



## PARENTAL SUPPORT AND ENGLISH ACHIEVEMENT: THE MEDIATING ROLE OF ACADEMIC SELF-CONCEPT

Yajun Wu<sup>i</sup>,

Qiang Yi

School of Humanities and Education,  
Foshan University,  
Foshan City, China

### Abstract:

The contribution of parental support to academic achievement has been adequately explored. However, the mediating mechanisms between parental support and academic achievement should be more studied, especially in teaching English as a foreign language (EFL). Consequently, this study was designed to examine whether academic self-concept a mediating between parental support and academic achievement among Chinese EFL learners. Participants were 499 Chinese secondary EFL learners selected through convenience sampling. The relationship between parental support, academic self-concept, and English achievement was explored by structural equation modelling analysis (SEM) and mediation analysis while controlling for gender and age. Results showed that parental support could affect English achievement directly and indirectly through academic self-concept. Additionally, academic self-concept fully mediated the relationship between parental support and English achievement. Theoretical and practical implications, limitations and directions for future research are discussed.

**Keywords:** parental support, academic self-concept, English achievement, mediating mechanisms

### 1. Introduction

With the deepening of the positive psychology movement in education, social support, including parental support, has received more and more attention from scholars and educators. Adolescents perceive parental support as respect, care and help from parents, and parents' assistance for their own choices (Pierce et al., 1996). From the self-determination theory perspective, Cheung and Pomerantz (2011) argued that parental support enables individuals to acquire autonomy. Given that parental support is of important for a kid's stable development (Bean et al., 2006), the facilitative effect of which

---

<sup>i</sup> Correspondence: email [wuyajun1225@163.com](mailto:wuyajun1225@163.com)

on the key indicators of school outcomes has been confirmed in several empirical studies. For instance, researchers documented that parental support could positively promote self-efficacy and academic well-being (Ruholt et al., 2015), self-regulated learning (Choe, 2020), and academic engagement and achievement (Bradley et al., 2021).

However, the impact of parental support on academic achievement needs to be further explored. Studies on the influence of parental support on academic achievement were mainly conducted in general academics or in the field of mathematics education, and few studies have explored the linkage between the two constructs in the field of EFL education. Furthermore, the mediating mechanisms between parental support and academic achievement need to be further explored. Chohan and Khan (2010) documented that parental support had a positive effect on academic self-concept. Furthermore, the predictive effect of academic self-concept on academic achievement was verified (Wu et al., 2021). Accordingly, this study hypothesized that academic self-concept plays a mediating role between parental support and academic achievement. And the primary purpose of this study was to verify this hypothesis among 499 Chinese secondary EFL learners.

## **2. Literature Review**

### **2.1 Parental Support**

Parental support is the most important source of social support for adolescents (Simons et al., 2013), referring to the respect, care, and help that individuals experience from their parents in daily life, as well as parents' assistance and encouragement for their independent decisions and choices (Pierce et al., 1996; Ryan et al., 2015). Adolescents who receive support and help from their parents could develop more positive qualities and prevent or reduce psychological and behavioral problems (Lu et al., 2021). In addition, the positive relationship between parental support and academic achievement was also verified (Hill & Tyson, 2009). Given the importance of parental support, its impact on academic performance and the mediating mechanisms have been considerably explored. The relationship between parental support and academic achievement has been studied using correlational design. For instance, in a study with American college students, Cutrona et al. (1994) explored the predictive effects of parental support, friend and romantic partner support on academic achievement from the perspective of attachment theory and found that only parental support significantly predicted participants' academic achievement. Additionally, studies have begun to explore the mediating mechanisms between parental support and academic achievement. Previous studies have verified that motivational beliefs and emotions (Ahmed et al., 2010), emotion-related self-regulation and adaptive skills (Liew et al., 2014), and learning strategy (Amalia & Latifah, 2019) mediated the relationship between parental support and academic achievement.

However, few studies have explored the impact of parental support on academic achievement in the field of EFL education. To our knowledge, no studies explore the mediating mechanism between parental support and English achievement. Given that

the predictive effect of parental support on academic self-concept (Chohan & Khan, 2010) and the predictive effect of academic self-concept on academic achievement (Perinelli et al., 2022) was confirmed in the existing literature, the present study hypothesized that parental support could affect English achievement directly or indirectly through academic self-concept. And the core objective of the present study was to investigate the potential mediating role of foreign language self-concept (FLSC) between parental support and foreign language (FL) achievement in a sample of Chinese secondary EFL learners.

## **2.2 Foreign Language Self-Concept**

Academic self-concept refers to students' perception of their academic ability or self-assessment of whether they can achieve their academic goals (Marsh & Martin, 2011; Wigfield & Karpathian, 1991). Arens et al. (2011) documented that academic self-concept was a domain-specific construct, suggesting that academic self-concept should be in a specific subject domain (e.g., English and mathematics). This study explored academic self-concept in the EFL context and defined foreign language self-concept as EFL learners' perception of their ability to learn English well. The self-determination theory (SDT) proposed by Ryan and Deci (2000) argued that competence, relatedness, and autonomy are the three psychological needs determining an individual's motivation. According to the SDT, the higher the level of FLSC of EFL learners, the stronger their competence and motivation to learn English.

Given the importance of academic self-concept, the antecedents and consequences of academic self-concept have been examined. For instance, from an empirical approach, Chohan and Khan (2010) found that parental support consistently affects children's self-concept. In a study with Hong Kong secondary school students, McNerney et al. (2012) documented that academic self-concept could affect academic achievement directly or indirectly through learning strategies. In another study with Taiwan college students, Chen et al. (2015) even explored the impact of parental support and academic self-concept on academic achievement, ignoring the correlation between parental support and academic self-concept. To our knowledge, research on the correlation between parental support and academic self-concept was relatively limited. Furthermore, even fewer studies were conducted on the mediating mechanisms between parental support and academic self-concept, especially in EFL education. This study was to confirm whether foreign language self-concept mediated between parental support and English achievement among Chinese EFL learners.

## **2.3 Foreign Language Achievement**

Academic achievement is one of the commonly studied variables in the educational context, referring to the extent to which a student progresses in realizing the educational goals (e.g., acquiring knowledge, skill or materials) (Bolt, 2011). On the one hand, academic achievement is crucial to the development of students, which is closely related to their further education, performance tracking and honours (Guterman, 2021; York et

al., 2015). On the other hand, improving students' academic achievement is the core goal of school education services (Mislevy, 2018). In most studies, academic achievement was characterized by students' marks (grades) (Guterman, 2021), and higher marks indicate higher academic achievement of students.

Given the importance of academic achievement, the antecedents of academic achievement have been extensively studied. For example, parental emotional support (Bean et al., 2006; Kim et al., 2003) and parental academic support (Choe, 2020; Hill & Tyson, 2009) have positively predicted achievement. In addition, in a meta-analysis conducted by Wu et al. (2021), the predictive effect of academic self-concept on academic achievement was confirmed. However, research on the relationship between parental support, academic self-concept, and academic achievement is limited, especially in the EFL context.

## 2.4 The Present Study

This study aimed to validate the following three hypotheses based on the literature:

**H1:** Parental support would positively correlate with foreign language self-concept among Chinese secondary EFL learners.

**H2:** Parental support would positively affect foreign language achievement in the Chinese EFL learning context.

**H3:** Foreign language self-concept mediates the relationship between parental support and foreign language achievement while controlling for gender and age.

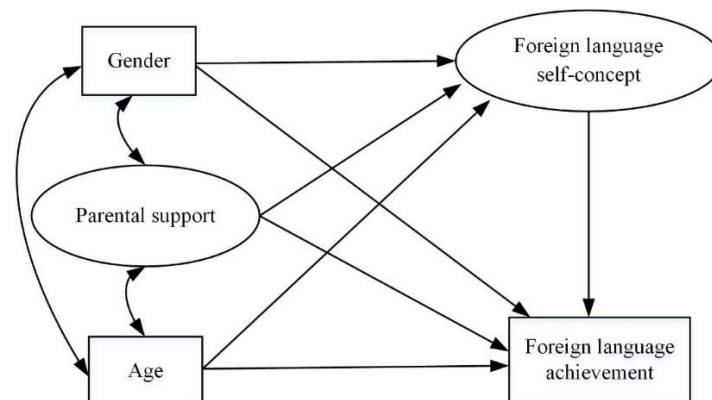


Figure 1: The proposed model

## 3. Methodology

### 3.1 Participants, Ethics Statement, and Procedure

Four hundred ninety-nine students (aged between 12 and 15 years) recruited from 12 classes in one secondary school participated in the questionnaire survey. There were 262 male participants (52.5%) and 237 female participants (47.5%). Two hundred six participants were seventh-graders (41.3%), and 293 were eighth-graders (58.7%). The mean age of the participants was 13.66 (SD = 0.62).

The research school is located in Foshan City, Guangdong Province, China, which is determined using convenience sampling. After obtaining the consent of the head teacher and the English teachers, the questionnaire survey was conducted in the English class with the help of the English teachers. First, written informed consent was obtained from the participants, and verbal informed consent was obtained from the participants' parents. Second, the participants completed the questionnaire with the assistance of their English teachers. Third, the English teacher collected the questionnaires and checked that the questionnaires were answered completely. The questionnaire survey lasted 20 minutes.

### **3.2 Measures**

#### **3.2.1 Parental Support Scale**

Participants' parental support was measured by the five items adapted from the Child and Adolescent Social Support Scale (Malecki & Demaray, 2002). Participants answered the five items of the parental support scale (e.g., "my parents give me good advice") on a five-point Likert scale (from 1-strongly disagree to 5-strongly agree). Furthermore, parental support was calculated by the mean value of the five items. Previous studies have shown that the parental support scale had good psychometric properties (e.g., Soylu et al., 2022). The reliability of the parental support scale was good (Cronbach's  $\alpha = 0.82$ ). The factor loadings of the items ranged from 0.67 to 0.71, all meeting the criterion of 0.35+ suggested by Byrne (2010).

#### **3.2.2 Foreign Language Self-Concept Scale**

Participants' foreign language self-concept was measured by the related items adapted from the Program for International Student Assessment 2015 (OECD, 2016). This scale has five items (e.g., "I get good marks in English"), and participants were asked to rate the degree to which the item statement matched their actual situation on a 5-point Likert scale. The psychometric properties of this scale have been confirmed to be good in previous studies (Kang & Wu, 2022; Wu & Kang, 2023). This scale demonstrated excellent internal consistency with Cronbach's  $\alpha = 0.86$ . Besides, the factor loadings of each item were examined, ranging from 0.58 to 0.86, showing that the factor loadings met the criterion (Byrne, 2010).

#### **3.2.3 Foreign Language Achievement**

For Chinese secondary school students, academic achievement, including English achievement, is one of the most critical determinants for further study. In addition, the Confucian tradition that highly values academic achievement in the Chinese scenario reinforces the importance parents, teachers, and students place on academic achievement (Hau & Ho, 2010). To Chinese secondary school students, academic achievement is mainly represented by academic performance. So, we collected participants' English scores in the most recent final-term examination to represent their foreign language achievement. The curriculum-based English examination paper was designed by the

Municipal Bureau of Education, which could guarantee the face validity of the examination paper. The full score of the examination paper is 100 points; the higher the score, the higher the foreign language achievement.

### 3.2.4 Covariates

Existing literature documented that there are gender differences (Guez et al., 2020) and age differences (Artieda et al., 2020; Gentry et al., 2002) in academic achievement, indicating that these two variables should be controlled while investigating the relationship between parental support, academic self-concept, and academic achievement. In the present study, gender and age were treated as covariates in the SEM analysis.

### 3.3 Data Analysis

The data analysis in this study consisted of five steps to verify the research hypotheses. In the first step, common method bias would be excluded because the participants all self-reported the data. Second, descriptive statistics of the studied variables were presented, which include mean, standard deviation (*SD*), skewness, kurtosis, Cronbach's  $\alpha$ , and factor loadings. Third, measurement models were evaluated by conducting a series of confirmatory factor analysis (CFA). Fourth, SEM was applied to investigate the relationship between parental support, academic self-concept, and English achievement. Fifth, mediation analysis was conducted to verify the mediating effect of academic self-concept between parental support and English achievement.

## 4. Results

### 4.1 Common Method Bias

All items of the studied variables (i.e., parental support and academic self-concept) were combined to conduct Harman's single-factor test (Podsakoff et al., 2003). The common method bias could be excluded if the fit of this single-factor model is poor. The model fit was poor, with  $\chi^2(35) = 669.458$ ,  $p < .001$ , CFI = .677, TLI = .585, RMSEA = .191, 90% CI [.178, .204], SRMR = .142, showing that common method bias was negligible in this study.

### 4.2 Descriptive Statistics

Table 1 shows the descriptive statistics of the studied variables. Based on the criteria of a variable's normality proposed by Roever and Phakiti (2017),  $|\text{skewness}| < 2$  and  $|\text{kurtosis}| < 2$  mean that the variable had satisfactory normality for conducting maximum likelihood (ML) estimation. The absolute value of skewness and kurtosis for parental support, FL self-concept, and English achievement is less than 2, indicating that these three variables had good normality and the proposed model's (i.e., "parental support  $\rightarrow$  FL self-concept  $\rightarrow$  English achievement") parameter estimation could be applied.

**Table 1:** Descriptive statistics of the studied variables

	Mean	SD	Skewness	Kurtosis	Cronbach's $\alpha$	Factor loadings
Parental support	3.66	.74	-.28	.14	.82	.67-.71
FL self-concept	2.59	.61	.06	-.26	.86	.58-.86
FL achievement	.00	.99	-.86	-.08	-	-

### 4.3 Measurement Models and Latent Bivariate Correlations

Mplus 8.3 (Muthén & Muthén, 2013) was applied to conduct CFA, SEM, and mediation analysis. In this study, model fit was evaluated by the criteria of comparative fit index (CFI  $\geq$  .90), Tucker-Lewis index (TLI  $\geq$  .90), root mean square error of approximation (RMSEA  $\leq$  .08), and standardized root mean square residual (SRMR  $\leq$  .10) (Chen, 2007; Hu & Bentler, 1999). The model ("parental support $\rightarrow$ FL self-concept") fit the data well:  $\chi^2(34) = 81.244$ ,  $p < .001$ , CFI = .976, TLI = .968, RMSEA = .053, 90% CI [.038, .068], SRMR = .038. When FL achievement was added to the model ("parental support $\rightarrow$ FL self-concept $\rightarrow$ FL achievement"), the model fit the data well, with  $\chi^2(58) = 147.875$ ,  $p < .001$ , CFI = .960, TLI = .946, RMSEA = .056, 90% CI [.045, .067], SRMR = .038.

**Table 2:** Results of correlation matrix

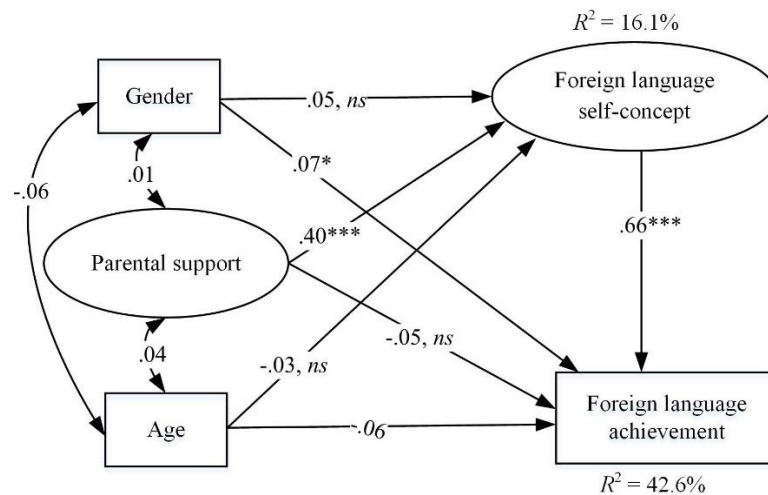
	1	2	3	4	5
1. Parental support	-				
2. FL self-concept	.40***	-			
3. FL achievement	.21***	.64***	-		
4. Gender	.01	.05	.10*	-	
5. Age	.04	-.02	-.08	-.06	-

\* $p < .05$ ; \*\*\* $p < .001$ .

Table 2 presents the correlation matrix for the studied variables. It was found that parental support was positively correlated with FL self-concept and FL achievement. The positive correlation between FL self-concept and FL achievement was also confirmed. Moreover, gender was found to be positively correlated with FL achievement, indicating that there is a gender difference in FL achievement.

### 4.4 Structural Equation Modelling

The model fit of the proposed model (see Fig. 1) was evaluated using the SEM. The model fit was adequate:  $\chi^2(60) = 148.474$ ,  $p < .001$ , CFI = .960, TLI = .949, RMSEA = .054, 90% CI [.043, .066], SRMR = .040. The relationships between parental support, FL self-concept, FL achievement, gender, and age are shown in Figure 2 with standardized regression weights. Specifically, there are four major findings. First, parental support positively predicted FL self-concept ( $\beta = .40$ ,  $SE = .05$ ,  $p < .001$ ). Second, FL self-concept positively predicted FL achievement ( $\beta = .66$ ,  $SE = .04$ ,  $p < .01$ ). Third, gender (male = 0 and female = 1) was positively correlated with FL achievement ( $\beta = .07$ ,  $SE = .04$ ,  $p < .05$ ), indicating that female students have higher FL achievement than male students. Fourth, parental support explained significant variance in FL self-concept (16.1%) and FL achievement (42.6%).



**Figure 2:** Relationships between parental support, FL self-concept, FL achievement ('ns' denotes insignificant coefficients. \*\*\*  $p < .001$ ; \*  $p < .05$ .)

#### 4.5 Mediation Analysis

The possible mediating effect of FL self-concept between parental support and FL achievement was tested using the bootstrapping method with 5000 re-samples. Suppose the lower and upper bounds of the 95% bias-corrected confidence intervals (95% CIs) do not include zero means that the effect of the model path is significant. First, the indirect effect of "Parental support → FL self-concept → FL achievement" was significant (95% CIs [.19, .34]), indicating that FL self-concept mediates the relationship between parental support and FL achievement. Second, the direct effect of parental support on FL achievement was not significant (95% CIs [-.14, .04]) when taking the indirect effect via FL self-concept. Therefore, it could be inferred that FL self-concept fully mediated the relationship between parental support and FL achievement.

**Table 3:** Results of mediation analysis

Model path	Effect	SE	Bias-corrected CIs 95%	
			Lower	Upper
Total effect	.21	.05	.12	.30
Indirect effect: Parental support → FL self-concept → FL achievement	.26	.04	.19	.34
Direct effect	-.05	.04	-.14	.04

#### 5. Discussion

This study is the first to investigate the mediating effect of academic self-concept between parental support and FL achievement in a cross-sectional design in an EFL context. The existing literature has validated the positive predictive effects of parental support and academic self-concept on academic achievement. The present study found that parental support and FL self-concept positively correlated with English achievement in the EFL context in China. Moreover, the mediating effect of FL self-concept between parental



support and FL achievement was confirmed, which revealed the mediating mechanism between parental support and FL achievement. That is, parental support indirectly affects FL achievement through FL self-concept. The full mediating effect of FL self-concept on the linkage from parental support to FL achievement indicates that only through FL self-concept can parental support affect children's FL achievement.

First, this study found that parental support positively predicted students' FL self-concept, suggesting that H<sub>1</sub> holds. This finding is in line with existing research (Chohan & Khan, 2010; Demaray et al., 2009; Xu et al., 2019), which showed that parental support positively affects students' self-concept. Drawing upon the social support theory, the relationship between social support and academic motivation (Legault et al., 2006), academic stress (Rayle & Chung, 2008), school engagement (Wang & Eccles, 2012), and academic achievement (López et al., 2002) have been explored. In this study, it was found that parental support was conducive to the improvement of students' FL self-concept, which provides empirical evidence for the social support theory.

Second, this study demonstrated that parental support was positively related to FL achievement, indicating that H<sub>2</sub> was supported. This finding is consistent with the existing literature (Lee & Smith, 1999; López et al., 2002). Although the association between social support and academic achievement has been widely explored, research focusing on parental support and academic achievement is relatively scarce. This study contributes to the literature by confirming the positive impact of parental support on FL achievement.

Third, this study found that parental support enhanced FL achievement, and FL self-concept fully mediated the association between parental support and FL achievement while controlling for gender and age, showing that H<sub>3</sub> was supported. On the one hand, the current finding extended previous findings (Chohan & Khan, 2010; Perinelli et al., 2022) on the relationship between parental support, academic self-concept, and academic achievement. On the other hand, the finding that FL self-concept plays a mediating role between parental support and FL achievement reveals the mediating mechanism between parental support and FL achievement.

The aforementioned findings provide empirical evidence for the social support theory, demonstrating that parental support could promote students' FL self-concept and FL achievement. Meanwhile, these findings have several practical implications. First, parental support could directly affect FL achievement or indirectly via FL self-concept, suggesting that support from parents contributes to students' EFL learning. Thus, parents are recommended to keep intimate communication with their children and provide adequate emotional and academic support for their children. Second, the FL self-concept fully mediated the relationship between parental support and FL achievement, which clarified the complex relationship between parental support and FL achievement. Furthermore, English educators could adopt targeted policies (e.g., improving parents' responsibility, parent collaboration and communication) (e.g., Mestry & Grobler, 2007; Widding, 2018) according to the direction and strength of the mediating effect of FL self-concept (Fairchild & MacKinnon, 2009).

The present study explored the mediating mechanism between parental support and academic achievement in the EFL context, which identifies the positive role of parental involvement in children's English learning. However, three limitations need to be addressed. First, in addition to gender and age, factors such as socioeconomic status (Yeung et al., 2022), psychological capital (Wu & Kang, 2023a), and prior achievement (Hemmings & Kay, 2010) are also possible predictors of academic achievement; thus, future studies are suggested to control more factors to deepen the understanding the relationship between parental support, FL self-concept, and FL achievement. Second, the cross-sectional design of the present study determines that the causal relationships between studied variables could not be drawn. Further studies are required to explore the causal link between the studied variables based on longitudinal data. Third, the participants were Han students from one public secondary school. Thus, the research conclusions might not be applicable to students in private schools or minority areas (Hongboontri & Keawkhong, 2014; Yang, 2015). It is recommended that future research select participants from a broader range of fields better to represent the population of Chinese secondary school students.

## 6. Conclusion

This cross-sectional research with Chinese secondary school students found that parental support facilitates children's foreign language learning. Students who perceived more parental support had higher levels of foreign language self-concept and obtained higher English achievement than those who perceived less parental support. Parental support could be enhanced by enhancing parents' sense of responsibility, improving home-school collaboration and communication, and advancing parenting styles.

## Funding Statement

This research was supported by Guangdong Philosophy and Social Science Foundation Special Project (Grant GD21WZX02-13).

## Conflict of Interest Statement

All authors declare that there is no conflict of interest.

## About the Author(s)

**Yajun Wu** is a senior lecturer of Foshan University, Guangdong Province, China. He received his PhD in 2021, and his research interests are foreign language education and the philosophy of language.

**Qiang Yi** is an associate professor of Foshan University, Guangdong Province, China. His research specialty is foreign language education.

## References

- Ahmed, W., Minnaert, A., van der Werf, G., & Kuyper, H. (2010). Perceived social support and early adolescents' achievement: The mediational roles of motivational beliefs and emotions. *Journal of Youth and Adolescence*, 39(1), 36–46. <https://doi.org/10.1007/s10964-008-9367-7>
- Amalia, R., & Latifah, M. (2019). Parental support, academic emotion, learning strategy, and academic achievement on first year student. *Journal of Family Sciences*, 4(1), 41–53.
- Arens, A. K., Yeung, A. S., Craven, R. G., & Hasselhorn, M. (2011). The twofold multidimensionality of academic self-concept: Domain specificity and separation between competence and affect components. *Journal of Educational Psychology*, 103(4), 970–981. <https://doi.org/10.1037/a0025047>
- Artieda, G., Roquet, H., & Nicolás-conesa, F. (2020). The impact of age and exposure on EFL achievement in two learning contexts: Formal instruction and formal instruction + content and language integrated learning ( CLIL ). *International Journal of Bilingual Education and Bilingualism*, 23(4), 449–472. <https://doi.org/10.1080/13670050.2017.1373059>
- Bean, R. A., Barber, B. K., & Crane, D. R. (2006). Parental support, behavioral control, and psychological control among African American youth: The relationships to academic grades, delinquency, and depression. *Journal of Family Issues*, 27(10), 1335–1355. <https://doi.org/10.1177/0192513X06289649>
- Bolt, N. (2011). Academic achievement. In S. Goldstein & J. A. Naglieri (Eds.), *Encyclopedia of child behavior and development* (pp. 8–9). New York: Springer.
- Bradley, G. L., Ferguson, S., & Zimmer-Gembeck, M. J. (2021). Parental support, peer support and school connectedness as foundations for student engagement and academic achievement in Australian youth. In R. Dimitrova & N. Wiium (Eds.), *Handbook of positive youth development* (pp. 219–236). Cham: Springer.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. New York: Routledge.
- Chen, C.-T., Chen, C.-F., Hu, J.-L., & Wang, C. (2015). A study on the influence of self-concept, social support and academic achievement on occupational choice intention. *Asia-Pacific Education Researcher*, 24(321), 1–11. <https://doi.org/10.1007/s40299-013-0153-2>
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 14(3), 464–504. <https://doi.org/10.1080/10705510701301834>
- Cheung, C. S. S., & Pomerantz, E. M. (2011). Parents' involvement in children's learning in the United States and China: Implications for children's academic and emotional adjustment. *Child Development*, 82(3), 932–950. <https://doi.org/10.1111/j.1467-8624.2011.01582.x>

- Choe, D. (2020). Parents' and adolescents' perceptions of parental support as predictors of adolescents' academic achievement and self-regulated learning. *Children and Youth Services Review*, 116, 105172. <https://doi.org/10.1016/j.chilyouth.2020.105172>
- Chohan, I., & Khan, R. M. (2010). Impact of parental support on the academic performance and self concept of the student. *Journal of Research and Reflections in Education*, 4(1), 14–26. <http://www.ue.edu.pk/jrre>
- Cutrona, C. E., Cole, V., Colangelo, N., Assouline, S. G., & Russell, D. W. (1994). Perceived parental social support and academic achievement: An attachment theory perspective. *Journal of Personality and Social Psychology*, 66(2), 369–378. <https://doi.org/10.1037/0022-3514.66.2.369>
- Demaray, M. K., Malecki, C. K., Rueger, S. Y., Brown, S. E., & Summers, K. H. (2009). The role of youth's ratings of the importance of socially supportive behaviors in the relationship between social support and self-concept. *Journal of Youth and Adolescence*, 38(1), 13–28. <https://doi.org/10.1007/s10964-007-9258-3>
- Fairchild, A. J., & MacKinnon, D. P. (2009). A general model for testing mediation and moderation effects. *Prevention Science*, 10(2), 87–99. <https://doi.org/10.1007/s11121-008-0109-6>
- Gentry, M., Gable, R. K., & Rizza, M. G. (2002). Students' perceptions of classroom activities: Are there grade-level and gender differences? *Journal of Educational Psychology*, 94(3), 539–544. <https://doi.org/10.1037/0022-0663.94.3.539>
- Guez, A., Peyre, H., & Ramus, F. (2020). Sex differences in academic achievement are modulated by evaluation type. *Learning and Individual Differences*, 83–84, 101935. <https://doi.org/10.1016/j.lindif.2020.101935>
- Guterman, O. (2021). Academic success from an individual perspective: A proposal for redefinition. *International Review of Education*, 67(3), 403–413. <https://doi.org/10.1007/s11159-020-09874-7>
- Hau, K.-T., & Ho, I. T. (2010). Chinese students' motivation and achievement. In M. H. Bond (Ed.), *The Oxford handbook of Chinese psychology* (pp. 187–2004). Oxford: Oxford University Press.
- Hemmings, B., & Kay, R. (2010). Prior achievement, effort, and mathematics attitude as predictors of current achievement. *The Australian Educational Researcher*, 37(2), 41–58.
- Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology*, 45(3), 740–763. <https://doi.org/10.1037/a0015362>
- Hongboontri, C., & Keawkhong, N. (2014). School culture: Teachers' beliefs, behaviors, and instructional practices. *Australian Journal of Teacher Education*, 39(5), 66–88. <https://doi.org/10.14221/ajte.2014v39n5.7>
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.

- Kang, X., & Wu, Y. (2022). Academic enjoyment, behavioral engagement, self-concept, organizational strategy and achievement in EFL setting: A multiple mediation analysis. *PLoS ONE*, 17(4), e0267405. <https://doi.org/10.1371/journal.pone.0267405>
- Kim, S., Brody, G. H., & Murry, V. M. B. (2003). Longitudinal links between contextual risks, parenting, and youth outcomes in Rural African American families. *Journal of Black Psychology*, 29(4), 359–377. <https://doi.org/10.1177/0095798403256887>
- Lee, V. E., & Smith, J. B. (1999). Social support and achievement for young adolescents in Chicago: The role of school academic press. *American Educational Research Journal*, 36(4), 907–945. <https://doi.org/10.3102/00028312036004907>
- Legault, L., Green-demers, I., & Pelletier, L. (2006). Why do high school students lack motivation in the classroom? Toward an understanding of academic amotivation and the role of social support. *Journal of Educational Psychology*, 98(3), 567–582. <https://doi.org/10.1037/0022-0663.98.3.567>
- Liew, J., Kwok, O., Chang, Y., Chang, B. W., & Yeh, Y. C. (2014). Parental autonomy support predicts academic achievement through emotion-related self-regulation and adaptive skills in Chinese American adolescents. *Asian American Journal of Psychology*, 5(3), 214–222. <https://doi.org/10.1037/a0034787>
- López, E. J., Ehly, S., & García-Vázquez, E. (2002). Acculturation, social support and academic achievement of mexican and mexican american high school students: An exploratory study. *Psychology in the Schools*, 39(3), 245–257. <https://doi.org/10.1002/pits.10009>
- Lu, M., Chen, J., He, W., Pang, F., & Zou, Y. (2021). Association between perceived social support of parents and emotional/behavioral problems in children with ASD: A chain mediation model. *Research in Developmental Disabilities*, 113, 103933. <https://doi.org/10.1016/j.ridd.2021.103933>
- Malecki, C. K., & Demaray, M. K. (2002). Measuring perceived social support: Development of the child and adolescent social support scale (CASSS). *Psychology in the Schools*, 39(1), 1–18. <https://doi.org/10.1002/pits.10004>
- Marsh, H. W., & Martin, A. J. (2011). Academic self-concept and academic achievement: Relations and causal ordering. *British Journal of Educational Psychology*, 81(1), 59–77. <https://doi.org/10.1348/000709910X503501>
- McInerney, D. M., Cheng, R. W. yi, Mok, M. M. C., & Lam, A. K. H. (2012). Academic self-concept and learning strategies: Direction of effect on student academic achievement. *Journal of Advanced Academics*, 23(3), 249–269. <https://doi.org/10.1177/1932202X12451020>
- Mestry, R., & Grobler, B. (2007). Collaboration and communication as effective strategies for parent involvement in public schools. *Educational Research and Review*, 2(7), 176–185.
- Mislevy, R. J. (2018). *Sociocognitive foundations of educational measurement*. Routledge. <https://doi.org/10.4324/9781315871691>
- Muthén, L. K., & Muthén, B. (2013). *Mplus version 8.3: User's guide*. Los Angeles: Muthén & Muthén.

- OECD. (2016). *PISA 2015 results (Volume I): Excellence and equity in education*. Paris: OECD Publishing.
- Perinelli, E., Pisanu, F., Checchi, D., Francesca Scalas, L., & Fraccaroli, F. (2022). Academic self-concept change in junior high school students and relationships with academic achievement. *Contemporary Educational Psychology, 69*, 102071. <https://doi.org/10.1016/j.cedpsych.2022.102071>
- Pierce, G. R., Sarason, B. R., & Sarason, I. G. (1996). *Handbook of social support and the family*. New York: Springer.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Rayle, A. D., & Chung, K.-Y. (2008). Revisiting first-year college students' mattering: Social support, academic stress, and the mattering experience. *Journal of College Student Retention: Research, Theory and Practice, 9*(1), 21–37.
- Roever, C., & Phakiti, A. (2017). *Quantitative methods for second language research: A problem-solving approach*. New York: Routledge.
- Ruholt, R., Gore, J. S., & Dukes, K. (2015). Is parental support or parental involvement more important for adolescents? *Undergraduate Journal of Psychology, 28*(1), 1–8.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. <https://doi.org/10.1037/110003-066X.55.1.68>
- Ryan, R. M., Deci, E. L., Grolnick, W. S., & La Guardia, J. G. (2015). The significance of autonomy and autonomy support in psychological development and psychopathology. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Theory and practice* (pp. 795–849). New Jersey: Wiley.
- Simons, L., Schrage, S. M., Clark, L. F., Belzer, M., & Olson, J. (2013). Parental support and mental health among transgender adolescents. *Journal of Adolescent Health, 53*(6), 791–793. <https://doi.org/10.1016/j.jadohealth.2013.07.019>
- Soylu, Y., Sağkal, A. S., & Özdemir, Y. (2022). The effects of parent-classmate-teacher support on early adolescents' school mental health: The mediating role of mental toughness. *Contemporary School Psychology, 26*(2), 225–234. <https://doi.org/10.1007/s40688-020-00299-5>
- Wang, M. Te, & Eccles, J. S. (2012). Social Support Matters: Longitudinal Effects of Social Support on Three Dimensions of School Engagement From Middle to High School. *Child Development, 83*(3), 877–895. <https://doi.org/10.1111/j.1467-8624.2012.01745.x>
- Widding, U. (2018). Parental determinism in the Swedish strategy for parenting support. *Social Policy & Society, 17*(3), 481–490. <https://doi.org/10.1017/S1474746417000513>
- Wigfield, A., & Karpachian, M. (1991). Who am I and what can I do? Children's self-concepts and motivation in achievement situations. *Educational Psychologist, 26*(3&4), 233–261. <https://doi.org/10.1080/00461520.1991.9653134>

- Wu, H., Guo, Y., Yang, Y., Zhao, L., & Guo, C. (2021). A meta-analysis of the longitudinal relationship between academic self-concept and academic achievement. *Educational Psychology Review*, 33(4), 1749–1778. <https://doi.org/10.1007/s10648-021-09600-1>
- Wu, Y., & Kang, X. (2023a). Conceptualisation, measurement, and prediction of foreign language learning psychological capital among Chinese EFL students. *Journal of Multilingual and Multicultural Development*, advance online publication. <https://doi.org/10.1080/01434632.2023.2193601>
- Wu, Y., & Kang, X. (2023b). Perceived teacher support and EFL achievement: The mediating roles of academic enjoyment and self-concept. *International Journal of Linguistics and Translation Studies*, 4(2), 38–53. <https://doi.org/10.36892/ijlts.v4i2.320>
- Xu, Q. Y., Li, S. F., & Yang, L. (2019). Perceived social support and mental health for college students in mainland China: The mediating effects of self-concept. *Psychology, Health and Medicine*, 24(5), 595–604. <https://doi.org/10.1080/13548506.2018.1549744>
- Yang, M. (2015). Trapped in politicization of ethnicity: The dilemma in China's ethnic minority education. *Chinese Education & Society*, 48(5), 327–331. <https://doi.org/10.1080/10611932.2016.1171115>
- Yeung, S. S. S., King, R. B., Nalipay, M. J. N., & Cai, Y. (2022). Exploring the interplay between socioeconomic status and reading achievement: An expectancy-value perspective. *British Journal of Educational Psychology*, Advance online publication. <https://doi.org/10.1111/bjep.12495>
- York, T. T., Gibson, C., & Rankin, S. (2015). Defining and measuring academic success. *Practical Assessment, Research and Evaluation*, 20(5), 1–20. <https://doi.org/10.7275/hz5x-tx03>

Creative Commons licensing terms

Authors will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions, and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of English Language Teaching shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflict of interests, copyright violations and inappropriate or inaccurate use of any kind content related or integrated on the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).