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How to decrease Test Anxiety: a focus on Academic Emotion Regulation, L2 grit, resilience, and self-assessment

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Abstract

Effective education and evaluation may be achieved when the mental and emotional health of the students being evaluated are taken into consideration. As a consequence of this, the purpose of this research was to try to highlight the dynamic that exists between Test Anxiety (TA), Academic Emotion Regulation (AER), L2 grit (L2G), academic resilience (AR), and core of self-assessment (CAS). In order to accomplish this goal, 417 English as a foreign language (EFL) students from Kuwait were provided with copies of the Test Anxiety Scale, the Academic Emotion Regulation Questionnaire, the Language-domain-specific Grit Scale, the Academic Resilience Scale, and the Core of Self-Assessment Questionnaire. The screening of the data using confirmatory factor analysis (CFA) and structural equation modeling (SEM) explicitly determined the impacts AER, L2G, AR, and CAS had on TA. It means that students who has developed a healthy state of AER, L2G, AR, and CSA could modulate their Test Anxiety skillfully. The implications of the study, which might lead to enhancements in language instruction and evaluation, are discussed in detail.

Keywords: Test Anxiety, Academic Emotion Regulation, L2 grit, Academic resilience, Core of self-assessment, EFL students

Introduction

The ability to perform well on exams may be hindered if learners suffer from Test Anxiety, which is characterized by a mix of physical symptoms and emotional responses. A combination of physical signs and mental responses known as Test Anxiety prevent you from doing effectively on exams. Many students, for an assortment of different reasons, feel exam anxiety that ranges in intensity from mild to severe. Students may have a momentary sense of helplessness in a testing setting, even though their locus of control is internal, if they are aware that they have not prepared enough for the exam (Ritonga et al., 2023). Moreover, performance on the exam might suffer, and students' mood can worsen if they suffer from TA (Rezaei et al., 2022). Therefore, overcoming Test Anxiety will increase the academic success of the learners. To this end, educationalists are in search of ways to overcome TA and provide mental and psychological health for the learners.

AER is a real-time indicator of development that points in the right direction like a map, and it helps students regulate their emotional intensity and focus while learning (Hu (2022)). It is crucial that educators and students alike become proficient in effective ER techniques. When it comes to anxiety, fear, stress, and demotivation, language learners are more susceptible; hence, ER plays a larger role in these settings (Namaziandost et al. (2023)). According to Alazemi et al. (2023), the direction of students' cognitive affairs is affected by the intensity and duration of AEG. The focus of this inquiry is on the final construct, PB. Learners' own aspirations provide the conceptual framework for PB. Students' efforts may be guided by these endpoints.

Physical, behavioral, and mental processes are all intertwined in AER (Gross & Barrett, 2011). AER is a dynamic mechanism that monitors and manipulates people's emotions throughout time (Gross et al., 2006). Multiple recent studies have shown that AER is associated with beneficial teacher- and learner-related constructs such as self-efficacy (Burić et al., 2016), critical thinking and immunity (Namaziandost et al., 2022b), and L2 tenacity (Heydarnejd et al., 2022). The AER stands for "affective regulating strategies," which are methods used by students to keep their emotions in check while studying (Burić et al., 2016). Attempts to explain AER in a scholarly setting (Pekrun et al., 2017) have shown that demographic characteristics about students have a major role in both AER and how much they like it. Additionally, Heydarnejd et al. (2022) demonstrated that AER causes development in learning and success in school. The results showed that students' ability to maintain a healthy emotional state correlated with greater intellectual growth. AER has been shown to have a significant impact on increasing both student engagement and teacher-student collaboration (Richards, 2020). In a recent attempt, Alazemi et al. (2023) evidenced that level of academic buoyancy, L2 grit, AER, and personal best goals are corelated among EFL learners.

The other crucial concept that may influence the state of TA is L2 grit tendencies. The L2 Grit is a combination of trying hard and caring deeply about the outcome. Research on the topic of grit has suggested that it is significantly related to other teacher and student-related constructs that contribute to educational success (Alazemi et al., 2023; Shafee Rad & Jafarpour, 2022; Sudina & Plonsky, 2021; Ritonga et al., 2023). More specifically, L2 grit and its contribution to language evaluation and academic accomplishment are of major relevance since students' success in language acquisition is strongly reliant on their work and desire for long-term objectives. High-grit people, as stated by Duckworth (2016), have a constructive outlook on their work life. Another way of looking about grit is as a character characteristic that helps one prioritize their goals and ignore the distractions that might otherwise get in the way of their progress (Hejazi & Sadoughi, 2022; Hedarnejad et al., 2022).

According to Fletcher and Sarkar (2003), one definition of the concept of resilience is the ability to continue normal development and make desirable changes despite substantial adversity. student resilience (SR) is a multifaceted concept, and a variety of factors have a key influence in both its creation and extension (Campbell Sills et al., 2006). These qualities include temperament and personality in addition to distinctive talents such as active problem-solving and personality attributes. As a consequence of the SR program, students get the confidence to take chances, which in turn reduces the amount of stress they experience around the possibility of failing their classes or dropping out of school

(Rojas, 2015). In addition, students who take part in SR find it easier to deal with the anxiety and melancholy that might result from taking language lessons (Khadem et al., 2017). In a study that followed a similar line of inquiry, Rudd et al. (2021) came to the conclusion that LR is a dynamic and supporting construct that molds supportive adaptation in order to overcome barriers to positive progress. In addition, Karabyk (2020) offered evidence showing both reflecting on one's experiences and seeking help play a significant part in the development of SR. This evidence was presented in the context of the development of SR.

The term "self-assessment" was coined by Bachman et al. (2010) to describe the process of evaluating one's own behavior, outlook, or their overall efficiency. That is why teachers should instruct and coach students to engage in periodic self-assessment. The essence of CSA, as defined by Locke et al. (1996), is an honest evaluation of one's own value, efficacy, and competence. This idea is a high-order, latent feature that is linked to factors like confidence, self-perception, neuroticism, and sense of agency (Judge et al., 1997; Rezaei et al., 2022). An individual's sense of self-worth is a measure of how highly they think of themselves. Individuals' perceptions of their own abilities in a variety of contexts are linked to their level of generalized self-efficacy (Locke et al., 1996). Neuroticism is characterized by an individual's disposition toward a pessimistic cognitive and explanatory style (Watson, 2000). Beliefs regarding the causes of events are associated with locus of control (Judge et al., 1997). It was concluded that engagement in online assessment is the outcomes of some critical factors such as CSA, resilience, autonomy, and test taking skills (Ritonga et al., 2023).

Students' perceptions of their own skills reveal their CSA, an integrated personality structure. This idea is a reflection of the students' core convictions about who they are and how they learn (Ismeil & Heydarnejad, 2023). Higher levels of CSA are associated with greater student engagement in learning because they foster an optimistic outlook on the world and increase happiness (Miller Smedema et al., 2015; Namaziandost et al., 2022b). Learners who have experienced good CSA also tend to have more optimistic worldviews when confronted with adversity. High levels of self-assessment, in other words, protect students against a variety of academic difficulties (Kammeyer-Mueller et al., 2009). Previous research has shown that students with high levels of CSA are better able to regulate their emotions and have healthy relationships with adults, including their instructors and classmates (Wongdaeng, 2022).

In this regard, Nemati et al. (2021) proposed an investigation to examine how several types of assessment—self, peer, and teacher—influence the growth of students' writing strategies while studying abroad. According to the results, students who engage in self-assessment throughout their research project demonstrate both cognitive and metacognitive growth. In light of this finding, Jahara et al. (2022) investigated the impact of coping strategies on cognitive load and academic stress for EFL students. Their findings indicated that EFL students who had a high degree of coping style were better able to do self-evaluations and deal with stress. In the same vein, Heydarnejad et al. (2022) concluded that developing L2 Grit and implementing CSA could help EFL learners manage their anxiety in language classes.

Although TA, AER, L2 Grit, SR, and CSA have each been independently shown to aid students in better managing their assessment and, as a result, improve their educational

attainment, no research has ever analyzed the links between them. This study sought to evaluate the function of TA, AER, L2 Grit, SR, and CSA and their interplay to manage EFL learners' TA. Learners and educators may benefit from this study's findings in both theoretical and practical ways. Considering these points of view, the following subjects for investigation are proposed:

1) To what extent may EFL students' AER may offer insight into TA?
2) To what extent may EFL students' L2 Grit may offer insight into TA?
3) To what extent may EFL students' SR may offer insight into TA?
4) To what extent may EFL students' CSA may offer insight into TA?

Keeping this standpoint in the mind, the following null hypotheses were raised:

- H01: EFL students' AER may not offer insight into TA.
- H02: EFL students' L2 Grit may not offer insight into TA.
- H03: EFL students' SR may not offer insight into TA.
- H04: EFL students' CSA may not offer insight into TA.

Methodology

Settings and participants

This research was carried out on a total of 417 attending private language institutions at intermediate or upper intermediate levels. They were qualified enough to answer the questionnaires in English. The selection of the participants was based on processes of either opportunity sampling or sampling based on convenience. There were 131 females and 286 males altogether. The ages of the participants ranged anywhere from 19 to 26 years old.

Instruments

The Test Anxiety Scale (TAS)

University students' levels of anxiety in their foreign language classroom were analyzed using the Foreign Language Classroom Anxiety Scale (FLCAS) developed and validated by Horwitz et al. (1986). The 33-item scale uses a 5-point Likert scale (from strongly agree to strongly disagree).

To concentrate on participants' skills, FLCAS by Horwitz et al. (1986) is modified, and some items were added to two subscales of Fear of Negative Evaluation (12 items) and Test Anxiety (12 items) based on the existing literature and relevant theories. Then, three experts in TEFL assess the validity and reliability of the modified scale. The reliability of this scale was above average, falling between 0.834 and 0.878.

The Academic Emotion Regulation Questionnaire (AERQ)

The AERQ, which was developed and validated by Burić et al. (2016), was used to conduct an assessment of the learners' existing ER. The AERQ consists of 37 questions, each of which is scored on a Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree). The following is a list of the eight aspects that make up the AERQ: situation

selection (four items), developing competencies (five items), redirecting attention (six items), reappraisal (five items), suppression (five items), venting (three items), venting (five items), and social support (four items). In this particular investigation, the dependability of the AERQ, as determined by Cronbach's alpha (with a range of 0.842 to 0.905), was found to be satisfactory.

The Language-domain-specific Grit Scale (L2-Grit S)

The L2-Grit S that was devised by Teimouri et al. (2020) was applied in order to study the L2 grit of the participants. This measure has 12 questions, each measuring one of two dimensions: endurance of effort and constancy of interest. Each item is rated on a 5-point Likert scale, ranging from 1 ("not at all like me") to 5 ("very much like me"). This scale's dependability was evaluated using Cronbach's alpha, and the results were satisfactory (with a range that went from 0.833 to 0.881).

The Academic Resilience Scale (ARS)

The ASR established by Kim and Kim (2016) was used to assess the AR. Each item on this scale has a Likert value between 1 and 5, and there is a total of twenty-six of them. Subjective happiness (9 items), empathy (7 items), sociability (3 items), perseverance (4 items), and self-regulation (2 items) are the categories used to classify the remaining items. The findings demonstrated a reliable SRS with a value between 0.825 and 0.893, which is within an acceptable range.

The Core of Self-Assessments Questionnaire (CSAQ)

By using CSAQ, Judge et al. (2003) were able to conduct an assessment of the students' levels of SA. There are 12 individual items, and each one is rated on a Likert scale that ranges from 1 to 5, with 1 being a strong disagreement and 5 representing a strong agreement. The scores that the pupils received ranged anywhere from 12 to 60 on this scale. If a responder had a high score on this scale, it suggested that they had a favorable view of themselves. According to the results of this investigation, the coefficient of reliability of the CSEQ is 0.878, which shows that it has a degree of dependability that is sufficient enough to be considered acceptable.

Research procedures

The beginning of this inquiry was in June of 2022, and it continued all the way through December of the same year. The operation was carried out by using a system that was web based and based on the Internet. The participants were needed to make use of online questionnaires in order to complete the questionnaire that was given to them. The TTSS, AERQ, L2-Grit S, ARS, and CSAQ were all component parts of the questionnaire. Because of the way the online questionnaire was designed, it was necessary for each component of the electronic survey form to have a close connection to every other component. This was done to ensure that the design of the survey would not result in any of the data being lost in the process. As a result, there need to be a link that is necessary between all of the components. The return rate was 87.9%, with 417 forms that were entirely filled out being received by the organization.

Data analysis

The Kolmogorov-Smirnov test was carried out so that it could be determined whether or not the data follow a normal distribution. The data followed a normal distribution; hence, the CFA and SEM statistical methods, implemented using LISREL 8.80, were used to examine them.

Results

Table 1 provides some descriptive statistics on the TA, AER, L2G, AR, and CAS.

The greatest mean scores were found for "Fear of Negative Evaluation" ($M = 31.631$, $SD = 10.093$) and "Test Anxiety" ($M = 31.281$, $SD = 10.290$) on the TA. Redirection attention was shown to be the most significant factor ($M = 20.664$, $SD = 5.191$) on the AER, the second instrument. Among L2 grit components, "perseverance of effort" had the highest mean score ($M = 20.314$, $SD = 5.259$). Furthermore, when looking at the individual components of the AR, perceived happiness ($M = 35.767$, $SD = 8.876$) stood out as the clear leader. CSA also received the following mean score: $M = 20.314$, $SD = 5.259$. Then, to find the optimal method of statistical analysis, the Kolmogorov-Smirnov test was carried out.

Table 2 shows that all of the instruments and their subscales had sig values greater than 0.05. Therefore, parametric methods can be used because the data follows a normal distribution.

Table 1 Descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
Communication Anxiety	417	8	40	22.458	8.340
Fear of Negative Evaluation	417	12	59	31.631	10.093
Test Anxiety	417	12	60	31.281	10.290
Anxiety of Foreign Language Class	417	8	40	18.998	6.962
TA	417	41	196	104.367	30.644
Situation selection	417	4	20	13.609	3.537
Developing competencies	417	5	25	16.403	4.677
Redirection attention	417	8	30	20.664	5.191
Reappraisal	417	5	25	17.362	4.680
Suppression	417	5	25	12.897	4.684
Respiration	417	3	15	9.808	2.617
Venting	417	5	25	15.890	5.410
Social support	417	5	20	13.345	3.582
AER	417	50	107	80.935	11.838
Perseverance of effort	417	6	30	20.314	5.259
Consistency of interest	417	6	30	19.916	5.382
L2 grit	417	13	60	40.230	9.832
Perceived happiness	417	15	50	35.767	8.876
Empathy	417	7	35	25.803	6.568
Sociability	417	3	15	11.429	2.941
Persistence	417	6	20	13.489	4.026
Self-regulation	417	5	15	10.976	2.618
AR	417	39	134	97.465	22.517
CSA	417	20	59	44.698	6.449

Table 2 The results of Kolmogorov-Smirnov test

Scales		Kolmogorov-Smirnov *Z*	Assymp. sig. (2 tailed)
TA	Communication Anxiety	0.859	0.451
	Fear of Negative Evaluation	0.655	0.785
	Test Anxiety	0.909	0.380
	Anxiety of Foreign Language Class	1.268	0.080
AER	Situation selection	0.948	0.329
	Developing competencies	0.983	0.289
	Redirection attention	1.000	0.270
	Reappraisal	0.877	0.425
	Suppression	0.929	0.354
	Respiration	1.194	0.116
	Venting	0.916	0.371
	Social support	1.029	0.240
L2 grit	Perseverance of effort	0.692	0.725
	Consistency of interest	0.895	0.400
AR	Perceived happiness	0.915	0.373
	Empathy	1.296	0.069
	Sociability	1.203	0.110
	Persistence	1.241	0.081
	Self-regulation	1.235	0.094
CSA		1.117	0.165

Table 3 The correlation coefficients between the TA, AER, L2G, AR, and CSA

	TA	AER	L2-Grit	AR	CAS
TA	1.000				
AER	−0.705**	1.000			
L2 grit	−0.826**	0.712**	1.000		
AR	**−0.924	**0.744	**0.731	1.000	
CSA	**0.608	**0.694	**0.768	0.642	1.000

** Correlation is significant at the 0.01 level (2 tailed)

In this work, the researchers checked the connection between TA, AER, L2G, AR, and CSA using a Pearson product-moment correlation. As Table 3 depicted, TA is significantly and negatively is connected to AER, L2 grit, AR, and CSA. More details are provided on Table 4.

Table 4 shows that there were negative and statistically significant connections between the various parts of TA and AER. That is, there were statistically significant positive correlations between AER and Communication Anxiety ($r = -0.694$), Fear of Negative Evaluation ($r = -0.723$), Test Anxiety ($r = -0.638$), and Anxiety of Foreign Language Class ($r = -0.646$). Communication Anxiety ($r = -0.813$), Fear of Negative Evaluation ($r = -0.768$), Test Anxiety ($r = -0.747$), and Anxiety of Foreign Language Class ($r = -0.851$) were positively correlated with L2 grit. In addition, there were strong negative connections between the various components of TA and AR.

Table 4 The correlation coefficients between the TA, AER, L2G, AR, and CSA

	Communication Anxiety	Fear of Negative Evaluation	Test Anxiety	Anxiety of Foreign Language Class	AER	L2 grit	AR	CSA
Communication Anxiety	1.000							
Fear of Negative Evaluation	**0.556	1.000						
Test Anxiety	**0.604	**0.531	1.000					
Anxiety of Foreign Language Class	**0.531	**0.586	**0.642	1.000				
AER	**−0.694	**−0.723	**−0.638	**−0.646	1.000			
L2 grit	**−0.813	−0.768**	−0.747**	−0.851**	**0.712	1.000		
AR	**−0.960	−0.937**	−0.923**	−0.894**	**0.744	**0.731	1.000	
CAS	**−0.544	−0.595**	−0.618**	−0.560**	**0.694	**0.768	**0.642	1.000

Correlation is significant at the 0.01 level (2 tailed)**

Equally substantial and favorable were the correlations between the subcomponents of TA and CSA: Communication Anxiety ($r = -0.544$), Fear of Negative Evaluation ($r = -0.595$), Test Anxiety ($r = -0.618$), and Anxiety of Foreign Language Class ($r = -0.560$).

Next, the LISREL 8.80 statistical program was used to conduct CAF and SEM analyses of the structural associations between TA, AER, L2G, AR, and CSA. Additionally, the model fit was assessed using the chi-square magnitude, the root-mean-squared error of approximation (RMSEA), the Comparative Fit Index (CFI), and the Nominal Fit Index (NFI). Chi-square should be non-significant, and the chi-square/df ratio should be less than 3. RMSEA values below 0.1 are generally accepted (Jöreskog, 2007). In addition, Jöreskog (2007) suggests using a cutoff value of 0.90 or above for the NFI, GFI, and CFI.

The extent to which the variables are connected, as seen in Figs. 1 and 2, is shown. Standardized estimations and *t*-values reported in Figs. 2 and 3 verified the impact of AER and L2-Grit, AR, and CAS on TA. Both AER ($\beta = -0.66$, $t = -22.31$) and L2-Grit ($\beta = -0.78$, $t = -30.56$) were positively affected by TA. There was also a statistically significant favorable effect of AR and CAS on TA ($\beta = -0.89$, $t = -36.48$, and $\beta = -0.54$, $t = -14.76$, respectively).

As Table 5 summarizes, the chi-square/df ratio (2.742), the RMSEA (0.065), GFI (0.924), NFI (0.963), and CFI (0.952) reached the acceptable fit thresholds.

Model 2 provides a graphical representation of the route coefficient values for the relationships between the AER, L2G, AR, CSA, and TA subfactors (Figs. 3 and 4). Conclusions may be drawn concerning AER and TA subfactors such as Communication Anxiety ($\beta = -0.65$, $t = -22.71$), Fear of Negative Evaluation ($\beta = -0.68$, $t = -24.54$), Test Anxiety ($\beta = -0.59$, $t = -16.92$), and Anxiety of Foreign Language Class ($\beta = -0.61$, $t = -18.83$). The following is the conclusion reached after investigating the connections between L2G and TA elements: Communication Anxiety ($\beta =$

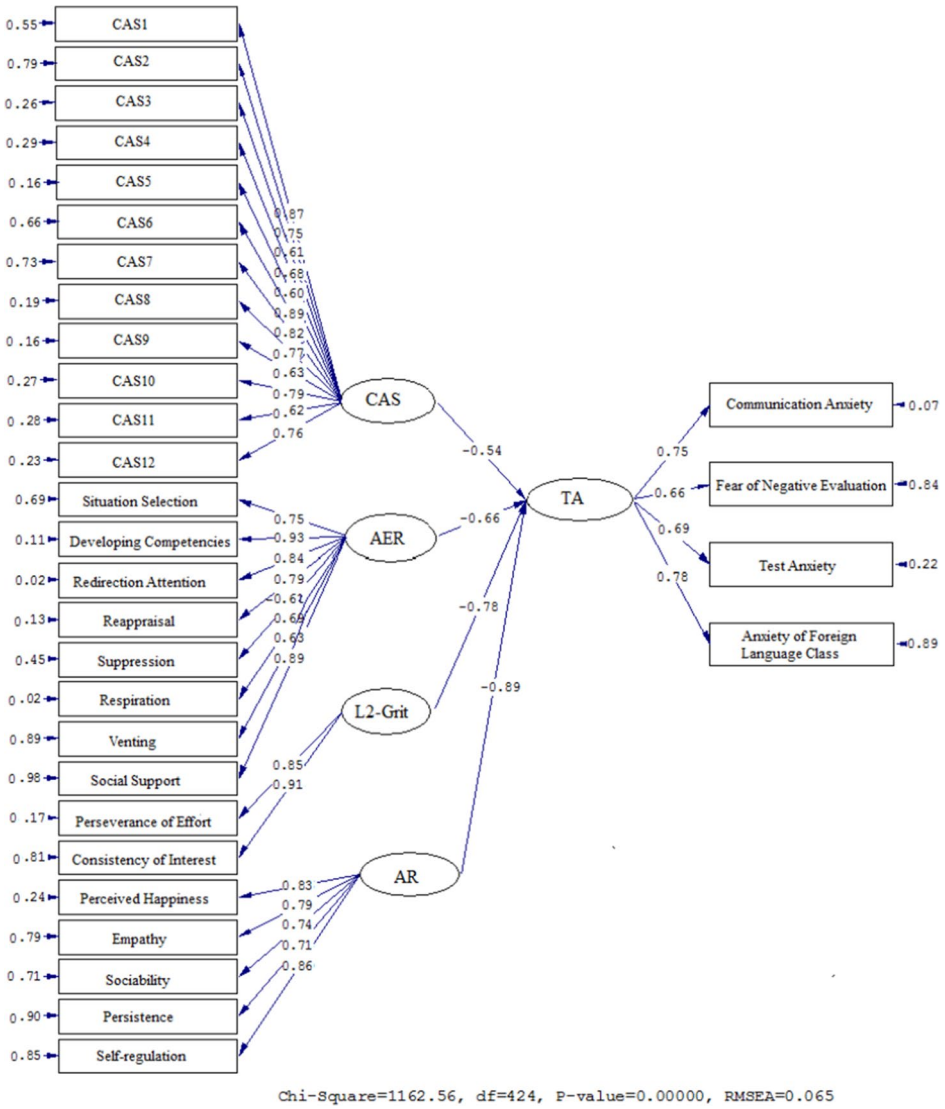

Fig. 1 Schematic representation of path coefficient values (model 1)

−0.77, $t = -33.61$), Fear of Negative Evaluation ($\beta = -0.73$, $t = -30.98$), Test Anxiety ($\beta = -0.70$, $t = -27.42$), and Anxiety of Foreign Language Class ($\beta = -0.82$, $t = -35.49$). Moreover, Communication Anxiety ($\beta = -0.77$, $t = -33.61$), Fear of Negative Evaluation ($\beta = -0.73$, $t = -30.98$), Test Anxiety ($\beta = -0.70$, $t = -27.42$), and Anxiety of Foreign Language Class ($\beta = -0.82$, $t = -35.49$) were shown to be associated with TA. Communication Anxiety ($\beta = -0.94$, $t = -44.56$), Fear of Negative Evaluation ($\beta = -0.91$, $t = -42.71$), Test Anxiety ($\beta = -0.89$, $t = -40.32$), and Anxiety of Foreign Language Class ($\beta = -0.86$, $t = -38.65$) were also found to be associated with AR. The same is true with CSA and TA subfactors: Communication Anxiety ($\beta = -0.50$, $t = -10.76$), Fear of Negative Evaluation ($\beta = -0.55$, $t = -13.42$), Test Anxiety ($\beta = -0.57$, $t = -14.68$), and Anxiety of Foreign Language Class ($\beta = -0.52$, $t = -11.83$).

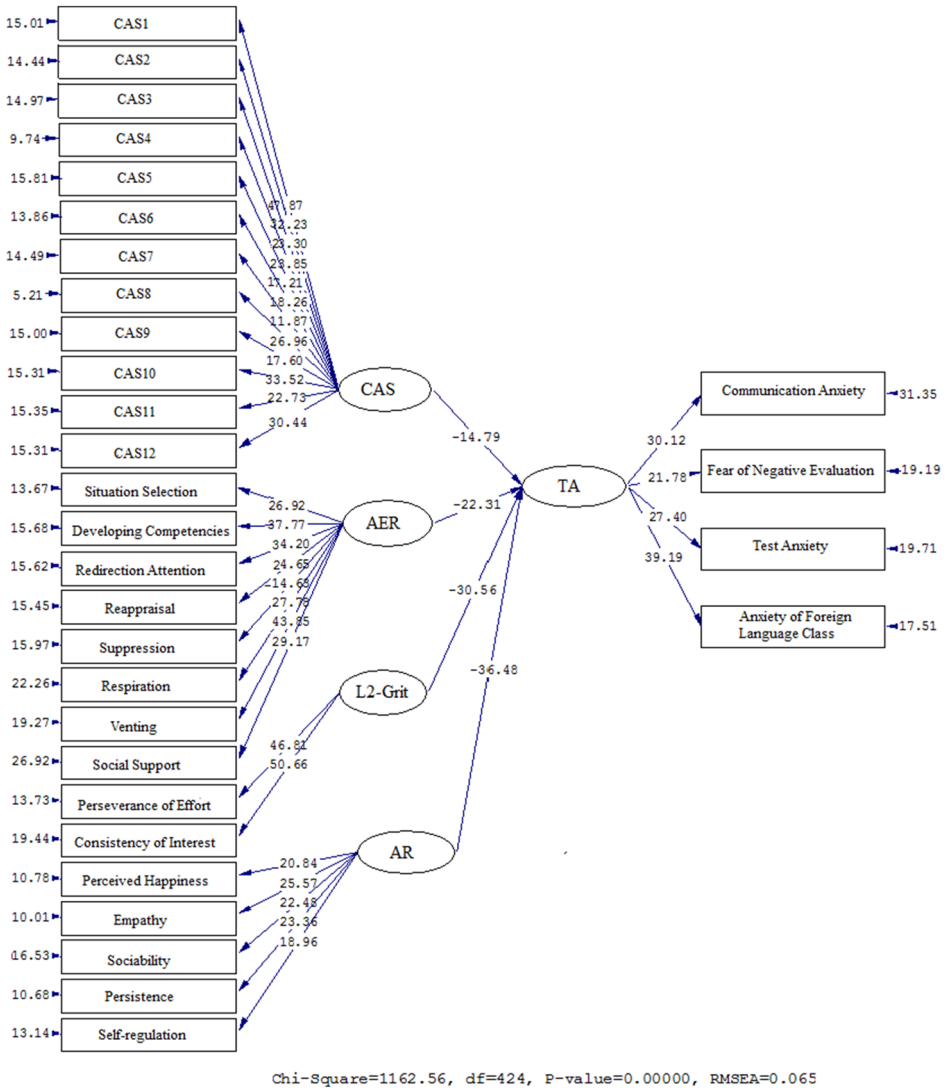

Fig. 2 T-values for path coefficient significance (model 1)

The second model's fit indices are also included in Table 6. The RMSEA (6308.60) and chi-square (2.973) ratios indicate a satisfactory match. In addition, the CFI (0.944), NFI (0.935), and GFI (0.961) were all within reasonable ranges.

Discussion

The purpose of this research was to better understand the dynamic relationship between EFL students' TA, AER, L2 Grit, SR, and CSA. For this purpose, a structural equation modeling strategy was used to develop a causal structural model that illustrates the connections between students' ER, L2 tenacity, resilience, and their self-assessment to manage their Test Anxiety. Models 1 and 2 showed that ER and L2 Grit, SR, and CSA were predictive of TA.

Based on the results of the first study question, which posed the question "(1) To what extent may EFL students' AER may offer insight on TA?", high levels of AER

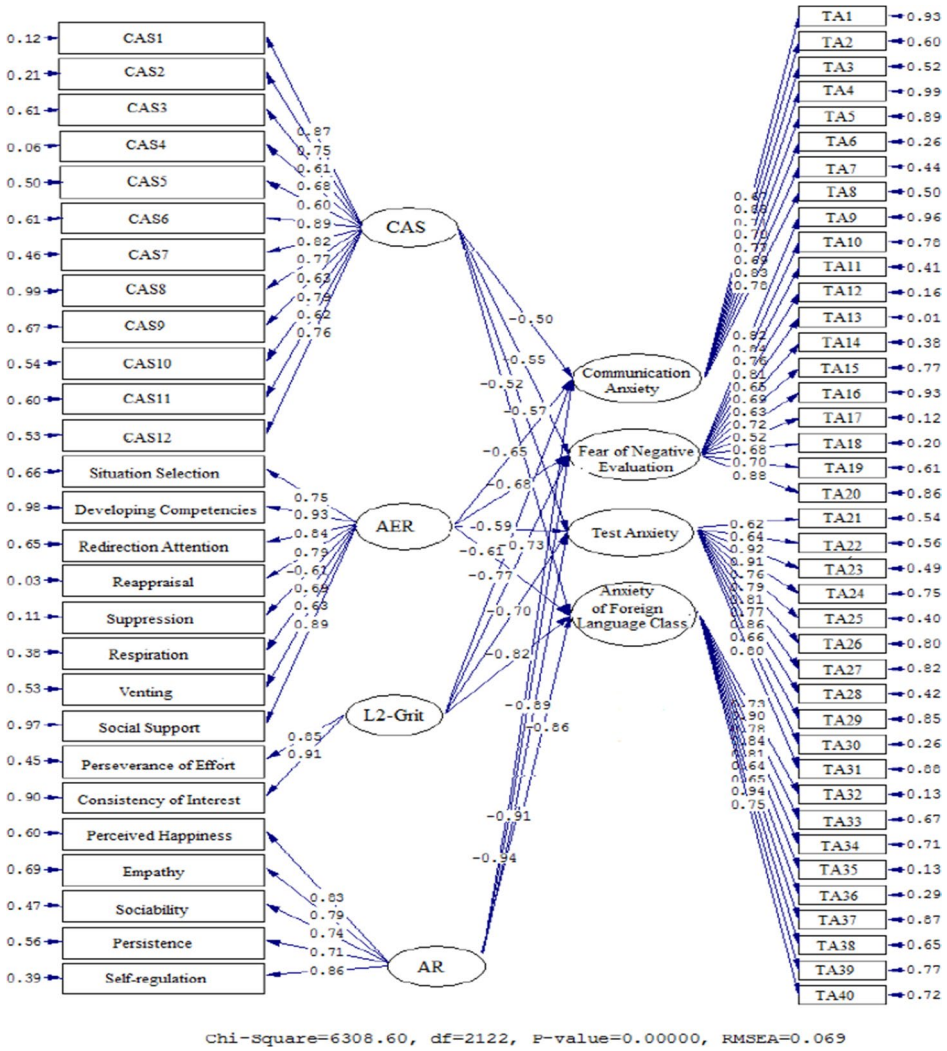

Fig. 3 Schematic representation of path coefficient values (model 2)

Table 5 Model fit indices (model 1)

Fitting indexes	$\chi 2$	df	$\chi 2/df$	RMSEA	GFI	NFI	CFI
Cut value			< 3	< 0.1	> 0.9	> 0.9	> 0.9
Model 1	1162.56	424	2.742	0.065	0.924	0.963	0.952

among the learners may predict high levels of TA management. It indicates that the strategies that are a part of AER supply an equilibrium in the instructional lives of the students, which helps them to critically evaluate their learning procedure. This can be taken to mean that the students are able to learn more effectively when they are able to critically evaluate their learning procedure. According to these findings, the emotional stability of the learners has a beneficial effect on their identities as well as their perspectives on their tracking and metacognitive abilities. This discovery is capable of

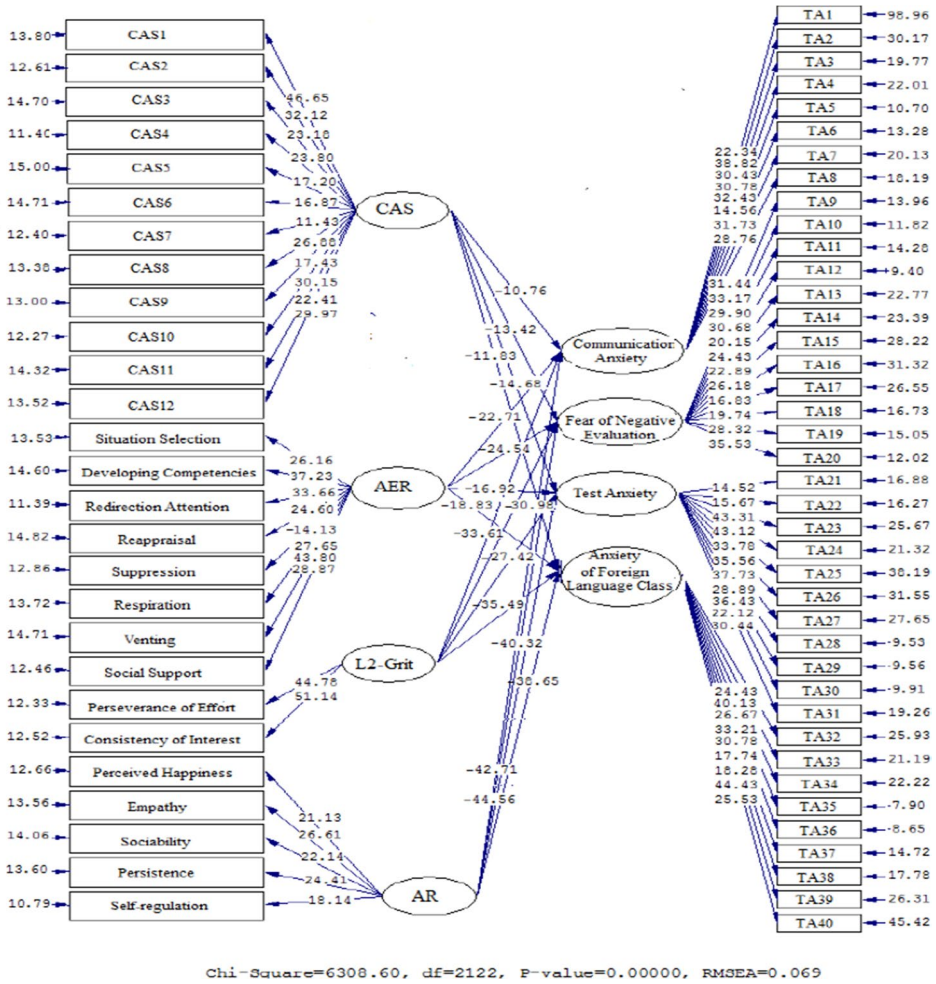

Fig. 4 T-values for path coefficient significance (model 2)

Table 6 Model fit indices (model 2)

Fitting indexes	$\chi 2$	df	$\chi 2$/df	RMSEA	GFI	NFI	CFI
Cut value			< 3	< 0.1	> 0.9	> 0.9	> 0.9
Model 2	6308.60	2122	2.973	0.069	0.944	0.935	0.961

being explored from a different point of view. As the research that was done reflected, emotion and cognition are connected to one another (Namaziandost et al., 2022a).

The achievement of success by people is dependent on the equilibrium that is maintained on both of these poles (cognition and emotion). When students, in general, and language learners, in particular, are given emotional support and when they apply appropriate tactics in the midst of chaos and complexity, they are able to improve their educational experiences cognitively and metacognitively. It was also approved that the AER set the tone of language instruction as well as assessment (Heydarnejad et al., 2019; Ritonga et al., 2023). Students get the ability to evaluate and improve themselves from the inside out via the process of self-assessment; the outcomes of the research suggest

that modulation of TA cannot be obtained without AER. Thus, investment in providing a balance in emotional experiences of language students, especially before and during language assessment, can guarantee a successful language learning and increase learners' engagement.

Taking into consideration the first research question, which was "RQ1: (1) To what extent may EFL students' L2 Grit may offer insight on TA?", the outcomes of this study suggested that EFL learners' L2 grit might predict their TA (model 1). To put it another way, a management in EFL learners' TA may be achieved via the synergy of persistent effort and consistent interest. One might deduce that students who are more determined to learn EFL are more consistent in their efforts to achieve their objectives. The more constant they are in their actions and the things they want to accomplish, the more accurately they can judge themselves. The TA is comprised of Communication Anxiety, Fear of Negative Evaluation, Test Anxiety, and Anxiety of Foreign Language Class, as was stated earlier on in this article. It is possible to draw the conclusion that learners with a greater degree of grit can better modulate their TA, and as a result, they acquire higher levels of self-regulation and a sense of confidence (model 2). Therefore, they can better manage the possible anxiety experienced due to communication and assessment in foreign language learning.

According to the current body of research on L2 grit and TA, to this day, no studies that are similar to one another have been carried out to evaluate the potential interaction between the two. Previous research (Alazemi, 2023; Zhao & Liao, 2021) has shown that learning a language is a cognitive activity that requires the participants to be actively involved and engaged in the process. It was shown by Shafee Rad and Jafarpour (2022) that learner L2 grit, emotion control, and resilience are all connected to one another. Their findings suggested that having grit in L2 helped EFL learners assess and manage their emotions, as well as bounce back more rapidly after setbacks.

In response to the third study question, which was "(3) To what extent may EFL students' SR may offer insight on TA?", it was discovered that the status of SR is detrimental to TA. To be more precise, resilient learners are better equipped in terms of Communication Anxiety, Fear of Negative Evaluation, Test Anxiety, and Anxiety of Foreign Language Class (model 2). This outcome is consistent with references to the premise of resilience (Ryan & Deci, 2000a, 2000b). EFL students who participate in SR may get some advantage from the activity since it inspires them to consider how they are feeling emotionally and come up with creative solutions to the stress caused by forthcoming examinations. According to Martin and Marsh's (2019) self-determination hypothesis, an increase in an individual's degree of self-awareness leads to improvements in motivation, contentment, resiliency, and class participation. Therefore, EFLs who have a high SR are more likely to respond positively to obstacles by setting objectives that are attainable and making serious attempts to adapt the cultural norms and social norms of the communities in which they have settled. Moreover, with strong SA, they can skillfully modulate negative emotions as well as anxiety while taking language exams.

Finally, it was shown that CSA plays a function as a mediator in the anxious feelings that learners of a foreign language experience (model 1). According to the findings of this investigation, the degree to which language students engage in self-assessment makes a direct correlation to the amount of anxiety such students experience while

taking language exams. Learners are supposed to analyze and evaluate themselves essentially via the prism of self-assessment since this is how the process works (Aghili Mehrizi et al., 2022). It is necessary for EFL students to practise self-evaluation to successfully manage their negative emotions, such as anxiety, while they are engaged in educational pursuits. Assessment strategies that put greater emphasis on the student have obvious and hidden benefits for EFL students. Therefore, it will be much simpler for EFL students to take corrective actions and develop themselves.

Conclusion and implication

The overall goal of this research was to illuminate the connections between TA, AER, L2G, AR, and CSA as they pertain to EFL language instruction. Results suggest that increasing resources dedicated AER, L2G, AR, and CSA may enhance TA management among EFL students. Language instructors and other educators play a vital role in fostering an atmosphere conducive to the spread of AER, L2G, AR, and CSA. Consequently, it is crucial that students learn effective strategies for use in the classroom. Learners who are able to keep their emotions in check are in a better position to critically evaluate their own methods of study. They take a more proactive role in their education. EFL students who have access to effective behavioral management techniques may focus on every facet of their education through the prism of self-evaluation. As a result, they want long-term viability, regular adaptability, positive personal eligibility, and a positive embrace of academic life, and they take greater ownership and independence for their learning.

Developing grit, resilience, and emotion regulation while learning a new language has been determined to be crucial because it keeps students engaged and dedicated for longer periods of time despite the challenges they face. This research also illustrates the CSA's mediating function in L2 anxiety. Their interactions were opposing and antagonistic. That is, the less likely it is that you will feel anxious, the greater your degree of self-evaluation. It is plausible to say that students, particularly those at the university level, who exhibit tenacity and CSA are more equipped to tackle challenges and triumph against TA. Overall, the research is an early start in the right direction, since it is helping us better understand the interdependencies between these factors.

It would seem that this field is still in its early stages and might benefit from further empirical investigations to illuminate a path that raises students' academic performance and ensures efficient teaching. In-service and pre-service training programs might provide educators and academics with access to the relevant knowledge. Policymakers, curriculum designers, content creators, test developers, and language teachers should all pay attention to the benefits of implementing psychological attributes which in turn decrease the possible anxiety experienced in language assessment. Designing tasks which aside academic subjects helps learners adapt efficient self-aid constructs is strongly suggested. Self-monitoring as well as self-awareness should be practiced from the beginning language learning steps. As a result, students will have a better chance of achieving academic achievement, evaluation will be more focused on their needs, and society as a whole will benefit.

Despite the fact that this research has a number of problems that need to be fixed, it does provide some fascinating new insights into the issue at hand. Because all of the data

for this study originated from the students' self-reporting on questionnaires, the generalizability of the findings may be called into question. It is likely that future research might gain something by merging qualitative and quantitative methods of investigation. In addition, it is suggested that a further survey be carried out in order to triangulate the findings of the research and to carry out an in-depth analysis into the degree to which student demographic information may impact the dynamic that exists between TA, AER, L2G, AR, and CSA. Last but not least, participants in this study were students studying EFL at the intermediate or upper intermediate levels from Kuwait. It is possible that in the future, research of a similar kind may be carried out in a variety of educational settings. This will allow for comparison and contrast of the current findings.

Abbreviations

EFL	English as a foreign language
TA	Test Anxiety
AER	The Academic Emotion Regulation
SR	The student resilience
CSA	The core of self-assessment
TAS	Test Anxiety Scale
FLCAS	The Foreign Language Classroom Anxiety Scale
AERQ	The Academic Emotion Regulation Questionnaire
L2-Grit Scale	The Language-domain-specific Grit Scale
ARS	The Academic Resilience Scale
CSAQ	The Core of Self-Assessment Questionnaire
SEM	Structural equation modeling
CFA	Confirmatory factor analysis
LISREL	Linear structural relations
RMSEA	The root-mean-squared error of approximation
CFI	The comparative fit index
NFI	The normed fit index

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Authors' contributions
All authors had adequate and equal contributions.

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Availability of data and materials
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Declarations

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