



How to cite this article:

Shanmugam, P., & Hidayat, R. (2022). Assessing grit and well-being of Malaysian ESL teachers: Application of the perma model. *Malaysian Journal of Learning & Instruction*, 19(2), 153-181. <https://doi.org/10.32890/mjli2022.19.2.6>

ASSESSING GRIT AND WELL-BEING OF MALAYSIAN ESL TEACHERS: APPLICATION OF THE PERMA MODEL

¹Punithan Shanmugam & ²Riyan Hidayat

¹Department of Language and Literacy Education,
Faculty of Education, University of Malaya

²Department of Mathematics,
Faculty of Science and Mathematics,
Universiti Pendidikan Sultan Idris

²Corresponding author: riyanhidayat@fsmt.upsi.edu.my

Received: 20/8/2021 Revised: 12/4/2022 Accepted: 12/4/2022 Published: 31/7/2022

ABSTRACT

Purpose – Seligman’s well-being theory of PERMA has been proven fruitful in defining various well-being constructs across different fields of study. With a growing interest in teacher psychology research abroad, PERMA has been unveiled as a rewarding prospect for the well-being of second language (L2) teachers. Nonetheless, the contribution of PERMA to the well-being and grit of L2 teachers in Malaysia remains unclear. Thus, this study (1) examined the influence of PERMA on the well-being and grit of Malaysian teachers of English as a second language (ESL); and (2) analyzed the mediating impact of positive emotion in the relationship between grit and well-being.

Methodology – A priori power analysis was conducted to identify the sample size for this study. Hence, a convenience sample of 91

primary ESL teachers from Kuala Lumpur participated in this cross-sectional study. Data obtained were analyzed via multiple regression and mediation analysis using SPSS v20. The analysis of the indirect effects of the mediation model was complemented with a bootstrap procedure based on Hayes's PROCESS Macro.

Findings – The regression analysis confirmed the significant impact of PERMA on both well-being and grit. Analysis of the regression coefficients (β) displayed that engagement and accomplishment influenced significant changes in grit. Engagement was also a significant predictor of well-being. The mediation model portrayed positive emotion as a partial mediator in the association between grit and well-being.

Significance – The meaningful interaction of PERMA with well-being and grit may not only encourage ESL teachers to flourish, correspondingly, it may elevate the well-being of learners in L2 classrooms.

Keywords: Positive psychology, PERMA, teacher well-being, grit, L2 teachers, ESL teachers.

INTRODUCTION

Since the new millennium, the role of English as a global language has evolved to address the fundamental shift in the professional needs and goals of educators and administrators (Kabilan, 2019). In line with this, Malaysian policymakers have aspired to reform the language education policies to fulfill the dynamic goals and demands of the 21st century as stated in the Malaysian Education Blueprint. English language teachers are perceived as a critical component of this reformation. Nonetheless, the multifaceted roles of teachers from monitoring students' academic progress and participating in professional development courses to handling various administrative tasks and managing connections with students, parents, administrators, and the wider community have been overlooked (Muniandy, 2017; Rashid et al., 2016; Subon & Sigie, 2016; Zarisfizadeh, 2012). In an increasingly demanding environment (Subon & Sigie, 2016; Zarisfizadeh, 2012), the constant changes in language policies further intensified the workload and organizational duties of teachers (Rashid

et al., 2016). Thus, many have been reported to contend with job dissatisfaction issues and questionable commitment to the teaching profession (Ghavifekr & Pillai, 2016; Muniandy, 2017; Zarisfizadeh, 2012) besides psychological and physical complications such as burnout, stress, musculoskeletal pains, and voice disorders (Moy et al., 2015; Mukundan et al., 2015; Subon & Sigie, 2016; Zamri et al., 2017). These complications were documented to be primarily due to heavy psychological job demands, high organizational expectations from administrators, and low quality of life (Moy et al., 2015; Subon & Sigie, 2016; Zamri et al., 2017), subsequently posing a threat to their level of grit and well-being.

Recent research has highlighted grit and well-being as essential factors that complement L2 teachers' effectiveness in learner outcomes and job satisfaction (Duckworth, 2016; Kern et al., 2014; Robertson-Kraft & Duckworth, 2014). Mercer (2018) noted the complex dynamics of L2 classrooms where successful teaching and learning depends on teacher psychology. As such, research in second language (L2) teacher psychology advocates that "teacher psychology not only influences the teacher's own effectiveness in their overall classroom approach, but it also affects learner motivation for learning an L2" (Nazari & Ogghyanous, 2021, p.2). Correspondingly, grit is a significant trait that is associated with life success, L2 teacher efficiency, and professional well-being (Duckworth, 2016; Robertson-Kraft & Duckworth, 2014). Teacher grit also involves teachers' persistent efforts in overcoming workplace challenges (Robertson-Kraft & Duckworth, 2014) and teaching challenges in the classroom (Duckworth, 2016). As a result, grit may possess promising implications on teachers' pedagogical outcomes both inside and outside of the classroom (Duckworth, 2016). Kern et al. (2014) further discovered that educators and staff members who possess higher levels of well-being across various well-being domains are more committed to their organization and more contented with their life, health, and occupation. Hence, given the significant influence of L2 teachers within an organization, they play a prominent role in influencing their learners' psychology both individually and collectively, which in turn stimulate positive emotions and well-being of the teachers (Mercer et al., 2016).

Over the years, a growing number of studies on positive psychology (PP) in second language acquisition (SLA) have emerged as a rewarding prospect in the area of L2 teacher well-being (MacIntyre

et al., 2016). The contemporary view of PP originated from Martin Seligman to refer to the study of positive character traits, positive emotions, and enabling institutions (Seligman et al., 2005). From an SLA perspective, PP teaches us how to shape and nurture our personal and social strengths rather than educating on stress and teaching barriers management (Mercer et al., 2016). With the advanced growth of PP, Seligman (2011) then posited his revised theory of PERMA, a multidimensional view of well-being comprising five elements: positive emotion, engagement, relationship, meaning, and accomplishment. Consistent with the focal point of PP, PERMA emphasizes human optimal functioning and flourishing to enable individuals to thrive based on positive experiences, virtues, and character strengths (Seligman, 2011). PERMA has generated promising results like improved quality of life, increased psychological health, and higher occupational success across different subpopulations (Butler & Kern, 2016). Nonetheless, existing literature on PERMA has predominantly focused on the well-being of students (Kern et al., 2015; Masfufah & Sudirman, 2019). Mercer et al. (2016) asserted that the evolution of PP could meaningfully contribute to teacher well-being if research is centered on the PERMA model. However, low grit and well-being levels of L2 teachers may result in teacher inefficiency, poor pedagogical skills, job dissatisfaction, and low organizational commitment (Duckworth, 2016; Robertson-Kraft & Duckworth, 2014), which could in turn generate low well-being and negative learner emotions and motivation towards L2 teaching and learning (Mercer et al., 2016). Hence, PERMA has considerable prospects to function as a foundation that can assist our ESL teachers to achieve positive functioning and elevate their grit and well-being levels.

LITERATURE REVIEW

Positive Emotion

Experiencing positivity is a crucial element of well-being (Seligman, 2011). Fredrickson (2001) exclaimed that positive emotions broaden an individual's thought-action repertoire, which in turn helps to develop their physical, intellectual, social, and psychological resources. This implies that L2 teachers' positive emotions can expedite "the broadening of perspectives by triggering their curiosity and desire to creatively explore innovative teaching methods" (Mercer et al., 2016,

p.221). Eventually, the dynamics of these emotions help the teachers to build their intellectual resources for future teaching and work (Mercer et al., 2016). As evidence, Helgesen (2016) demonstrated how the infusion of positive emotions in his language classroom produced high positive emotion scores and low depressive symptoms among his students. Hence, positive changes in well-being can be observed via an increase in positive emotions.

The function of positive emotions as a potential mediator of well-being has been strongly suggested in several models (Hendriks et al., 2021). In the positive-activity model, the association between the performance of positive activity and well-being may appear transparent with the intervention of positive emotions (Lyubomirsky & Layous, 2013). Positive activities that lead to significant changes in life, accompanied by the dynamics of positive emotions, will eventually contribute to increased well-being (Lyubomirsky & Layous, 2013; Sheldon & Lyubomirsky, 2012). Happier individuals are the result of the complex interplay between their positive emotions, positive behaviours, positive thoughts, and need satisfaction as stimulated by their conscious positive activities (Lyubomirsky & Layous, 2013). Hence, enhancing positive emotions is central if positive changes in the ability to manage mental well-being and life challenges are to be gained (Hendriks et al., 2021). As such, studies involving PP interventions and mental well-being have also recognized positive emotions as a possible mediating variable (Li et al., 2017; Schiffrin, 2014).

Engagement

Engagement in PP can be referred to as the fulfilling sensation one acquires when one is completely absorbed or immersed in a particular activity (Seligman, 2011). This concept has also been denoted as flow by Csikszentmihalyi (1990); a positive mental state resulting from a high level of engagement that involves intense concentration, focus, and absorption. From an L2 teachers' perspective, engagement stems from the dynamic interaction between cognitive, affective, and behavioural processes (Mercer et al., 2016). Cognitive engagement is the willingness of teachers to invest their efforts in teaching when they are mentally focused; affective engagement refers to the positive feelings that teachers develop towards their teaching and students when they are interested and enjoy their work; and behavioural

engagement occurs when teachers are efficiently and actively immersed when working with their students or colleagues (Mercer et al., 2016). Tardy and Snyder (2004) documented that engagement or flow was experienced by 10 tertiary EFL teachers when learning took place or students were engaged in their learning and this helped to shape the teachers' belief of effective teaching and learning.

Relationship

Social relationships are a fundamental aspect of positive outcomes, such as better physical health and positive behaviours (Butler & Kern, 2016). Relationships fulfill basic human requirements, which include our need for a sense of belonging, love, and social support (Seligman, 2011). Besides social support, a positive teacher-student relationship is perceived to be essential in developing mutual respect and trust in an L2 classroom (Mercer et al., 2016). Common suggestions include acknowledging students' interest and involvement, recognizing students by their names, displaying empathy, providing opportunities for collaborative learning, and facilitating independent decision-making processes (Dornyei & Murphey, 2003; Mercer et al., 2016). Although past studies have illustrated the advantages of positive relationships on L2 learners' well-being (Helgesen, 2016), Gregersen et al. (2020) confirmed that ESL/EFL teachers who scored high overall well-being scores were discovered to possess positive relationships with colleagues, positive supportive organizational culture, and pleasure when working on teaching tasks.

Meaning

Meaning is the fourth well-being pillar of the PERMA model and can be defined as a feeling of "belonging to and serving something that you believe is bigger than the self" (Seligman, 2011, p.17). This feature is strongly connected to the sense of identity of how purposeful or invaluable one feels one's life is (Butler & Kern, 2016). Teachers who question their life purpose can reflect on what drew them to the teaching profession, besides making a meaningful contribution to the wider society and nurturing a generation greater than themselves (Mercer et al., 2016). To date, several studies have found that teachers' life meaning significantly correlated with health outcomes and life satisfaction (Kern et al., 2014) and conscientiousness (MacIntyre et al., 2019), which are all essential features of flourishing.

Accomplishment

The final well-being domain in Seligman's model constitutes accomplishment or also known as achievement. It involves making progress towards a particular goal/objective, mastery, or efficiency before attaining a sense of achievement (Butler & Kern, 2016; Seligman, 2011). Although accomplishment requires a constant amount of effort and needs to be actively worked on, it could influence teacher commitment and assist L2 teachers to preserve high levels of job satisfaction and motivation (Mercer et al., 2016). Seligman (2011) further connected accomplishment to the power of perseverance or grit, asserting that the desire or determination to achieve precedes one's actual achievements. In line with this, well-being research informs us that accomplishment was found to be significantly associated with high self-efficacy and low burnout levels (Butler & Kern, 2016), and life satisfaction and health of teachers (Kern et al., 2014).

Grit and Well-Being

Viewed as a personality trait, grit is defined by Duckworth et al. (2007, p.1087) as the "perseverance and passion for long term goals" under two dimensions: consistency of interest and perseverance of effort. Gritty individuals tend to possess high determination in their pursuit of goals despite constant setbacks or adversities in accomplishing their goals (Duckworth et al., 2007; Vainio & Daukantaite, 2016). Grit was found to significantly correlate with the coping skills and adaptability of teachers in their longitudinal study (Robertson-Kraft & Duckworth, 2014). Hence, from an L2 perspective, the key to enhancing teacher quality in terms of retention, performance and efficiency may hinge on grit (Duckworth et al., 2009; Robertson-Kraft & Duckworth, 2014), which indirectly promotes well-being (Duckworth et al., 2007; Peterson & Seligman, 2004). Although present studies on grit have predominantly focused on the academic and well-being outcomes of students or young adults (Disabato et al., 2018; Vainio & Daukantaite, 2016; Weisskirch, 2019), it has emerged as a consistent predictor of various well-being outcomes across these studies. Grit significantly predicted psychological well-being (Vainio & Daukantaite, 2016), subjective well-being or life satisfaction (Disabato et al., 2018; Vainio & Daukantaite, 2016), and self-esteem and happiness (Weisskirch, 2019). However, existing studies have not focused on the well-being of L2 teachers and this study attempts to bridge the gap.

Empirical Support for PERMA, Grit, and Well-Being

To date, there is a dearth of research involving the relationship between PERMA and grit of L2 teachers to the best of our knowledge. However, in an interview with the proponent of grit, Perkins-Gough (2013) presented how Duckworth and her co-researchers, built character development, including grit, among middle school staff using the PERMA framework. Based on this initiative, Duckworth may have hinted at the assimilation of grit and PERMA as a good well-being model. In addition, although it did not involve teachers, a student learning community experienced higher levels of grit after PERMA was incorporated in their PP training (Masfufah & Sudirman, 2019). In another study on character strengths and PERMA, the strength of persistence was significantly related to all the dimensions of PERMA (Wagner et al., 2019). Nonetheless, engagement and accomplishment were found to strongly correlate with persistence (Wagner et al., 2019). Correspondingly, several studies have reported strong links between engagement and grit (Hodge et al., 2018; Suzuki et al., 2015; Von Culin et al., 2014).

Previous studies between PERMA and well-being have highlighted PERMA as a multidimensional model due to the unique psychometric features of the five dimensions (Butler & Kern, 2016). In the development of the PERMA-Profiler, the multidimensional elements of PERMA strongly correlated with life satisfaction and flourishing, with meaning becoming the strongest predictor and engagement the weakest (Butler & Kern, 2016). The PERMA elements also possessed a moderate correlation with physical health (Butler & Kern, 2016). From the context of teacher well-being, positive emotion, meaning, and accomplishment strongly correlated with health and life satisfaction, whereas engagement and relationship were positively linked to organizational commitment and job satisfaction of 153 private school teachers in Australia (Kern et al., 2014). Besides its efficiency as a multidimensional model, PERMA has also displayed equal efficiency as a unidimensional model (MacIntyre et al., 2019). In a study on 47 ESL/EFL teachers' well-being and personality traits, the overall PERMA well-being score (unidimensional) was found to be positively linked to agreeableness, conscientiousness, emotional stability, and intellect (MacIntyre et al., 2019). When assessed as independent domains (multidimensional), PERMA was also related to health and several other personality traits (MacIntyre et al., 2019).

Hence, the present study acknowledges the insights from all these studies. Based on the literature reviewed, the following hypotheses were formulated based on the proposed conceptual framework in Figure 1 that highlights the hypothesized relationships between PERMA, grit, and well-being.

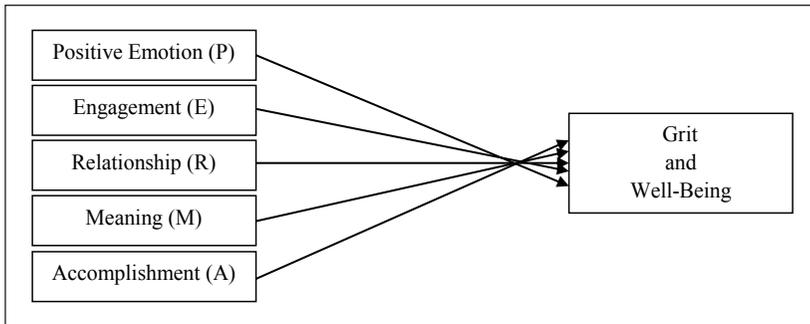
H_1 : There is a significant relationship between PERMA and the grit level of ESL teachers.

H_2 : There is a significant relationship between PERMA and the well-being of ESL teachers.

H_3 : Positive emotion significantly mediates the relationship between grit and well-being of ESL teachers.

Figure 1

Proposed Conceptual Model of PERMA on Grit and Well-Being.



METHODOLOGY

Research Design

The primary goal of this study was to investigate if the grit and well-being of Malaysian ESL teachers were significantly influenced by PERMA and if positive emotion mediated the association between grit and well-being. The hypothesized associations between the variables in this study were examined using a quantitative research design. A cross-sectional survey was utilized to obtain quantitative data in this study. Assessing current perspectives and feelings (Cresswell, 2012), data collected at only a particular point in time were sufficient

in fulfilling the purpose of this study. Recent studies in PP on well-being have generated promising results through the use of cross-sectional surveys (Disabato et al., 2018; Vainio & Daukantaite, 2016; Weisskirch, 2019).

Sample

The target population of this study constituted national school ESL teachers from Kuala Lumpur. A priori power analysis utilizing the G*Power 3.1 software was computed to identify the adequate sample size for this study. This significant step was undertaken to ensure that the results of this study were not underpowered (Voorhis & Morgan, 2007). For a multiple regression analysis with five predictors, power was set at .80 with $\alpha = .05$ (Cohen, 1988). The results specified a sample size of 91 for a medium effect size ($f^2 = .15$) for this study. Hence, data were collected from a convenient sample of 91 primary level ESL teachers. The teachers who participated voluntarily based on convenience came from national primary schools located in three regions in Kuala Lumpur.

Measures

Seligman (2011) claimed that the five PERMA domains can be assessed as distinct but correlated constructs. Hence, the PERMA-Profiler was developed by Butler and Kern (2016) considering both the unidimensional and multidimensional nature of the five constructs. After going through a comprehensive theoretical and empirical process for two years, the instrument captures the unique psychometric properties of the five PERMA domains by demonstrating “acceptable reliability, cross-time stability, and evidence for convergent and divergent validity” (Butler & Kern, 2016, p.22) across a diverse sample of over 30,000 participants. Although it was designed to be multidimensional in nature, a single score assumes that the measure is also unidimensional in nature and provides a global indication of well-being (Butler & Kern, 2016).

Thus, in examining the multidimensional function of PERMA, only 15 items (3 for positive emotion, 3 for engagement, 3 for relationship, 3 for meaning, and 3 for accomplishment) out of the original 23 items were included (Butler & Kern, 2016). The remaining items were

omitted as they served as filler items (Butler & Kern, 2016). The 10-point rating scale ranged from “Never” (0) to “Always” (10) or “Not at all” (0) to “Completely” (10). The total score for each construct was averaged by 3, representing the total items for a construct. Hence, the total score of each construct ranged from 0 to 10 on the interval scale. Although with just 3 items for a construct, based on the results of the pilot test, the internal consistency values of > 0.7 for all the constructs confirmed the unique psychometric properties of PERMA (Butler & Kern, 2016); positive emotion ($\alpha = .79$), engagement ($\alpha = .82$), relationship ($\alpha = .91$), meaning ($\alpha = .73$), and accomplishment ($\alpha = .71$).

Overall well-being was assessed using the same PERMA-Profilier. In exploring the unidimensional function of PERMA, an item on happiness was added to the initial 15 items as recommended by Butler and Kern (2016). With the same psychometric properties, the scores of the 16 items were added together and averaged by 16. Thus, the total score of PERMA representing overall well-being ranged from 0 to 10 on the interval scale. The Cronbach’s alpha based on the pilot test was .95, matching the high internal consistency values of PERMA documented in Butler and Kern’s (2016) study.

Grit was measured using the Short Grit Scale (Grit-S). Grit-S examines passion for long-term goals and trait-level perseverance and consists of 8 items (Duckworth & Quinn, 2009). Respondents rated themselves on a 5-point rating scale ranging from “Not like me at all” (1) to “Very much like me” (5). Out of the 8 items, items 1, 3, 5, and 6 were reverse scored as suggested by Duckworth and Quinn (2009). After reverse scoring, the total score of this measure was divided by the number of items. Thus, the total score for grit ranged from 1 to 5 on the interval scale. The results of the pilot test revealed a Cronbach’s alpha of .77.

Procedure

First and foremost, ethical approvals were acquired from the Malaysia Educational Planning and Research Division (EPRD), the Faculty of Education Internal Review Board of the University of Malaya (UM), and the Kuala Lumpur State Education Department (JPWPKL). A pilot test was then conducted among 30 ESL teachers, who were also part-time students at UM and represented the target population.

Before the actual data collection, the participants' scores across the measures were examined using Cronbach's alpha method to establish the validity and reliability of the instruments. Data collection took place at primary national schools from three regions under the Federal Territory of Kuala Lumpur: Sentul, Bangsar/Pudu, and Keramat. With the assistance of English Language Unit district officers, the Google Form link of the survey was administered to the English Language Panel Head of each school through their official social media platforms. Prior to obtaining access to the questionnaires, the respondents were required to provide their approval via the informed consent form that was attached to the survey. The informed consent form notified the teachers of the objectives of the study, their voluntary rights, and the contents of the survey.

Data Analyses

A preliminary analysis was conducted before the multiple regression and mediation analysis. Descriptive statistics and correlations between the predictor and the dependent variables were computed and examined. Furthermore, several basic assumptions were required to be satisfied before a regression analysis could be executed. The assumptions included linearity and homoscedasticity, condition of the predictor/independent variables (IV), multicollinearity, and normality of residuals (Cohen et al., 2003). Violation of the assumptions might lead to insignificant confidence intervals and significance levels and inaccurate regression coefficients (Cohen et al., 2003). Thus, the skewness and kurtosis values, the tolerance and variance inflation factor (VIF) values, the Durbin-Watson (DW) coefficient, and Cook's Distance (Cook's D) values were analyzed to ensure that the data were normally distributed and the assumptions were met. In examining H_1 and H_2 , two multiple regression analyses were conducted to observe whether the 5 elements of PERMA influenced significant changes in the variance of grit and well-being. The regressions were examined in terms of the standardized regression coefficients (β) at $p < .05$. The results of the coefficient of determination (R^2), the unstandardized regression coefficients (B), and the t -values were presented in a table.

Furthermore, a simple mediation analysis was carried out to observe the mediation effect of positive emotion between grit and well-being. The mediation model was analyzed using PROCESS Macro for SPSS

(Hayes, 2013). The unstandardized regression coefficients and the significance between grit and well-being in the model were analyzed in terms of the direct effects (a, b, c') and total effect (c). The indirect effect (IE) obtained from the product of the coefficients ($a \times b$) was also explored. The IE signifies the change in well-being for every unit of change in grit that is mediated by positive emotion. Partial mediation occurs when both the direct effect (DE) and the IE between grit and well-being are significant. On the contrary, complete mediation takes place when the DE between grit and well-being is significant, but the IE is insignificant. The bootstrapping method (Preacher & Hayes, 2008) with a resampling procedure of 10 000 bootstrap samples was employed to test H_3 . Point estimates and confidence intervals (95%) were estimated for the IE, which was considered significant if the confidence interval did not contain zero. All statistical analyses were carried out using the SPSS-IBM v20 with the level of significance at $p < .05$.

RESULTS

Descriptive Statistics

Table 1 shows the means, standard deviations, skewness, kurtosis, and correlations between the variables in this study. Based on the mean scores, most of the ESL teachers in this study possessed high levels of PERMA in terms of positive emotion, engagement, relationship, meaning, accomplishment, and well-being. Nonetheless, their level of grit was just above average. Significant positive correlations were indicated between all the variables in this study. The strength of the correlations varied from weak to strong. Weak correlations were displayed mainly between grit and PERMA constructs; positive emotion and grit ($r = .26, p < .05$), engagement and grit ($r = .36, p < .01$), relationship and grit ($r = .24, p < .05$), meaning and grit ($r = .31, p < .01$), and accomplishment and grit ($r = .41, p < .01$). Likewise, PERMA well-being portrayed low correlations with other independent PERMA constructs and grit; positive emotion and well-being ($r = .35, p < .01$), engagement and well-being ($r = .39, p < .01$), relationship and well-being ($r = .29, p < .01$), meaning and well-being ($r = .35, p < .01$), accomplishment and well-being ($r = .33, p < .01$), and grit and well-being ($r = .41, p < .01$). Conversely, besides a slightly weak

correlation between engagement and relationship ($r = .47, p < .01$), the associations between the other PERMA constructs were discovered to be between moderate and high; positive emotion and engagement ($r = .65, p < .01$), positive emotion and relationship ($r = .66, p < .01$), positive emotion and meaning ($r = .79, p < .01$), positive emotion and accomplishment ($r = .73, p < .01$), engagement and meaning ($r = .59, p < .01$), engagement and accomplishment ($r = .56, p < .01$), relationship and meaning ($r = .63, p < .01$), relationship and accomplishment ($r = .54, p < .01$), and meaning and accomplishment ($r = .81, p < .01$).

Table 1

Descriptive Statistics of the Continuous Variables (N = 91)

Construct	1	2	3	4	5	6	7
Positive Emotion	1	-	-	-	-	-	-
Engagement	.65**	1	-	-	-	-	-
Relationship	.66**	.47**	1	-	-	-	-
Meaning	.79**	.59**	.63**	1	-	-	-
Accomplishment	.73**	.56**	.54**	.81**	1	-	-
Grit	.26*	.36**	.24*	.31**	.41**	1	-
Well-Being	.35**	.39**	.29**	.35**	.33**	.41**	1
Mean	7.62	7.60	7.50	7.76	7.37	3.43	7.57
SD	1.30	1.20	1.67	1.21	1.15	.57	1.09
Skewness	-.77	-.64	-.89	-.26	-.16	-.02	-.83
Kurtosis	.65	.12	.91	.13	.42	.38	1.46

Note. * $p < .05$, ** $p < .01$

Preliminary Analysis

Tables 2 to 4 present the results of the analyses that were conducted to ensure that the basic assumptions for the regression analysis were met. Based on Table 1, the skewness values between -.02 and -.89 and the kurtosis values between .12 and 1.46 indicated a normal distribution of the data. Chua (2013) mentioned that the normality of data is a reasonable assumption when the skewness and kurtosis values are within the normal distribution range of -1.96 to +1.96. The linear patterns shown in the histograms and scatterplots further substantiate the assumptions of linearity and homoscedasticity. In addition, the

tolerance and VIF values were found to be $> .2$ and < 4 respectively, which signified an absence of multicollinearity among the predictors (Hair et al., 2010) (Table 2). Cook's Distance (Cook's D) values generated from the regression analyses between each independent (IV) and dependent (DV) variable were found to range from .07 to .27 (Table 3). Thus, no outlying residuals or influential points were evident as the Cook's D values did not exceed the threshold of 0.85 ($D_i < 0.85$) (McDonald, 2002). Last but not least, the regression analyses between the predictor and outcome variables in this study produced Durbin-Watson (DW) coefficients between 1.65 and 1.97 (Table 4). Garson (2012) specified that DW coefficients between 1.5 and 2.5 support the independence of the residuals and the absence of autocorrelation.

Table 2

Multicollinearity Diagnostics

IV	DV	B	SE B	β	t	a	Tolerance	VIF
Positive Emotion	Accomplishment	.19	.10	.21	1.85	.07	.29	3.49
Engagement		.06	.08	.06	.71	.48	.56	1.79
Relationship		-.01	.06	-.02	-.21	.84	.53	1.89
Meaning		.59	1.00	.62	5.97	.00	.34	2.93
Positive Emotion	Meaning	.30	.09	.33	3.44	.00	.31	3.19
Engagement		.06	.07	.06	.81	.42	.56	1.79
Relationship		1.00	.05	.13	1.85	.07	.55	1.81
Accomplishment		.49	.08	.47	5.97	.00	.45	2.22
Positive Emotion	Relationship	.56	.18	.43	3.05	.00	.31	3.28
Engagement		.04	.15	.03	.33	.70	.56	1.80
Meaning		.40	.22	.29	1.85	.07	.25	3.70
Accomplishment		-.04	.20	-.03	-.21	.84	.32	3.14
Positive Emotion	Engagement	.42	.13	.45	3.11	.00	.31	3.26
Relationship		.02	.08	.03	.30	.77	.53	1.88
Meaning		.13	.16	.13	.81	.42	.27	3.75
Accomplishment		.11	.14	.10	.71	.48	.32	3.12
Engagement	Positive Emotion	.24	.08	.22	3.11	.00	.62	1.62
Relationship		.18	.06	.23	3.05	.00	.59	1.70
Meaning		.40	.12	.37	3.44	.00	.27	3.61
Accomplishment		.21	.11	.18	1.85	.07	.33	3.02

Table 3

Cook's D Values in the Regression between the IVs and the DVs

IV	DV	Cook's D
Positive Emotion	Grit	.08
Engagement		.08
Relationship		.13
Meaning		.07
Accomplishment		.14
Positive Emotion	Well-Being	.23
Engagement		.25
Relationship		.27
Meaning		.23
Accomplishment		.15

Table 4

Durbin-Watson (DW) Values in the Regression between the IVs and the DVs

IV	DV	DW
Positive Emotion	Grit	1.84
Engagement		1.97
Relationship		1.86
Meaning		1.89
Accomplishment		1.94
Positive Emotion	Well-Being	1.72
Engagement		1.81
Relationship		1.79
Meaning		1.65
Accomplishment		1.82

Multiple Regression Analysis

Two regression analyses were carried out to assess the impact of PERMA on grit and well-being. The results of the regression analyses

are shown in the following Table 5. When regressed into grit, PERMA significantly accounted for 21 percent of the variance in grit; $R = .46$, $R^2 = .21$, $F(5, 85) = 4.61$, $p < .01$. Analysis of the standardized partial regression coefficients (β) showed that engagement significantly contributed to the variance in grit at $\beta = .27$, $t(85) = 2.11$, $p < .05$. Correspondingly, accomplishment was also discovered to contribute to major changes in grit at $\beta = .45$, $t(85) = 2.62$, $p < .05$. Hence, it can be deduced that higher levels of engagement and accomplishment were found to be significantly associated with higher levels of grit of the ESL teachers. Therefore, H_1 was supported.

When regressed into well-being, PERMA significantly predicted 18 percent of the changes in well-being; $R = .43$, $R^2 = .18$, $F(5, 85) = 3.78$, $p < .01$. Further examination of the standardized partial regression coefficients (β) indicated that only engagement significantly influenced the variance in well-being at $\beta = .26$, $t(85) = 1.99$, $p < .05$. From this, it can be inferred that higher levels of engagement were significantly connected to the positive well-being of the ESL teachers. Thus, H_2 was also supported.

Table 5

Summary of Multiple Regression Analyses of PERMA on Grit and Well-Being

Variable	Grit					Well-Being				
	R^2	B	$SE B$	B	t	R^2	B	$SE B$	β	t
PERMA	.21**					.18**				
Positive Emotion		-.10	.08	-.23	-1.25		.02	.16	.03	.13
Engagement		.13	.06	.27	2.11*		.24	.12	.26	1.99*
Relationship		.02	.05	.06	.48		.05	.09	.07	.51
Meaning		-.03	.09	-.07	-.36		.06	.18	.07	.36
Accomplishment		.22	.08	.45	2.62*		.07	.17	.07	.42

Note. * $p < .05$, ** $p < .01$

Mediation Analysis

This section is dedicated to assessing the mediating impact of positive emotion on the relationship between grit and well-being. In the path analysis, path a = regression between grit (IV) and the mediator (M), positive emotion; path b = regression between positive emotion (M) and well-being (DV) when grit (IV) is controlled; path c (Total Effect) = regression between grit (IV) and well-being (DV); and path c' (Direct Effect) = regression between grit (IV) and well-being (DV) when positive emotion is controlled (M). A summary of the mediation model after the bootstrapping is shown in Figure 2.

The unstandardized regression coefficients indicated that the association between grit and positive emotion in path a was statistically significant at $\beta = .59$, $t(89) = 2.55$, $p < .05$. The relationship between positive emotion and well-being in path b was also significant at $\beta = .22$, $t(88) = 2.72$, $p < .05$. The DE between grit and well-being in path c' was also found to be significant at $\beta = .66$, $t(88) = 3.55$, $p < .05$.

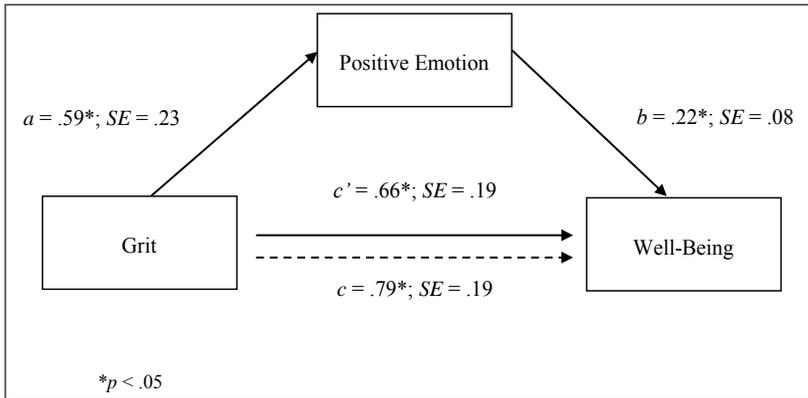
The unstandardized IE for path $ab = (.59)(.22)$. In analyzing the significance of the IE of positive emotion, the bootstrap test for the unstandardized IE was .13, with the 95 percent confidence interval found to range from .01 to .31. Hence, with the significant DE at path c' between grit and well-being, the IE was also significant at $p < .05$.

The total effect (TE) of grit on well-being in path c was .79 and the unstandardized IE was .13. In examining the percentage of IE over the TE of grit on well-being, the following formula was applied; IE of X on Y/ TE of X on Y = $(0.13 / 0.78) \times 100 = 17$ percent

From this, we can infer that the percentage of the TE of grit on well-being that operates indirectly is 17 percent, but a large proportion of the relationship of 83 percent functions directly. Thus, grit significantly influenced 83 percent of the changes in well-being, but 17 percent of the relationship was explained by positive emotion. With this, H_3 was supported as positive emotion functioned as a partial mediator in the relationship between grit and well-being.

Figure 2

Path Coefficients for Mediation between Grit, Positive Emotion and Well-Being (N = 91)



Note. The dotted lines the effect of grit on well-being when positive emotion is not included as the mediator, a , b , c and c' are the unstandardized regression coefficients.

DISCUSSION

As a summary, we examined (a) the impact of PERMA on the grit and well-being of ESL teachers in Malaysia and (b) if positive mediation functioned as a mediator in the relationship between grit and well-being. Empirical support was documented via the regression and mediation analyses in this study.

With the PERMA framework as our conceptual basis, PERMA emerged as a significant predictor of grit and well-being. The findings on PERMA here concur with past studies that reported a significant association between PERMA and grit (Masfufah & Sudirman, 2019; Wagner et al., 2019), and well-being (Butler & Kern, 2016; Kern et al., 2014; 2015; MacIntyre et al., 2019; Tansey et al., 2018). From the results of the reliability analyses to the regression analyses, the five elements of PERMA displayed strong harmony in functioning as a multidimensional model of well-being (Butler & Kern, 2016). This implies that PERMA can potentially function as a pillar of support for Malaysian ESL teachers during challenging or troubling times. With the core focus of PP in promoting positive human functioning (Kern et al., 2014; Mercer et al., 2016), PERMA may guide ESL teachers to alleviate risk factors such as burnout, stress, musculoskeletal

pains, and anxiety including nurturing positive states. Hence, our ESL teachers are expected to develop encouraging levels of grit and well-being and flourish in schools when they perform well across multiple well-being dimensions. Moreover, an increase in the well-being of L2 teachers via PERMA may benefit students indirectly, as the well-being of teachers and students are interconnected (Mercer et al., 2016). Based on the results here, we can also comprehend why grit and PERMA have been perceived as substantial components in PP interventions (Masfufah & Sudirman, 2019; Perkins-Gough, 2013). Incorporating PERMA and grit in character development helps to nurture active listening, meaningful relationships, positive goal setting, and behavioural consequences (Perkins-Gough, 2013). Accordingly, the amalgamation of both the constructs has been significantly proven to correlate with one's ability to be happy and consistently pursue and achieve targeted goals within an educational environment (Masfufah & Sudirman, 2019). Thus, with little being explored previously, the significant interaction between PERMA and grit in this study adds to the growing body of research in the area of teacher well-being.

Further exploration of PERMA indicated that both engagement and accomplishment were significant predictors of grit. The findings align with previous studies on grit (Hodge et al., 2018; Suzuki et al., 2015; Von Culin et al., 2014; Wagner et al., 2019). Grittier individuals are more inclined to pursue happiness via engagement (Suzuki et al., 2015; Von Culin et al., 2014). Teachers who seek happiness via engagement are more likely to enjoy their organizational commitments (Suzuki et al., 2015), which helps to promote grit through a sustained effort over time (Von Culin et al., 2014). This is relevant to the coping skills and adaptability of L2 teachers (Robertson-Kraft & Duckworth, 2014), as highly determined or gritty individuals will pursue their goals and seek to achieve them regardless of obstacles, time, and effort (Duckworth et al., 2007; Vainio & Daukantaite, 2016). Hence, the positive affiliation between engagement and grit eventually leads to productivity (Hodge et al., 2018). The perseverance to achieve precedes achievement itself (Seligman, 2011) and accomplishment only takes place after teachers have committed themselves to actively work on a particular goal and become skillful or proficient at it after a period of time (Mercer et al., 2016). This is consistent with the causal connection discovered between engagement and accomplishment (Kern et al., 2015; Wagner et al., 2019), in defining character strengths, including perseverance or grit

(Wagner et al., 2019). While engagement revolves around the process of task completion, accomplishment involves its results (Wagner et al., 2019). Thus, it was not surprising when both engagement and accomplishment displayed similar patterns of correlation on grit in this study.

Besides grit, engagement was also significantly linked to the well-being of the ESL teachers. Despite the limited research between engagement and well-being of L2 teachers, this finding supports the significant link between engagement and well-being indicated in past research (Bermejo-Toro, et al., 2016; Kern et al., 2014; 2015; MacIntyre et al., 2019). With previous studies on well-being conducted within the context of workplace engagement (e.g., Bermejo-Toro et al., 2016), engagement has been documented to act as a protective factor against burnout (Kern et al., 2014; Bermejo-Toro et al., 2016). Thus, with its potential preventive function against risk factors, engagement can positively impact workplace performance and overall happiness (Butler & Kern, 2016). Through higher levels of engagement, happier teachers are anticipated to be more committed and dedicated to their profession and organization as a whole (Kern et al, 2014; 2015). This resonates strongly with the notion of grit, engagement, and productivity (Hodge et al., 2018) mentioned earlier. Thus, these findings suggest that engagement has a crucial role to play in securing a comprehensive understanding of L2 teachers' grit and well-being.

The mediation model illustrated that grit was significantly associated with well-being, with or without the intervention of positive emotion. Positive emotion made a considerable amount of difference in the relationship between grit and well-being. This implies that grit impacts well-being beyond the influence of positive emotion. Hence, the mediation results support the positive relationship between grit and well-being indicated in previous literature (Disabato et al., 2018; Vainio & Daukantaite, 2016; Weisskirch, 2019). As a personality trait, grit by itself correlates with positive emotions such as happiness and pursuit of goals (Duckworth et al., 2009). From this, the dynamism of grit captures positive emotions and empowers well-being as gritty individuals are more inclined to have a growth mindset and make positive contributions with the presence of positive emotions (Duckworth et al., 2009). Gritty teachers are indeed positive and strong teachers as they are more likely to work harder in various challenging settings (Duckworth et al., 2009). Regardless of obstacles, this sustained effort correlates with improved life satisfaction, teacher

efficiency, and teaching performance over time (Duckworth et al., 2007; 2009; Duckworth & Quinn, 2009). Consequently, this aspect of grit that defines teacher retention resonates well with the role of positive emotions in building their enduring personal resources for future teaching and work through thought-action repertoires (Fredrickson, 2001).

With what has been discussed, our findings suggest that the nature of both grit and positive emotion may be parallel to a certain extent. Positive emotion could have emerged as a complete mediator in this study if the direct relationship between grit and well-being was insignificant. Nonetheless, the unique role of positive emotion as a significant mediator cannot be undervalued as its importance was equally reflected in previous studies (Li et al., 2017; Lyubomirsky & Layous, 2013, Rusk et al., 2018; Sheldon & Lyubomirsky, 2012). With the intervention of positive emotion, positive activities with optimal features will presumably promote successful psycho-social functioning and durable well-being (Lyubomirsky & Layous, 2013, Rusk et al., 2018). In layman's terms, gritty individuals who engage in positive activities such as thinking optimistically and persevering with their passion may experience enhanced positive emotions, which in turn helps to boost their well-being. Hence, the positive mediating impact of positive emotion on well-being in our mediation model supports the theoretical concept of the positive-activity model. Based on both the literature reviewed and our findings, we believe that the role of positive emotion is promising and may contribute significantly to explaining the well-being of L2 teachers under different conditions.

IMPLICATIONS, LIMITATIONS, AND SUGGESTIONS FOR FUTURE RESEARCH

Although the present study was conducted with a smaller sample, the findings support the strength of PERMA documented in previous studies. Regardless of numerous teaching barriers and life's stressors, the dynamic interaction between the five elements of PERMA is anticipated to enhance the well-being and grit levels of ESL teachers. Public safety organizations and health practitioners should be mindful that well-being interventions or enrichment programs for L2 teachers should be developed around PERMA. In professional teacher development programs, relevant district or state education

departments should explore the possibility of employing the PERMA framework to enrich the well-being and morale of L2 teachers via interactive games or group activities. Hence, the composite model of PERMA is implied as a promising well-being pillar for L2 teachers and leaves plenty of scope for further research. With a scarcity of research within the L2 field, future studies on PERMA may enlighten us with new theoretical perspectives on the well-being of L2 teachers.

Based on the literature reviewed, the personality trait of grit has been documented to be crucial to the well-being of both L2 teachers and learners, teacher retention, and teacher performance (Duckworth et al., 2007; 2009; Robertson-Kraft & Duckworth, 2014). With the positive association between grit and well-being of the L2 teachers in this study, the language panels in schools ought to consider how grit can be incorporated into their L2 environment to boost the well-being of teachers and nurture a positive learning mindset among the learners. Nonetheless, grit scores are malleable and the change from less gritty to gritty teachers may be reflected over time (Ion et al., 2017). Hence, we suggest that future researches on grit and well-being employ longitudinal studies using larger samples of teachers. With the significant interplay between the well-being of L2 teachers and learners (Mercer et al., 2016), future studies could also investigate whether the elevation of teachers' well-being via grit influences their teaching efficiency and the well-being of learners in L2 classrooms.

Despite some meaningful results, this study is not without its fair share of limitations. The convenience sampling method is non-randomized and does not reflect an equal opportunity of the actual population participating in this study. Hence, this sampling bias restricts the generalizability of the findings. Nonetheless, the data on the demographic information of the teachers collected may help to curtail the probability of the biased identity of the respondents (Fraenkel et al., 2015). Moreover, as a quantitative approach was employed in this study, future studies could look into integrating qualitative methods such as interviews to obtain more in-depth knowledge. Last but not least, we address the effectiveness of structural equation modeling (SEM) in examining mediation models with a large sample size. Thus, this study can be replicated by employing SEM with a randomized larger sample of ESL teachers to address the research gaps in this study and to better inform us on the grit and well-being of L2 teachers in relation to PERMA.

ACKNOWLEDGMENT

This study received no specific grant from any public funding agency, commercial, or non-profit sectors. We would also like to declare that no conflicts of interest have arisen as a result of this study.

REFERENCES

- Bermejo-Toro, L., Prieto-Ursua, M., & Hernandez, V. (2016). Towards a model of teacher well-being: Personal and job resources involved in teacher burnout and engagement. *Educational Psychology, 36*(3), 481–501. <https://doi.org/10.1080/01443410.2015.1005006>
- Butler, J., & Kern, M. L. (2016). The PERMA-Profler: A brief multidimensional measure of flourishing. *International Journal of Well-Being, 6*(3), 1–48. <https://doi.org/10.5502/ijw.v6i3.526>
- Chua, Y. P. (2013). *Mastering research statistics*. McGraw-Hill Education.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Academic.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Lawrence Erlbaum Associates.
- Cresswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). Pearson Education.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper and Row.
- Disabato, D. J., Goodman, F. R., & Kashdan, T. B. (2018). Is grit relevant to well-being and strengths? Evidence across the globe for separating perseverance of effort and consistency of interests. *Journal of Personality, 87*(2), 194–211. <https://doi.org/10.1111/jopy.12382/>
- Dörnyei, Z., & Murphey, T. (2003). *Group dynamics in the language classroom*. Cambridge University Press.
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 1087–1101. <https://doi.org/10.1037/0022-3514.92.6.1087>

- Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the short grit scale (Grit-S). *Journal of Personality Assessment, 91*(2), 166–174. <https://doi.org/10.1080/00223890802634290>
- Duckworth, A. L., Quinn, P. D., & Seligman, M. E. P. (2009). Positive predictors of teacher effectiveness. *The Journal of Positive Psychology, 4*(6), 540–547. <https://doi.org/10.1080/17439760903157232>
- Duckworth, A. (2016). *Grit: The power of passion and perseverance*. Simon & Schuster, Inc.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to design and evaluate research in education* (9th ed.). McGraw-Hill Education.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218–226. <https://doi.org/10.1037//0003-066X.56.3.218>
- Garson, D. G. (2012). *Testing statistical assumptions*. Statistical Publishing Associates.
- Ghavifekr, S., & Pillai, N. S. (2016). The relationship between school's organizational climate and teacher's job satisfaction: Malaysian experience. *Asia Pacific Education Review, 17*(1), 87–106. <https://doi.org/10.1007/s12564-015-9411-8>
- Gregersen, T., Mercer, S., MacIntyre, P., Talbot, K., & Banga, C. A. (2020). Understanding language teacher well-being: An ESM study of daily stressors and uplifts. *Language Teaching Research, 1*–22. <https://doi.org/10.1177/1362168820965897>
- Hair, J. F., William, C. B., Barry, J. B., & Rolph, E. A. (2010). *Multivariate Data Analysis*. Prentice Hall.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.
- Helgesen, M. (2016). Happiness in ESL/EFL: Bringing positive psychology to the classroom. In P. D. MacIntyre, T. Gregersen, & S. Mercer (Eds.), *Positive Psychology in SLA* (pp. 305–323). Multilingual Matters.
- Hendriks, T., Schotanus-Dijkstra, M., Graafsma, T., Bohlmeijer, E., & de Jong, J. (2021). Positive emotions as a potential mediator of a multi-component positive psychology intervention aimed at increasing mental well-being and resilience. *International Journal of Applied Positive Psychology, 6*, 1–21. <https://doi.org/10.1007/s41042-020-00037-5>

- Hodge, B., Wright, B. J., & Bennett, P. C. (2018). The role of grit in determining engagement and academic outcomes for university students. *Research in Higher Education*, 59(4), 448–460. <https://doi.org/10.1007/s11162-017-9474-y>
- Ion, A., Mindu, A., & Gorbanescu, A. (2017). Grit in the workplace? Hype or ripe? *Personality and Individual Differences*, 111, 163–168. <https://doi.org/10.1016/j.paid.2017.02.012>
- Kabilan, M. K. (2019). Malaysian English language teachers' satisfaction level of their professional development. *English Language Teaching and Research*, 1(1), 49–59. <https://doi.org/10.33474/ELTAR-J.V1I1.4770>
- Kern, M. L., Waters, L., Adler, A., & White, M. (2014). Assessing employee wellbeing in schools using a multifaceted approach: Associations with physical health, life satisfaction, and professional thriving. *Psychology*, 5, 500–513. <https://doi.org/10.4236/psych.2014.56060>
- Kern, M. L., Waters, L. E., Adler, A., & White, M. A. (2015). A multidimensional approach to measuring well-being in students: Application of the PERMA framework. *The Journal of Positive Psychology*, 10(3), 262–271. <https://psycnet.apa.org/doi/10.1080/17439760.2014.936962>
- Li, M., Jiang, X., & Ren, Y. (2017). Mediator effects of positive emotions on social support and depression among adolescents suffering from mobile phone addiction. *Psychiatria Danubina*, 29(2), 207–213. <https://doi.org/10.24869/psyd.2017.207>
- Lyubomirsky, S., & Layous, K. (2013). How do simple positive activities increase well-being? *Current Directions in Psychological Science*, 22(1), 57–62. <https://doi.org/10.1177/0963721412469809>
- MacIntyre, P. D., Gregersen, T., & Mercer, S. (2016). *Positive Psychology in SLA*. Multilingual Matters.
- MacIntyre, P. D., Ross, J., Talbot, K., Mercer, S., Gregersen, T., & Banga, C. A. (2019). Stressors, personality and wellbeing among language teachers. *System*, 82, 26–38. <https://doi.org/10.1016/j.system.2019.02.013>
- Masfufah, A. A., & Sudirman, N. A. (2019). Picollo (positive psychology in classroom) programme: Training for increase grit for adolescent community in classroom setting. *Proceedings of the 4th ASEAN Conference on Psychology, Counselling, and Humanities (ACPOCH 2018)*, 279–284. <https://doi.org/10.2991/acpch-18.2019.68>

- McDonald, B. (2002). A teaching note on Cook's distance—A guideline. *Research Letters in the Information and Mathematical Sciences*, 3, 127–128.
- Mercer, S., Oberdorfer, P., & Saleem, M. (2016). Helping language teachers to thrive: Using positive psychology to promote teachers' professional well-being. In D. Gabrys-Barker, & D. Galajda (Eds.), *Positive Psychology Perspectives on Foreign Language Learning and Teaching* (pp. 213–229). Springer.
- Mercer, S. (2018). Psychology for language learning: Spare a thought for the teacher. *Language Teaching*, 51(4), 504–525. <https://doi.org/10.1017/S0261444817000258>
- Moy, M. F., Hoe, V. C. W., Hairi, N. N., Chu, A. H. Y., Bulgiba, A., & Koh, D. (2015). Determinants and effects of voice disorders among secondary school teachers in Peninsular Malaysia using a validated Malay version of VHI-10. *PLoS ONE*, 10(11). <https://doi.org/10.1371/journal.pone.0141963>
- Mukundan, J., Zare, P., Zarifi, A., Manaf, U. K. A., & Sahamid, H. (2015). Language teacher burnout and school type. *English Language Teaching*, 8(9), 26–32. <https://doi.org/10.5539/elt.v8n9p26>
- Muniandy, J. (2017). An investigation on English teachers' psychological well-being and their job satisfaction. *International Journal of Novel Research in Humanity and Social Sciences*, 4(2), 20–31.
- Nazari, M., & Oghyanous, P. A. (2021). Exploring the role of experience in L2 teachers' turnover intentions/occupational stress and psychological well-being/grit: A mixed methods study. *Cogent Education*, 8(1), 1–15. <https://doi.org/10.1080/2331186X.2021.1892943>
- Perkins-Gough, D. (2013). The significance of grit: A conversation with Angela Lee Duckworth. *Educational Leadership*, 71(1), 14–20.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. American Psychological Association; Oxford University Press.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptomatic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/brm.40.3.879>
- Rashid, R. A., Rahman, S. B. A., & Yunus, K. (2016). Reforms in the policy of English language teaching in Malaysia. *Policy Futures in Education*, 15(1), 100–112. <https://doi.org/10.1177/1478210316679069>

- Robertson-Kraft, C., & Duckworth, A. L. (2014). True grit: Trait-level perseverance and passion for long-term goals predicts effectiveness and retention among novice teachers. *Teachers College Record*, 116(3), 1–27.
- Rusk, R. D., Vella-Brodrick, D. A., & Waters, L. (2018). A complex dynamic systems approach to lasting positive change: The synergistic change model. *The Journal of Positive Psychology*, 13(4), 406–418. <https://doi.org/10.1080/17439760.2017.1291853>
- Schiffirin, H. H. (2014). Positive psychology and attachment: Positive affect as a mediator of developmental outcomes. *Journal of Child and Family Studies*, 23(6), 1062–1072. <https://doi.org/10.1007/s10826-013-9763-9>
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Free Press.
- Sheldon, K. M., & Lyubomirsky, S. (2012). The challenge of staying happier: Testing the hedonic adaptation prevention model. *Personality and Social Psychology Bulletin*, 38(5), 670–680. <https://doi.org/10.1177/0146167212436400>
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60(5), 410–421. <https://doi.org/10.1037/0003-066X.60.5.410>
- Subon, F., & Sigie, M. M. (2016). Burnout among primary and secondary school teachers in Samarahan district. *IOSR Journal of Humanities and Social Science*, 21(8), 28–41. <https://doi.org/10.9790/0837-2108112841>
- Suzuki, Y., Tamesue, D., Asahi, K., & Ishikawa, Y. (2015). Grit and work-engagement: A cross-sectional study. *PLoS ONE*, 10(9). <https://doi.org/10.1371/journal.pone.0137501>
- Tansey, T. N., Smedema, S., Umucu, E., Iwanaga, K., Wu, J. R., Cardoso, E. D. S., & Strauser, D. (2018). Assessing college life adjustment of students with disabilities: Application of the PERMA framework. *Rehabilitation Counseling Bulletin*, 61(3), 131–142. <https://doi.org/10.1177/0034355217702136>
- Tardy, C. M., & Snyder, B. (2004). ‘That’s why I do it’: Flow and EFL teachers’ practices. *ELT Journal*, 58(2), 118–128. <https://doi.org/10.1093/elt/58.2.118>
- Vainio, M. M., & Daukantaite, D. (2016). Grit and different aspects of well-being: Direct and indirect relationships via sense of coherence and authenticity. *Journal of Happiness Studies*, 17(5), 2119–2147. <https://doi.org/10.1007/s10902-015-9688-7>

- Von Culin, K. R., Tsukayama, E., & Duckworth, A. L. (2014). Unpacking grit: Motivational correlates of perseverance and passion for long-term goals. *The Journal of Positive Psychology, 9*(4), 306–312. <https://doi.org/10.1080/17439760.2014.898320>
- Voorhis, C. R. W. V., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology, 3*(2), 43–50. <https://doi.org/10.20982/tqmp.03.2.p043>
- Wagner, L., Gander, F., Proyer, R. T., & Ruch, W. (2019). Character strengths and PERMA: Investigating the relationships of character strengths with a multidimensional framework of well-being. *Applied Research in Quality of Life, 15*(2), 307–328. <https://doi.org/10.1007/S11482-018-9695-Z>
- Weisskirch, R. S. (2019). Grit applied within: Identity and well-being. *Identity, 19*(2), 98–108. <https://doi.org/10.1080/15283488.2019.1604345>
- Zamri, E. N., Moy, F. M., & Hoe, V. C. W. (2017). Association of psychological distress and work psychosocial factors with self-reported musculoskeletal pain among secondary school teachers in Malaysia. *PLoS ONE, 12*(2). <https://doi.org/10.1371/journal.pone.0172195>
- Zarifizadeh, S. (2012). Job satisfaction factors among English language teachers in Malaysia. *International Journal of Applied Linguistics & English Literature, 1*(4), 30–36. <https://doi.org/10.7575/ijalel.v.1n.4p.30>