part Two's questions are adequate to assess first-year students' English speaking levels among the various parts. This section deviates from a standardized structure, offering examiners a more accurate representation of genuine speaking ability and subsequent scoring (Quaid, 2018). Illustrative questions encompass topics like "Describe a place you have visited that left a strong impression on you," "Talk about a memorable event from your childhood," and "Describe a book that you enjoyed and would recommend to others." To furnish a reference dataset reflecting the current level of proficiency in speaking English among students, the examiners have recorded the audio of the English speaking tasks scheduled for May 2023.

#### 3.4.2 Data Analysis

The data analysis was conducted using SPSS 27 and Mplus 8. In the initial step, preliminary analyses involved calculating kurtosis, skewness, and descriptive statistics. Following Kline's (2015) two-stage approach to structural equation modeling, the measurement model was tested first, and once confirmed, the structural model was examined. Model evaluation considered the "Maximum Likelihood" estimation method and several fit indices. The fit indices used in this study included Chi-square divided by degrees of freedom ( $\chi$ 2/df), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). A well-fitting model is characterized by  $\chi$ 2/df < 3, CFI and TLI values of at least .90, and an RMSEA of .08 or less (Kline, 2015).

#### 4. Results

#### 4.1 Descriptive Statistics of the Variables

Table 1 shows the descriptive statistics and correlations of measured variables. According to the mean value of the BPN (M = 4.78, SD = 0.67) and ENG (M = 4.79, SD = 0.68), they generally reported a moderate level of satisfaction with their basic psychological needs and classroom engagement with their speaking courses. According to the correlational results, all variables within the model displayed significant correlations, as evidenced by Table 1; the various variables demonstrated the expected patterns of association, with correlations ranging from small to large in magnitude. Specifically, L2 proficiency showed a moderate correlation with the other variables ( $r_{PRO-ENG} = 0.33$ , p < 0.01; rpro-bpn = 0.36, p < 0.01; rpro-per = 0.46, p < 0.01); the basic psychological needs exhibited positive high correlations with classroom engagement and academic performance ( $r_{BPN-ENG} = 0.72$ , p < 0.01; rbpn-per = 0.51, p < 0.01). Regarding L2 speaking performance, it displayed medium positive correlations (reng-per = 0.45, p < 0.01) with classroom engagement.

Variables	Mean	SD	Max	Min	Kurtosis	Skewness	1	2	3	4
1. PRO	114.70	7.07	134.0	87.0	0.94	-0.64	1.00			
2. BPN	4.78	0.67	7.0	3.0	-0.18	0.14	.36**	1.00		
3. ENG	4.79	0.68	6.5	3.0	0.21	0.06	.33**	.72**	1.00	
4. PER	4.93	0.62	6.5	3.0	0.08	0.12	.46**	.51**	.45**	1.00

Table 1. Descriptive statistics and correlations of measures

Note: p < .05. p < .01.

### 4.2 Structural Model of Basic Psychological Needs, Classroom Engagement, and L2 Speaking Performance

In the first step, the results showed that the data adequately fit the measurement ( $\chi^2$  = 74.676, df = 41, p < .001, CFI = 0.974, TLI = 0.919, RMSEA =

0.058, 90% CI [0.036, 0.078], SRMR = 0.041). The standardized parameter estimates of the hypothesized model are shown in Fig.2. Our results showed that L2 proficiency predicted academic English speaking performance through three pathways; the direct effect of BPN on PER was significant; as shown in Table 2,

there is one indirect path of concern (PRO $\rightarrow$  BPN  $\rightarrow$  ENG  $\rightarrow$  PER ). The indirect effect is

significant [β = 0.197, S. E. = 0.075, p = .0101, 95% BCCI = (0.058, 0.397)].



Figure 2. The final model of PRO, BPN, ENG, and PER

**Note:** PRO refers to L2 proficiency; BPN refers to basic psychological needs; ENG refers to classroom engagement; PER refers to L2 speaking Performance.

	Effect	95%BCCI low	95%BCC high
PRO-BPN-ENG-PER	.197	.058	.397
PRO-ENG-PER	135	006	.100
PRO-BPN-PER	.000	029	.018
Total Indirect	.120	.0190	.313

Table 2. Indirect effects of L2 proficiency on PER

Note. BCCI = Bootstrap confidence interval.

#### 5. Discussion

Our quantitative research has answered the two research questions. In this part, we will discuss the results in relation to the existing literature. The hypothesized framework of this study investigated the relationships between L2 basic proficiency, psychological needs, classroom engagement, and L2 speaking performance, with a primary focus on learners' psychological well-being. The study found both direct and indirect effects of L2 proficiency on L2 speaking performance. These discoveries have important pedagogical implications for academic English speaking learning and teaching.

# 5.1 The Direct Effect of L2 Proficiency on BPN, L2 Speaking Performance

In line with previous literature, this study confirmed that L2 proficiency was a significant positive predictor of academic learning. High-proficient students were likelier to gain higher BPN satisfaction. Previous scholars have documented the critical role of L2 proficiency in language learning (Huang, 2022); in this study, we further corroborate the direct effects of L2 proficiency on English-speaking learning, and it was a significant positive predictor of English speaking achievement of university students. A high level of L2 proficiency will help students handle language tasks and get a positive psychological state. According to this study, the relatively low level of L2 proficiency impacted the PER sufficiently and directly. Low-proficiency students did not hold an emotionally positive view toward BPN and were more likely to be impacted by distraction, dismay, and English speaking proficiency.

There is no direct effect of L2 proficiency on classroom engagement, which reflects that engaging students in classroom tasks requires more than individual L2 proficiency. This result underscores the fact that fostering active participation and involvement among students in classroom activities goes beyond merely assessing their individual L2 language skills. These findings align with prior research conducted by Lee and colleague (2022) that highlights a prevalent trend among Chinese students focusing primarily on test-oriented language learning methods, often neglecting the necessary emphasis on conversational proficiency and speaking exercises in their educational endeavors. For aims of transcending the constraints of test-oriented approaches and nurturing students' linguistic capabilities and classroom engagement, an effective classroom of L2 speaking entails synergy between students, peers, and teachers to encourage students to hone their speaking skills (Wu & Hung, 2022).

### 5.2 The Indirect Effects of L2 Proficiency on Academic English Speaking Performance via BPN and Classroom Engagement

Apart from its direct effect, L2 proficiency can also indirectly affect L2 speaking performance via the mediation of BPN and classroom engagement. Students with higher L2 proficiency are typically more confident in their abilities and feel more autonomous in the classroom, which contributes to their BPN satisfaction. As Reeve (2011) argued, when students feel satisfied with their BPN in a learning situation, it encourages them to commit to the task and strive toward mastery, especially through cognitive engagement. Therefore, in our study, students with high BPN satisfaction tended to invest more efforts to achieve their speaking goals, which supports previous research suggesting that BPN plays a facilitative role in academic engagement (McEown et al., 2014; Oga-Baldwin et al., 2017). We found that students who perceived their BPN as being more fulfilled were generally more satisfied with their autonomy, competence, and connection in their learning. Consequently, students who felt that their psychological needs were better met showed higher levels of engagement across all dimensions within a speaking classroom.

The study also confirms that increased engagement is linked to higher language proficiency. It demonstrates that engagement plays a mediating role between L2 proficiency, BPN, and L2 speaking performance in a classroom context. When students have a higher perceived BPN, they tend to have better classroom engagement and speaking performance. This finding supports previous engagement's relevance research on for academic achievement (Reeve, 2012, 2013; Reeve & Tseng, 2011). As explained by Gardner (2010), students with positive psychological engagement (i.e., emotionally, agentically, and cognitively engaged) show greater motivational intensity (i.e., behavioral engagement; McEown et al., 2014) and correspondingly have a higher level of language achievement. Gardner (2010) also explains that students with positive psychological engagement tend to show greater motivation and have a higher level of language proficiency.

## 6. Conclusion

The current study filled a critical research gap by exploring the relationships between L2 proficiency, psychological basic needs, classroom engagement, and L2 speaking performance. Our findings may theoretically and pedagogically contribute to the L2 field. Theoretically, this study provides empirical evidence of the positive role of L2 proficiency in the L2-speaking context. More essentially, it supports the L2 speaking context, concluding that L2 proficiency also indirectly influences L2 speaking performance. Specifically, high-proficiency students with adequate BPN are more likely to feel satisfied with their autonomy, relatedness, and competence, which enables them to be psychologically and for higher quality behaviorally engaged speaking tasks. Classroom engagement is the mediator between BPN and L2 speaking performance, reinforcing the pivotal role of engagement in the L2 speaking context.

There are pedagogical suggestions based on the findings of the present study. First, given the importance of L2 proficiency, teachers should provide individualized instructions to facilitate students of varying English speaking levels to foster students' involvement in the classroom.

High-proficiency students may be able to understand and participate in each speaking task; however, many low-proficiency ones still need help appropriately involved in their speaking activities. Second, students of different levels of proficiencies should be supported with more psychological consideration; for example, reserved students require more encouragement in classroom interaction to enhance their engagement and improvement. On the other hand, engaging absent-minded students entails long-term attention and assistance to increase their involvement in the class. This may help students progressively build autonomy, a mental nutrient essential for speaking interaction; moreover, it corresponds to the primary concern of SDT, which is the well-being of individuals, including students, in the classroom. Third, teachers can provide up-to-date learning technologies and online platforms with appropriate guidelines and feedback to cater to the relatedness of students who strive to learn more in the classroom. Initially, students may be captivated by its flexibility and utility; however, to mitigate high dropout rates and distractions, regular supervision and feedback are essential to ensure continual learning progress. Finally, teachers should be mindful when commenting on their students' speaking practice. While researchers have different opinions on this issue, we still believe that more positive, encouraging feedback can boost students' motivation in speaking acquisition, particularly within an East Asian cultural context emphasizing teacher authority.

Despite these contributions, the study has a handful of limitations. Using a cross-sectional design and self-report questionnaires implies caution in inferring causality from the findings. Future research should employ longitudinal designs, incorporate multiple data collection methods, and consider demographic factors to address these limitations. Secondly, the study was conducted solely at one university in the northeast region of mainland China, with participants consisting exclusively of first-year students. As a result, it should be treated with caution when researchers attempt to generalize the findings to other contexts. It would be beneficial to explore whether the hypnotized model can be replicated with diverse research samples (e.g., English majors) at various educational levels (e.g., senior-level university students or high school students) and in different regions within China or globally.

### Acknowledgements

Financial support for this project was gratefully received from the Teaching Reform Program granted by Dalian Maritime University — "A Study on the Design of Blended College English Tasks to Promote Classroom Engagement" (Project Number: XJG2022-93) and the High Education Program granted by Dalian Maritime University — "The construction of integrated curriculum for Academic English Studies in a Research-oriented World-class Maritime University." (Project Number: GJ2023Y05).

## References

- Alamer, A. (2022b). "Exploratory Structural Equation Modeling (ESEM) and Bifactor ESEM for Construct Validation Purposes: Guidelines and Applied Example." *Research Methods in Applied Linguistics*, 1(1), 100005. https://doi.org/10.1016/j.rmal.2022.100005.
- Asfar, H. S., & Rahimi, M. (2016). Reflective thinking, emotional intelligence, and speaking ability of EFL learners: Is there a relation? *Thinking Skills and Creativity*, 19, 97–111.

https://doi.org/10.1016/j.tsc.2015.10.005.

- Milton, J., Wade, J., & Hopkins, N. (2010). Aural word recognition and oral competence in a foreign language. In R. Chacón-Beltrán, C. Abello-Contesse, & M. Torreblanca-López (Eds.), Further insights into non-native vocabulary teaching and learning (pp. 83–98). *Multilingual Matters*. https://doi.org/10.21832/9781847692900-007.
- Creswell, J. W., & Plano Clark, V. L. (2011). Designing and Conducting Mixed Methods Research (2nd ed.). Sage Publications.
- Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D. R. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality*, 62(1), 119–142. https://doi.org/10.1111/j.1467-6494.1994.tb00 797.
- Eccles, J. S. (2016). Engagement: Where to next? *Learning and Instruction, 43, 71–75.* https://doi.org/10.1016/j.learninstruc.2016.02 .003.
- Fathi, J., Pawlak, M., Mehraein, S., Hosseini, H.M., & Derakhshesh, A. (2023). Foreign language enjoyment, ideal L2 self, and

intercultural communicative competence as predictors of willingness to communicate among EFL learners. *System*, *115*. https://doi.org/10.1016/j.system.2023.103067.

- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109. https://doi.org/10.3102/00346543074001059.
- Fredricks, J. A., Blumenfeld, P., Friedel, J., & Paris, A. (2005). School engagement. In K. A. Moore & L. H. Lippman (Eds.), What do children need to flourish? Conceptualizing and measuring indicators of positive (pp. 305-321). New York, NY: Springer.
- Gardner, R. (2010). Motivation and Second Language Acquisition: The Socio-Educational Model. New York: Peter Lang Publishing.
- Hiver, P., Al-Hoorie, A. H., Vitta, J. P., & Wu, J. (2021). Engagement in language learning: A systematic review of 20 years of research methods and definitions. *Language Teaching Research*, 136216882110012. https://doi.org/10.1177/13621688211001289.
- Huang, H.-T. D., Hung, S.-T. A., & Hong, H.-T. V. et al. (2016). Test-taker characteristics and integrated speaking test performance: A path-analytic study. *Language Assessment Quarterly*, 13(4), 283–301. https://doi.org/10.1080/15434303.2016.12361 11.
- Huang, H.-T. D. (2022). Examining the effect of digital storytelling on English speaking proficiency, willingness to communicate, and group cohesion. *Tesol Quarterly*, 1–28. https://doi.org/10.1002/tesq.3147.
- Hulstijn, J. H. (2015). Language proficiency in native and non-native speakers: Theory and practice. John Benjamins. https://doi.org/10.1075/lllt.41.
- IELTS (2005). IELTS Handbook, Cambridge ESOL.
- IELTS (2017). IELTS. Available Nov 12, 2017, from https://www.ielts.org.
- Isaacs, T., Hu, R., Trenkic, D., & Varga, J. (2023). Examining the predictive validity of the Duolingo English Test: Evidence from a major UK university. *Language Testing*, 40(3), 748–770.

https://doi.org/10.1177/02655322231158550.

Iwashita, N., Brown, A., McNamara, T., & O'Hagan, S. (2008). Assessed levels of

second language speaking proficiency: How distinct? *Applied Linguistics*, 29(1), 24–49. https://doi.org/10.1093/applin/amm017.

- Jang, H., Reeve, J., & Deci, E. L. (2010). Engaging Students in Learning Activities: It Is Not Autonomy Support or Structure But Autonomy Support and Structure. *Journal of Educational Psychology*, pp. 102, 588–600.https://doi.org/10.1037/a0019682.
- Joe, H.-K. & Hiver, P. & Al-Hoorie, A. (2017). Classroom social climate, self-determined motivation, willingness to communicate, and achievement: A study of structural relationships in instructed second language settings. *Learning and Individual Differences*, 53. 133-144. 10.1016/j.lindif.2016.11.005.
- Lee, M., Lee, M. K., Yaung, H., Lee, T., & Lee, S. M. (2022). Academic Hatred: Focusing on the Influence of a Supportive Classroom Climate. *SAGE Open*, 12(2). https://doi.org/10.1177/21582440221094820.
- Li, C., Dewaele, J.-M., & Hu, Y. (2021). Foreign language learning boredom: Conceptualization and measurement. *Applied Linguistics Review*, 1–27. https://doi.org/10.1515/applirev-2020-0124.
- Mackey, A., & Gass, S. M. (2015). Second Language Research: Methodology and Design (2nd ed.). New York: Routledge. https://doi.org/10.4324/9781315750606.
- McEown, M. S., K. A. Noels, and K. D. Saumure. (2014). "Students' Self-Determined and Integrative Orientations and Teachers' Motivational Support in a Japanese as a Foreign Language Context." *System*, 45, 227–241. https://doi.org/ 10.1016/j.system.2014.06.001.
- McEown, M. S., & W. Q. Oga-Baldwin. (2019). "Self-determination for all Language Learners: New Applications for Formal Language Education." *System*, *86*, 102124. https://doi.org/10.1016/j.system.2019.102124.
- Milton, J., Wade, J., & Hopkins, N. (2010). Aural word recognition and oral competence in a foreign language. In R. Chacón-Beltrán, C. Abello-Contesse, & M. Torreblanca-López (Eds.), Further insights into non-native vocabulary teaching and learning (pp. 83–98). *Multilingual Matters*. https://doi.org/10.21832/9781847692900-007.
- Noels, K. A., Chaffee, K. E., Lou, N. M., & Dincer, A. (2016). Self-determination, engagement,

and identity in learning German: Some directions in the psychology of language learning motivation. *Fremdsprachen Lehren und Lernen, 45*(2), 12–29.https://doi.org/10.1007/978-3-030-2838 0-3\_5.

Noels, K. A., et al. (2019). Self-determination and motivated engagement in language learning. In M. Lamb, K. Csizér, A. Henry, & S. Ryan (Eds.), The Palgrave Handbook of Motivation for Language Learning. *Palgrave Macmillan*.

https://doi.org/10.1007/978-3-030-28380-3\_5.

- Oga-Baldwin, W. Q., Y. Nakata, P. Parker, & R. M. Ryan. (2017). "Motivating Young Language Learners: A Longitudinal Model of Self-Determined Motivation in Elementary School Foreign Language Classes." *Contemporary Educational Psychology*, 49, 140–150. https://doi.org/10.1016/J.CEDPSYCH.2017.0 1.010.
- Pajares, F., & Valiante, G. (2001). Gender differences in writing motivation and achievement of middle school students: A function of gender orientation. *Contemporary Educational Psychology*, 26, 366–381.https://doi.org/10.1006/ceps.2000.10 69.
- Plonsky, L., & Oswald, F. L. (2014). How big is "big"? Interpreting effect sizes in L2 research. *Language Learning*, 64, 878-912. http://doi:10.1111/lang.12079.
- Reeve, J., & Tseng, C.-M. (2011). Agency is a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology*, 36(4), 257–267. https://doi.org/10.1016/j.cedpsych.2011.05.00 2.
- Reeve, J. (2012). A self-determination theory perspective on student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), Handbook of research on student engagement. Springer. https://doi.org/10.1007/978-1-4614-2018-7\_7.
- Reeve, J. (2013). How students create motivationally supportive learning environments for themselves: The concept of agentic engagement. *Journal of Educational Psychology*, 105(3), 579–595. https://doi.org/10.1037/a0032690.
- Reeve, J., & Cheon, H. S. (2014). An

intervention-based program of research on teachers' motivating styles. In S. Karabenick & T. Urdan's (Eds.), *Advances in motivation and achievement* (Vol. 18, pp. 297–343). Bingley: Emerald Group Publishing.

- Reeve, J. (2016). Autonomy-Supportive Teaching: What It Is, How to Do It. In: Liu, W., Wang, J., Ryan, R. (eds) *Building Autonomous Learners*. Springer, Singapore. https://doi.org/10.1007/978-981-287-630-0\_7.
- Deci, L. Rvan, R. М., & E. (2000).Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68-78. https://doi.org/10.1037/0003-066X.55.1.68.
- Ryan, R. M., & Deci, E. L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. Guilford Press.
- Schlenker, B. R., Schlenker, P. A., & Schlenker, K. A. (2013). Antecedents of academic engagement and the implications for college grades. *Learning and Individual Differences*, 27, 75-81.

https://doi.org/10.1016/j.lindif.2013.06.014.

- Shirvan, M. E., & Alamer, A. (2022). Modeling the interplay of EFL learners' basic psychological needs, grit, and L2 achievement. *Journal of Multilingual and Multicultural Development*, 1-17.
- Sinatra, G.M., Heddy, B.C., & Lombardi, D. (2015). The challenges of defining and measuring student engagement in science. *Educational Psychology*, 50, 1–13. https://doi.org/10.1080/00461520.2014.10029 24.
- Skehan, P. (2009). Modelling second language performance: Integrating complexity, accuracy, fluency, and lexis. *Applied Linguistics*, 30(4), 510–532. https://doi.org/10.1093/applin/amp047.
- Skinner, E. A., Kindermann, T. A., Connell, J. P., & Wellborn, J. G. (2009). Engagement and disaffection as organizational constructs in the dynamics of motivational development. In K. R. Wentzel, & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 223-245). New York, NY: Taylor & Francis.
- Uden, Jolien & Ritzen, Henk & Pieters, Jules. (2014). Engaging Students: The Role of Teacher Beliefs and Interpersonal Teacher

Behavior in Fostering Student Engagement in Vocational Education, *Teaching and Teacher Education*. 37, 21–32. https://doi.org/10.1016/j.tate.2013.08.005.

- Vansteenkiste, M., Simons, J., Lens, W., Soenens, B., & Matos, L. (2005). Examining the motivational impact of intrinsic versus extrinsic goal framing and autonomy-supportive versus internally controlling communication style on early adolescents' academic achievement. *Child Development*, 2, 483–501.
- Widodo, H.P. & Elyas, T. (2020). Introduction to Gender in Language Education. *Sexuality & Culture* 24, 1019–1027. https://doi.org/10.1007/s12119-020-09753-1.
- Wu, Y.-H. S., & Hung, S.-T. A. (2022). The effects of virtual reality infused Instruction on elementary school students' English-speaking performance, willingness to communicate, and learning autonomy. *Journal of Educational Computing Research*, 1–30.

https://doi.org/10.1177/07356331211068207.

Yao, Y., X., Z., S., & Jiang, Y. (2023). The impacts of self-efficacy on undergraduate students' perceived task value and task performance of L1 Chinese integrated Writing: A mixed-method research. *Assessing Writing*, p. 55.

https://doi.org/10.1016/j.asw.2022.100687.

- Zhang, Snowy & Ardasheva, Yuliya & Austin, Bruce. (2020). Self-efficacy and English public speaking performance: A mixed method approach. *English for Specific Purposes*. https://doi.org/ 59. 10.1016/j.esp.2020.02.001.
- Zhen, R., Liua, R. D., Ding, Y., Wang, J., Liua, Y., & Xua, L. (2017). The Mediating Roles of Academic Self-Efficacy and Academic Emotions in the Relation Between Basic Psychological Needs Satisfaction and Learning Engagement among Chinese Adolescent Students. *Learning and Individual Differences*, pp. 54, 210–216. https://doi.org/10.1016/j.lindif.2017.01.017.