

An Exploration of Grit and Motivation through the Perspective of ERG Theory

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ABSTRACT

Acquiring Arabic language as a third language at the university level requires sustained perseverance and commitment with continuous effort due to its complex script, phonetic system and grammatical structures. This study examines the relationship between grit and motivation using Alderfer's ERG Theory (1969), focusing on how Existence, Relatedness and Growth needs influence students' persistence in the learning process. A total of 126 students participated in a 43 items survey measuring three core areas: grit (consistency of interest and perseverance), motivational beliefs (self-efficacy, intrinsic value and test anxiety) and self-regulated learning strategies (cognitive strategy use and self-regulation). Descriptive analysis demonstrated that the students reflected moderate consistency in interest, together with strong perseverance, high self-efficacy and intrinsic motivation and moderate test anxiety. Correlational analysis showed strong positive associations between Existence and Relatedness ($r = .561$, $p < .001$), Relatedness and Growth ($r = .689$, $p < .001$) and a moderate positive relationship between Growth and Existence ($r = .465$, $p < .001$). Meanwhile, the T-test results showed no significant differences across disciplines. These outcomes suggest an interconnection between grit and motivational factors to enhance continuous engagement in the Arabic language learning process. Furthermore, the results emphasize the relevance of ERG theory for understanding the persistence in challenging learning environments.

Keywords: Grit, Motivation, ERG Theory, Third Language Learning, Arabic

INTRODUCTION

Background of Study

Learning a foreign language at university requires sustained effort and commitment. These demands are particularly evident when students learn Arabic as a third language, as they must adjust to a new script, unfamiliar sound patterns and complex grammatical forms. For many undergraduates, Arabic is not used in daily communication, which can limit exposure and slow progress. Consequently, a student's capacity for long-term persistence and their sources of motivation become critically important for success.

This study examines the interplay between two key personal factors: grit and motivation. Grit refers to a student's perseverance and passion for long-term goals, enabling them to maintain effort and interest despite challenges or slow progress (Duckworth et al., 2007). In language learning, students with higher grit are more likely to continue practice and remain engaged with demanding tasks. Recent studies, including those in Arabic learning contexts, support the link between grit and stronger student effort and persistence (Alamer, 2021).

To understand motivation, this study employs ERG theory, a framework developed by Alderfer (1969). This theory explains motivation through three core needs: Existence (basic requirements), Relatedness (social connections) and Growth (personal development). In a university course for Arabic as a third language, these might translate to passing a required module (Existence), forming study groups with peers (Relatedness) or aspiring to achieve personal fluency (Growth). Unlike strictly hierarchical models, ERG theory suggests that these needs can be pursued simultaneously and that frustration in pursuing a higher-level need can increase the desire to fulfil a lower-level one (Alderfer, 1969). This dynamic nature makes it a suitable lens for the complex, fluctuating motivational landscape of university students.

While motivation has been widely studied in second language acquisition (e.g., Dörnyei, 2005), research that connects it directly to grit using a clear psychological framework remains limited, especially for third-language students. Investigations into Arabic as a foreign language have often prioritized instructional methods or general attitudes, paying less attention to the specific needs that fuel long-term effort. Therefore, exploring how the different need satisfactions outlined by ERG Theory support the development and maintenance of grit offers a valuable perspective. Understanding this relationship is key to addressing why some students persist in mastering a challenging language like Arabic while others disengage, providing insights that can help improve student support and program outcomes.

Statement of Problem

Research on foreign language acquisition has often adopted a generalised perspective, treating language learners as a relatively uniform group. However, scholarship in multilingualism indicates that learners acquiring a third or additional language demonstrate distinct psychological and experiential characteristics that differ from those of traditional second language learners, particularly in terms of prior linguistic knowledge, heightened metalinguistic awareness and the interaction of multiple linguistic systems (Cenoz, 2013; Jessner, 2008). This distinction is particularly relevant in the context of learning Arabic at the university level. As a less commonly taught language, Arabic presents unique challenges in terms of script, phonology and grammatical structure, all of which require sustained and continuous effort. For students with prior multilingual experience, the motivations underlying language learning may therefore be more complex and extend beyond basic academic requirements.

Studies on Arabic language learning have also highlighted the importance of motivation and learner attitudes in shaping engagement and learning outcomes (Abushihab et al., 2025). In such contexts, the ability to sustain long-term effort becomes a critical factor, highlighting the importance of grit as a psychological construct. Grit, defined as perseverance and passion for long-term goals (Duckworth et al., 2007), has been recognised as an important predictor of success in demanding learning environments, including second language acquisition (Teimouri et al., 2022). However, how grit operates in the context of learning a subsequent foreign language such as Arabic remains insufficiently explored.

Understanding why learners persist in challenging language learning contexts requires closer attention to both their underlying motivational needs and their capacity for sustained effort. While motivation has been widely examined in second language acquisition, it is often studied independently from persistence-related constructs such as grit. This separation has resulted in a limited understanding of how motivational factors and personal traits interact to support long-term engagement. This gap is particularly significant in the context of learning Arabic as a subsequent foreign language, where limited exposure and linguistic complexity place greater demands on learners' commitment and consistency. Despite increasing interest in psychological factors affecting language learning, there remains insufficient exploration of how motivational needs and individual traits such as grit operate together in shaping sustained effort in demanding learning environments.

To connect these ideas, Alderfer's ERG (Existence, Relatedness, Growth) Theory of Motivation provides a useful framework. It offers a way to organize a learner's various reasons for study into three core areas: practical Existence needs (for example, meeting a degree requirement), social Relatedness needs (for example, connecting with a culture) and personal Growth needs (for example, intellectual development). The theory's

frustration regression principle, which suggests that blocked higher level needs can make a person focus more on basic needs, is particularly useful for understanding how students keep trying when facing difficulty.

Therefore, the central problem is the lack of a clear, theory based model that explains how a student's combination of ERG based motivational needs interacts with their level of grit to work together and support persistence and long term commitment in the specific and demanding context of learning Arabic as a subsequent foreign language. This study aims to address this gap by combining these two areas of inquiry, seeking to provide a complete picture of the psychological foundations of sustained effort in advanced language learning.

Objective of the Study and Research Questions

This study is done to explore grit and motivation through the perspective of ERG theory. Specifically, this study is done to answer the following questions;

- How do learners perceive their existence as motivation in learning?
- How do learners perceive their relatedness as motivation in learning?
- How do learners perceive growth as motivation in learning?
- Is there a relationship between all variables as motivation in learning?

(H1- There is no relationship between all variables as motivation in learning)

- Is there a significant difference for all variables across disciplines?

(H1-There is no significant difference for all variables across disciplines)

LITERATURE REVIEW

THEORETICAL FRAMEWORK OF THE STUDY

ERG Theory

Existence, Relatedness and Growth

This research paper utilises Alderfer's Existence, Relatedness and Growth (ERG) theory to examine the intricate relationship between motivation and grit in educational contexts. Clayton P. Alderfer came up with this idea in 1969 (Alderfer, 1969). The ERG theory is based on Maslow's work (Yang & Ling, 2023). This theory reorganised Maslow's hierarchy of needs into three categories: Existence, Relatedness and Growth (Wang et al., 2021). The ERG is a motivational framework focused on understanding the determinants that affect individual human behaviour (Caulton, 2012). One thing that makes ERG theory stand out from more rigid hierarchical models like Maslow's is that it is flexible (Kang & Jin, 2020). The ERG theory diverges from Maslow's theory in three aspects: (1) the capacity to address multiple levels concurrently; (2) the potential for a distinct hierarchy of needs for each individual; and (3) the likelihood of an individual descending to a lower level of needs that are comparatively easier to fulfil if the highest level of needs remains unmet (Moosa & Aloka, 2023).

The Three Basic Needs: Existence, Relatedness and Growth

Alderfer's ERG theory classifies human needs into three primary categories that influence an individual's motivational drives:

Existence Needs: These needs are similar to Maslow's theory, which divides needs into physiological and safety needs (Aydın & Orgun, 2012; Yang & Ling, 2023). They include the desire for physical and material well-being (Moosa & Aloka, 2023; Zhu et al., 2019). The existence need refers to basic material-existence needs and includes a range of physiological, safety and material needs. (Henning et al., 2017).

Relatedness Needs: This category includes the human desire to maintain significant interpersonal relationships, experience a sense of belonging and uphold satisfactory interactions with others (Wang et al., 2021; Zhu et al., 2019). Relatedness needs for students include their academic success, relationships with teachers in school and relationships with professors and classmates in college (Moosa & Aloka, 2023).

Growth Needs: Growth needs are innate aspirations for personal advancement, self-actualization, self-esteem and the realisation of self-worth through creativity, productivity or contributions (Wang et al., 2021). Tuan Ismail et al. (2023) assert that self-esteem and self-actualization are crucial for development. Self-esteem helps people feel capable, independent, learn, succeed, take charge and build confidence. Self-actualization is when you work on your personality and reach your goals. To help students grow, it is important to let them know what the subject or teacher expects of them. Students need to be able to change the way their classroom works, whether it's online or in person, in order to stay motivated to learn. They need to believe that the information they get from online courses can help them reach their educational goals, which will motivate them.

Past Studies

Past Studies on Grit in Learning

Grit received increasing interest in research related to second and foreign language learning, especially as scholars attempt to explain why certain students persevere despite persistent obstacles. Several studies have examined the level of second language (L2) grit among students, along with the associated social and psychological factors. For instance, Gyamfi and Lai (2020) examined grit among Thai EFL students, emphasizing both its prevalence and the factors that influence it. Considering the generally limited English proficiency among Thai students, the authors questioned whether motivation alone could sufficiently account for sustained engagement in language learning, particularly in contexts with restricted opportunities for authentic practice. Utilizing a mixed-methods approach, they surveyed 171 students and held focus group discussions with 15 participants. Their findings indicated that students exhibited levels of grit exceeding the moderate threshold, primarily influenced by social and contextual factors. Specifically, career ambitions, societal pressures and the perceived privilege associated with being an English major were identified as significant factors influencing L2 resilience.

Wang and Chen (2025), who examined general L2 grit levels while also taking demographic factors like gender and academic year into account, found similar trends. They gave 332 students the Second Language Grit Scale using a quantitative method. Their findings supported the idea that grit is a stable but context-sensitive trait in language learning by showing that students generally had moderate levels of grit across both dimensions of the construct.

In addition to measuring grit levels, further research has looked at the relationship between L2 grit and motivational factors. In their investigation of the connection between language attitudes and the L2 Motivational Self System (L2MSS), for example, Labasano et al. (2025) identified L2 grit as a mediating element. 313 students' survey results showed consistently high levels of L2MSS, L2 grit and language attitude. Crucially, their findings indicated that grit partially moderated the association between language attitude and L2MSS, indicating that persistence is a significant factor in turning favourable attitudes into long-lasting motivational orientations.

Language performance has also been studied in regard to the relationship between motivation and grit. Wu et al. (2022) concentrated on non-English-major Chinese students, a demographic frequently marked by a lack of enthusiasm for studying the language and dissatisfaction with its results. The authors used a 12-item Grit Scale in addition to measures of intrinsic and extrinsic motivation to survey 624 students, highlighting the

importance of affective elements. Regression analysis showed that grit was a better predictor of language achievement than motivation. Additionally, both grit and motivation demonstrated positive correlations with performance, highlighting the complimentary roles played by these concepts.

Shahrokhi and Dehaghani (2025), who examined the connections between L2 grit, motivation and willingness to communicate (WTC) with self-assessment included as a mediating variable, revealed similar results. Grit and motivation were shown to be positively correlated, while motivation was found to be strongly correlated with WTC, according to the study, which used several validated assessments with 343 students. Interestingly, the association between motivation and grit was somewhat mediated by self-assessment, suggesting that students with higher grit tended to appraise their learning progress more accurately.

This line of research was expanded more recently by Xu and Hong (2025), who surveyed emotional intelligence as an antecedent of L2 performance through the sequential mediation of motivation and grit. Their findings, which were based on data from 801 students, showed that motivation, grit and emotional intelligence all contributed to second language proficiency. L2 grit, in particular, demonstrated its centrality within a larger network of affective and motivational components by playing a strong mediating function between emotional intelligence and motivation.

Researchers began looking into the importance of self-regulated learning in the development of L2 grit in addition to motivation and emotion. Mikami and Shiozawa (2024) investigated the relationship between grit in language learning and metacognitive and self-regulatory traits. The study, which used data from 108 students, demonstrated a robust correlation between higher levels of L2 grit and psychological elements that assist self-regulated learning, particularly self-efficacy and enjoyment. Furthermore, motivated learning behaviors like persistent effort and active engagement with learning activities fully controlled the association between grit and achievement.

Taken together, these findings indicate that L2 grit is often moderate to high among foreign language students and serves as a mediator and predictor of important socioemotional and psychological resources. In conclusion, grit seems to encourage sustained engagement and strategic learning by interacting with factors including emotional intelligence, self-efficacy, learning satisfaction and behavioral self-regulation. The current study builds on this body of work by examining the relationship between motivation and grit in foreign language students via the lenses of existence, relatedness and growth needs.

CONCEPTUAL FRAMEWORK OF THE STUDY

Learning is a journey that requires the learners to have motivation to be successful. The motivation that the learners have can help trigger their cognitive capacity which then encourages the use of self-regulated learning strategies (Rahmat & Thasrabiab, 2024). This study explores learners' motivation in learning. Figure 1 below presents the conceptual framework of the study. This study is rooted from Alderfer's (1969) ERG theory of motivation. The components in the theory are combined with the constructs by Martin, et.al (2022) to reveal the relationship between the variables as shown in figure 1. To begin with, according to Alderfer's (1969), the first need for motivation is existence. This refers to the basic need to push the learners to move ahead with the learning task. This depends on the learners' (i) consistency of interest and (ii) perseverance. Next, in order to stay motivated, learners need relatedness and this can refer to the learners' need to stay connected with the learning and gain recognition. This can be achieved through (i) self-efficacy, (ii) intrinsic value and (iii) test anxiety. Lastly, learners need to have a sense of growth to stay motivated. This is achieved by (i) cognitive strategy use and (ii) self-regulation. Additionally, this study also explores if there is a relationship between all variables.

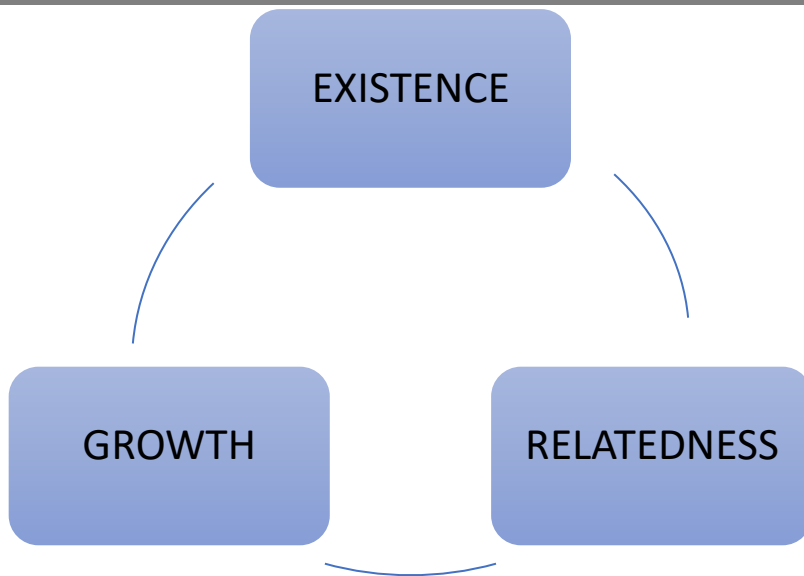


Figure 1 Conceptual Framework of the Study

Grit and motivation through the perspective of ERG theory

METHODOLOGY

This quantitative study is done to explore grit and motivation through the perspective of ERG theory. A convenient sample of 126 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from Martin, et.al (2022) to reveal the variables in table 3 below. Table 1 below shows the categories used for the Likert scale; 1 is for Strongly Disagree, 2 is for Disagree, 3 is for Undecided, 4 is for Agree and 5 is for Strongly Agree.

Table 1 Likert Scale Use

1	Never
2	Rarely
3	Sometimes
4	Very Often
5	Always

Table 2 Distribution of Items in the Survey

Part	Variable	Construct	No. of Items	Total Items	Cronbach Alpha
Two	Existence	Grit	i. Consistency of Interest	6	12
			ii. Perseverance	6	
Three	Relatedness	Motivational Beliefs	i. Self-Efficacy	6	17
			ii. Intrinsic Value	7	
			iii. Test Anxiety	4	

Four	Growth	Self-Regulated Learning Strategies	i. Cognitive Strategy Use	7	14
			ii. Self-Regulation	7	
Total of Items				43	.927

Table 2 shows the distribution of items included in the survey instrument to measure three major domains: Grit, Motivational Belief and Self Regulated Learning Strategies aligned with the ERG theoretical framework (Existence, Relatedness and Growth) rooted from Alderfer's (1969) ERG theory of motivation. The components of ERG theory were integrated with the constructs developed by Martin, et.al (2022) to examine the relationship between the variables in this study.

The questionnaire consists of 43 items in total divided into three major parts. Part two contained 12 items to measure students' Grit of consistency of interest and perseverance which evaluate the individual interest and sustained effort. On the other hand, part three focuses on capturing the students' motivation that consists of 17 items. These 17 items were distributed to three sub constructs, starting with Self-Efficacy to examine students' confidence, Intrinsic Value, which evaluates students' perceptions on academic preferences and meaningfulness and Test Anxiety to test the students' emotional responses. The final part of the survey addressed Self-Regulation Learning strategies that included 14 items organised into two sub constructs: cognitive strategy use and self-regulation. Cognitive strategy construct is used to assess students' employment of learning strategies, whereas the self-regulation evaluates students' capacity in learning behaviour based on performance feedback. The reliability of the survey was assessed with Cronbach's Alpha coefficient. With overall construct coefficient .927, which exceeded the minimum of 0.70 suggested by Nunnally and Bernstein (1994), indicating the suitability of the instrument for the study with excellent consistency and reliability inline with contemporary psychometric standards (DeVellis, 2021; Knekta et al., 2019).

Table 3 Reliability Levels, Cronbach's Alpha Ranges and Their Interpretations

Reliability Level	Cronbach's Alpha range	Interpretation
Excellent	0.9 and above	Indicates very high internal consistency
Good	0.80-0.89	Reflects strong internal consistency
Acceptable	0.70-0.79	Indicates acceptable internal consistency
Questionable	0.60-0.69	Reflects questionable internal consistency
Poor	Below 0.6	Indicates poor internal consistency

In order to determine the internal reliability of the instrument, reliability analysis is one. Table 3 above shows the distribution and interpretation of Cronbach Alpha range. According to Ahmad, et.al. (2024), Cronbach Alpha scores between 0.7 to 0.9 is considered acceptable to excellent.

Table 2 also shows the reliability of the survey. The analysis shows a Cronbach alpha of .707 for Existence, .858 for Relatedness and .915 for Growth. The overall Cronbach alpha for all 43 items is .927; thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

FINDINGS AND DISCUSSION

Demographic Analysis

According to Zienefuss, et.al (2021), researchers report demographic data in percentages to establish sample representatives and allow for generalizability to a larger population. The reporting also provides an overview

of participants' characteristics. Percentages offer a clear and understandable picture of the sample makeup.

Table 4 Percentage for Demographic Profile

Question	Demographic Profile	Categories	Percentage (%)
1	Gender	Male	42%
		Female	58%
2	Discipline	Science & Technology	41%
		Social Sciences, Humanities & Business	59%
3	Arabic Language Level	Level 1	35%
		Level 2	60%
		Level 3	5%
4	Basic Arabic Background	Yes	75%
		No	25%

Table 4 represents the findings for the demographic profile of the 126 students who participated in this study. The sample consisted of 58% females and 42% males. The majority of students (59%) were studying Social Sciences, Humanities and Business, while only 41% were studying Science and Technology. In terms of Arabic Language Level, most of the students who participated in this study were at Level 2 (60%), then Level 1 (35%) and Level 3 representing the smallest group (5%). The data show that a large majority of the students (75%) said they had a basic knowledge of Arabic, while 25% said they did not.

Descriptive Statistics

Why is there a need to report the mean and standard deviation? According to Vetter (2017), Mean (M) represents the average or centre of a data set. Standard deviation (SD) indicates the typical distance of individual observations from the mean which shows the data's variability or spread. A low SD means the data points are clustered close to the mean while a high SD indicates they are more spread out. It is good to have a high SD.

Findings for Existence

This section presents data to answer research question 1- How do learners perceive their existence as motivation in learning? In the context of this study, this is measured by (i) consistency of interest and (ii) perseverance.

Table 5 Mean for Consistency of Interest

ITEM	Mean	SD
GCIQ1 I often set a goal but later choose to pursue a different one.	3.23	0.75
GCIQ2 New ideas and new projects sometimes distract me from previous ones.	3.3	0.86
GCIQ3 I become interested in new pursuits every few months.	3.40	0.86
GCIQ4 My interests change from year to year.	3.37	0.96
GCIQ5 I have been obsessed with a certain idea or project for a short time but later lost interest.	3.19	0.93
GCIQ6 I have difficulty maintaining my focus on projects that take more than a few months to complete.	3.10	0.99

Table 5 presents the mean scores for consistency of interest, one of the components of learning grit. The highest mean score was recorded for item GCIQ3 ($M = 3.40$), indicating that students tend to become interested in new pursuits every few months. This is followed by item GCIQ4 ($M = 3.37$), suggesting that students perceive their interests as changing from year to year. Item GCIQ2 also shows a relatively high mean score ($M = 3.30$), reflecting that new ideas or projects may distract students from ongoing ones. In contrast, the lowest mean score was observed for item GCIQ6 ($M = 3.10$), indicating comparatively lower agreement that students have difficulty maintaining focus on long-term projects. Overall, the findings suggest that students experience moderate inconsistency in their interests, as they tend to shift focus to new ideas or pursuits, which may challenge their ability to sustain long-term engagement in achieving their objectives.

Table 6 Mean for Perseverance of Effort

ITEM	Mean	SD
GCPQ1 I have achieved a goal that took years of work.	3.31	0.85
GCPQ2 I have overcome setbacks to conquer an important challenge.	3.37	0.68
GCPQ3 Setbacks don't discourage me.	3.36	0.71
GCPQ4 I finish whatever I begin.	3.91	0.84
GCPQ5 I am a hard worker.	3.81	0.85
GCPQ6 I am diligent.	3.71	0.81

Table 6 presents the mean scores for perseverance of effort, one of the main components of learning grit. The highest mean score ($M = 3.91$) was recorded for item GCPQ4, indicating that students demonstrate strong perseverance in completing tasks once they begin them. This is followed by item GCPQ5, with a mean score of 3.81, reflecting that students perceive themselves as hardworking in completing tasks or projects. Meanwhile, item GCPQ3 recorded a mean score of 3.36, suggesting a moderate level of agreement that setbacks do not discourage students from achieving their goals. Another item with a relatively lower mean score is GCPQ1 ($M = 3.31$), indicating that students have lower agreement that they have achieved a goal that required a long period of effort. Overall, these findings suggest that perseverance plays an important role in helping students complete their projects and pursue their goals despite encountering setbacks.

Findings for Relatedness

This section presents data to answer research question 2- How do learners perceive their relatedness as motivation in learning?. In the context of this study, this is measured by (i) self-efficacy, (ii) intrinsic value and (iii) test anxiety.

Table 7 Mean for Self-Efficacy

ITEM	Mean	SD
MBSEQ1 Compared with others in this class, I expect to do well.	3.33	0.88
MBSEQ2 I'm certain I can understand the ideas taught in this course.	3.56	0.73
MBSEQ3 I expect to do very well in this class.	3.71	0.85
MBSEQ4 Compared with others in this class, I think I'm a good student.	3.13	1.02
MBSEQ5 I am sure I can do an excellent job on the problems and tasks assigned for this class.	3.60	0.83
MBSEQ6 I know that I will be able to learn the material for this class.	3.88	0.75

The findings indicate that students demonstrated a generally positive level of self-efficacy in relation to their motivation for learning. Among the six items, the highest mean score was recorded for MBSEQ6 ($M = 3.88$, $SD = 0.75$), indicating strong confidence in their ability to successfully learn the course material. This suggests that students possess a high level of perceived capability in managing academic demands.

The second highest mean was observed for MBSEQ3 ($M = 3.71$, $SD = 0.85$), reflecting students' expectation of performing well in the course. This further reinforces the presence of positive academic self-beliefs. Following the revision of the instrument, MBSEQ1 was refined to measure students' comparative expectation of performance ("Compared with other students in this class, I expect to do well"). The item recorded a moderate mean ($M = 3.33$, $SD = 0.88$), indicating that while students are generally confident, their expectations become more moderate when evaluated in relation to peers. In contrast, MBSEQ4 ($M = 3.13$, $SD = 1.02$) yielded the lowest mean score, suggesting that students exhibit relatively lower confidence when making direct self-evaluations against others in the class. This pattern indicates that self-efficacy may be more stable in task-related beliefs but less consistent in socially comparative contexts.

Overall, the results suggest that students demonstrate strong confidence in their ability to understand and manage course requirements. However, this confidence appears comparatively lower when framed within peer comparison, highlighting a distinction between individual competence beliefs and socially influenced self-evaluation.

Table 8 Mean for Intrinsic Value

ITEM	Mean	SD
MBIVQ1 I prefer class work that is challenging so I can learn new things.	3.51	0.75
MBIVQ2 It is important for me to learn what is being taught in this class.	3.93	0.75
MBIVQ3 I like what I am learning in this class.	4.04	0.78
MBIVQ4 I think I will be able to use what I learn in this class in other classes.	3.65	0.93
MBIVQ5 Even when I do poorly on a test I try to learn from my mistakes.	4.01	0.84
MBIVQ6 I think that what I am learning in this class is useful for me to know.	4.04	0.91
MBIVQ7 I think that what we are learning in this class is interesting.	4.13	0.77

As reflected in Table 8, the findings indicate a generally high level of intrinsic value among the respondents, suggesting strong internal motivation towards their learning. The highest mean score was recorded for the item "I think that what we are learning in this class is interesting" (MBIVQ7), with a mean of 4.13 ($SD = 0.77$), highlighting students' strong interest and enjoyment in the learning process. This was followed by two closely related items that shared the second highest position: perceiving the learning content as useful (MBIVQ6) and liking what is being learned in the class (MBIVQ3), both recording a mean of 4.04 ($SD = 0.91$ and 0.78 respectively). These findings indicate that students were highly motivated by the perceived relevance and meaningfulness of the course content. In contrast, the lowest mean score was observed for the item related to preference for challenging classwork (MBIVQ1), with a mean of 3.51 ($SD = 0.75$), suggesting that although students were intrinsically motivated, they were comparatively less inclined toward tasks that they perceived as challenging. Overall, the results demonstrate a strong presence of intrinsic motivation, particularly driven by interest, perceived usefulness and enjoyment of learning.

Table 9 Mean for Test Anxiety

ITEM	Mean	SD
MBTAQ1 I am so nervous during a test that I cannot remember facts I have learned.	3.39	0.99
MBTAQ2 I have an uneasy, upset feeling when I take a test.	3.18	0.95

MBTAQ3 I worry a great deal about tests.	3.54	0.85
MBTAQ4 When I take a test I think about how poorly I am doing.	3.30	1.09

The findings for test anxiety, as presented in Table 9, indicate that respondents experienced a moderate level of anxiety during assessments. Among the four items, worrying excessively about tests (MBTAQ3) recorded the highest mean score ($M = 3.54$, $SD = 0.85$), suggesting that concern and apprehension about test performance were common among students. This was followed by feelings of nervousness that interfered with recalling learned information (MBTAQ1), which obtained a mean of 3.39 ($SD = 0.99$), reflecting the impact of anxiety on cognitive functioning during tests.

Thinking negatively about one's performance while taking a test (MBTAQ4) showed a slightly lower mean of 3.30 ($SD = 1.09$), indicating that self-doubt was present but less dominant. The lowest mean was recorded for experiencing general uneasiness during tests (MBTAQ2) with a mean of 3.18 ($SD = 0.95$), suggesting that emotional discomfort was comparatively less intense than cognitive worry. Overall, the findings reveal that students' test anxiety was more strongly associated with worry and fear of poor performance rather than general emotional unease, highlighting the cognitive dimension of anxiety within the learning context.

Findings for Growth

This section presents data to answer research question 3- How do learners perceive growth as motivation in learning?. In the context of this study, this is measured by (i) cognitive strategy use and (ii) self-regulation.

Table 10 Mean for Cognitive Strategy Use

ITEM	Mean	SD
SRLSCSUQ 1 When I study, I put important ideas into my own words.	3.83	0.73
SRLSCSUQ 2 I always try to understand what the teacher is saying even if it doesn't make sense.	3.78	0.77
SRLSCSUQ 3 When I study for a test, I try to remember as many facts as I can.	4.03	0.73
SRLSCSUQ 4 When studying, I copy my notes over to help me remember material.	3.79	0.92
SRLSCSUQ 5 When I study for a test, I practice saying the important facts over and over to myself.	3.96	0.81
SRLSCSUQ 6 When I am studying a topic, I try to make everything fit together.	3.92	0.79
SRLSCSUQ 7 When reading I try to connect the things, I am reading about with what I already know.	3.92	0.78

Table 10 shows the average scores for how well students use cognitive strategies. The findings indicate that SRLSCSUQ 3 has the highest mean score ($M = 4.03$, $SD = 0.73$). This means that when students study for a test, they often try to remember as many facts as they can. This was followed by SRLSCSUQ 5 ($M = 3.96$, $SD = 0.81$), which shows that students use repetition by going over important facts again and again. The next highest item is SRLSCSUQ 6 ($M = 3.92$, $SD = 0.79$), which shows that students try to put things together to get a better idea of what the whole topic is about.

On the other hand, the lowest average score was on SRLSCSUQ 2 ($M = 3.78$, $SD = 0.77$). This means that students were less likely to understand the teacher's explanation when the subject was unclear. In general, these results show that students use cognitive strategies to a medium to high degree, especially those that involve memorisation, repetition and combining different learning resources.

Table 11 Mean for Self-Regulation

ITEM	Mean	SD
SRLSSRQ1 I ask myself questions to make sure I know the material I have been studying.	3.79	0.87
SRLSSRQ2 When work is hard I either give up or study only the easy parts.	3.16	0.94
SRLSSRQ3 Even when study materials are dull and uninteresting, I keep working until I finish.	3.73	0.83
SRLSSRQ4 Before I begin studying, I think about the things I will need to do to learn.	3.73	0.85
SRLSSRQ5 I often find that I have been reading for class but don't know what it is all about.	3.37	0.89
SRLSSRQ6 When I'm reading, I stop once in a while and go over what I have read.	3.53	0.80
SRLSSRQ7 I works hard to get a good grade even when I don't like a class.	3.87	0.89

Table 11 shows the average scores for students' self-regulation. The results show that SRLSSRQ7 had the highest mean score ($M = 3.87$, $SD = 0.89$). This means that students generally work hard to get good grades even if they don't like a certain class. Next, SRLSSRQ1 ($M = 3.79$, $SD = 0.87$) shows that students are likely to ask themselves questions to better understand the material. SRLSSRQ3 and SRLSSRQ4 ($M = 3.73$, $SD = 0.83$; $SD = 0.85$) show that students stay on task and plan their learning activities even when the materials aren't very interesting. On the other hand, SRLSSRQ2 had the lowest mean score ($M = 3.16$, $SD = 0.94$), which means that some students are likely to give up or only work on easier tasks when they have trouble learning. These results show that students are able to control themselves to a moderate to high degree, especially when it comes to effort, planning and keeping track of their learning. However, they have trouble with activities that are hard.

Exploratory Statistics

According to He (2024), correlation is a statistical technique that shows how strongly two variables are related to each other or the degree of association between the two. It's a common tool for describing simple relationships without making a statement about cause and effect. This section presents data to answer research questions on correlation. To determine if there is a significant association in the mean scores between all variables as motivation in learning, data is analysed using SPSS for correlations. Results are presented separately in table 12 below. Findings for Relationship between all variables as motivation in learning This section presents data to answer research question 4- Is there a relationship between all variables as motivation in learning?. (H1- There is no relationship between all variables as motivation in learning). Is there a significant difference for all variables across disciplines? (H1-There is no significant difference for all variables across disciplines).

Table 12 Correlation Between All Variables as Motivation in Learning

		EXISTENCE	RELATEDNESS	GROWTH
EXISTENCE	Pearson (Correlation)	1	.561**	.465**
	Sig (2-tailed)		<.001	<.001
	N	126	126	126
RELATEDNESS	Pearson (Correlation)	.561**	1	.689**
	Sig (2-tailed)	<.001		<.001
	N	126	126	126
GROWTH	Pearson	.465**	.689**	1

	(Correlation			
	Sig (2-tailed)	<.001	<.001	
	N	126	126	126

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

Table 12 shows there is an association between existence and relatedness. Correlation analysis shows that there is a high significant association between existence and relatedness($r=.561^{**}$) and ($p<.001$). According to He (2024), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5 and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between existence and relatedness. Null hypothesis is rejected.

There is also an association between relatedness and growth. Correlation analysis shows that there is a high significant association between relatedness and growth($r=.689^{**}$) and ($p<.001$). According to He (2024), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5 and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between relatedness and growth. Null hypothesis is rejected. Lastly, here is also an association between growth and existence. Correlation analysis shows that there is a moderate significant association between growth and existence($r=.465^{**}$) and ($p<.001$). According to He (2024), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5 and strong positive correlation from 0.5 to 1.0. This means that there is also a moderate positive relationship between growth and existence. Null hypothesis is rejected.

Inferential Statistics

According to He (2024), there are three main functions of a T-test and ANOVA. Firstly, both are done to compare means. This test is also done to determine if the average scores (mean) or values of two groups or one group against a known value, are different enough to be considered statistically meaningful and are not just due to random chance. Secondly, T-test and ANOVA are done to test hypotheses. Researchers use t-tests and ANOVA to test hypotheses about means, such as whether a new treatment significantly impacts a variable or if there's a difference in performance between two distinct groups. Lastly, T-test and ANOVA are done to identify significant differences. The output of a t-test provides a p-value (significance value). If this p-value is below a predetermined threshold (often 0.05), it indicates a statistically significant difference, allowing researchers to draw conclusions about the populations from which their samples were drawn. Findings for Significant Difference for all variables as motivation in learning across disciplines .This section presents data to answer research question 5- IIs there a significant difference for all variables across disciplines? (H1-There is no significant difference for all variables across disciplines.)

Table 13 T-tests for all variables across disciplines

		Levene's Test for Equality of Variances		t-test for Equality of Means		Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p			Lower	Upper
EXISTENCE	Equal variances assumed	.063	.803	.884	124	.189	.378	.06579	.07441	-.08149	.21308
	Equal variances not assumed			.876	106.448	.191	.383	.06579	.07506	-.08302	.21461
RELATEDNESS	Equal variances assumed	.046	.830	.541	124	.295	.589	.04727	.08730	-.12552	.22005
	Equal variances not assumed			.533	103.775	.297	.595	.04727	.08863	-.12850	.22303
GROWTH	Equal variances assumed	.001	.978	.039	124	.485	.969	.00401	.10382	-.20149	.20950
	Equal variances not assumed			.038	105.449	.485	.970	.00401	.10499	-.20415	.21217

With reference to table 13, a T-test was conducted to examine all variables across disciplines. The analysis in table 16 shows there is no significant difference between existence ($F=0.063, p=0.378$), relatedness ($F=0.046, p=0.589$) and growth ($F=0.001, p=0.969$) across disciplines. Null hypothesis is accepted.

CONCLUSION

SUMMARY OF FINDINGS AND DISCUSSIONS

This study investigated students' perceived existence, relatedness and growth (ERG) needs as essential motivational elements in the learning process. Guided by the framework of ERG theory, the findings suggest that motivation is shaped by a multidimensional system.

Findings regarding existence needs suggested that students exhibit moderate existence motivation, characterized by inconsistent interest along with strong perseverance. The mean score indicated a low consistency of interest across time, potentially posing difficulties for sustained engagement. In contrast, higher perseverance scores highlight the students' tendency to persist and complete tasks despite facing challenges. Even though inconsistency in interests can limit prolonged engagement, the findings support existing research emphasizing the contextual and psychological variability of grit (Gyamfi & Lai, 2020; Wang & Chen, 2025). Moreover, these results are consistent with Wu et al. (2022), who suggested that sustained effort is a stronger predictor of success than stable interests. In addition, this study aligns with Labasano et al. (2025) and Mikami and Shiozawa (2024), by highlighting grit's mediating function between motivation and self-regulated learning.

The results for relatedness needs revealed that students possess strong self-efficacy and intrinsic value, alongside moderate levels of test anxiety. Intrinsic value reported the highest mean score, indicating strong emotional and cognitive engagement, followed closely by self-efficacy, which reflects strong self-beliefs. On the other hand, test anxiety showed a lower mean score. This pattern indicates that students' relatedness motivation is primarily driven by positive self-beliefs and internal engagement rather than anxiety, suggesting a positive psychological relatedness to the learning process. These findings are supported by Mikami and Shiozawa (2024) and Xu and Hong (2025), who identified self-efficacy as a factor in grit. In addition, the prominence of intrinsic value aligns with Labasano et al. (2025), emphasising the importance of emotional and cognitive engagement in sustaining learning. Meanwhile, the presence of test anxiety highlights persistent assessment-related pressures, consistent with the findings of Wu et al. (2022) and Shahrokhi and Dehaghani (2025).

The growth needs findings showed a high level of cognitive strategy use and positive self-regulation behaviours oriented toward students' continuous improvement. Growth-oriented motivation paired with cognitive strategy use indicated the highest mean score. However, overall self-regulation remained at a moderate level, and the lowest mean score was observed in self-regulatory behaviours, highlighting the difference in strength within growth-related motivation. This supports prior research by Mikami and Shiozawa (2024) and Xu and Hong (2025), suggesting self-regulated learning as a critical factor in the development and expression of grit. Furthermore, the findings align with Wu et al. (2022) and Wang and Chen (2025) by indicating that strategic learning behaviours serve as a fundamental mechanism for converting grit into academic performance.

The interconnectedness of variables analysis showed positive correlations among all motivational dimensions, highlighting the interdependent nature of existence, relatedness and growth needs. The strongest relationship occurred between relatedness and growth, followed by existence and relatedness, whereas existence and growth showed the lowest correlation. These results support the view of the conceptualisation of motivation as an integrated system in learning (Gyamfi & Lai, 2020; Wang & Chen, 2025; Labasano et al., 2025). In addition, the findings imply that persistent students are more likely to demonstrate stronger self-beliefs and engagement, consistent with the findings of Mikami and Shiozawa (2024).

The findings of disciplinary differences indicate no significant variations across the motivational dimensions, suggesting that existence, relatedness, and growth needs are applicable across academic fields. Among the variables, existence displayed the highest statistical value, while relatedness showed moderate variation and growth portrayed the lowest, with all p - values exceeding .05. This supports previous research by Gyamfi and Lai (2020) and Wang and Chen (2025), who emphasised that student motivation is influenced more by contextual and psychological factors than by disciplinary backgrounds.

In conclusion, this study demonstrates that grit-related motivation is multidimensional and operates as a dynamic system in which perseverance, emotional connection, and strategic self-development interact. The findings align closely with existing research and strengthen the view that learning motivation is shaped by multiple interrelated factors rather than disciplinary distinctions. This study therefore supports the ERG theory as an effective framework for understanding motivation in foreign language learning.

Implications and Suggestions for Future Research

Theoretical and Conceptual Implications

The study's findings offer both theoretical and conceptual insights through the extension of Alderfer's (1969) ERG theory to examine grit and motivational factors in learning context. Based on the conceptual framework of ERG theory, the existence, relatedness and growth needs are interconnected within students' motivation in the multidimensional learning process. In terms of existence needs, students' perseverance scores the highest compared to interest consistency which indicates that the students' motivation is largely sustained through persistent effort, reflecting the ERG theory's conceptualisation of existence needs as motivating goal-directed behaviour. Regarding to relatedness needs, which are demonstrated by high self-efficacy, intrinsic value and moderate test anxiety contribute to the enhancement of students' motivation in learning process were consistent with ERG framework. The findings on growth needs that were measured through cognitive strategy use and self-regulation exhibited the highest mean scores. As a results, indicating that students actively pursue personal growth and strategic learning which supports ERG theory's emphasis on growth as an essential for self-actualisation and the achievement of mastery.

The significant positive correlations across existence, relatedness and growth provide empirical support for the conceptual framework of motivational dimensions are interrelated. This result leads to the perseverance, relational engagement and strategic learning engagement mutually support and enhance one another. Additionally, the absence of significant differences across multi disciplines highlights the motivational process is broadly applicable across academic domains, affirming the relevance of ERG-based theory in explaining students' grit and motivation. Together, these findings support the conceptualisation of motivation as both multidimensional and adaptive which emphasises the importance of creating an effective learning environment to improve students' engagement and performance.

Pedagogical Implications

The outcome of this study offers several insights of effective teaching and learning practices for instructors and students. In order to support the existence needs, instructors should design tasks with clear goals, achievable milestone and structured feedback to encourage students' persistence. In the context of relatedness needs, high self-efficacy and intrinsic value with moderate test anxiety requires an engaging learning environment. Instructors can enhance students' motivation by acknowledging students' efforts, encouraging teamwork and providing opportunities for meaningful interaction between students and instructors. Regarding the growth needs, strong engagement in cognitive strategies and self-regulation indicates that students' growth need best supported through strategic learning skills. This can be achieved by demonstrating metacognitive strategies, reflective exercises, equipping students with tools for planning, monitoring and tracking their learning. Collectively, the findings suggest that teaching and learning strategies should integrate multiple motivational dimensions. Each of needs play important role in enhancing students' academic achievement in an effective teaching and learning environment. These insights provide a framework for designing effective teaching and learning practices in order to enhance students' motivation, engagement and learning outcomes.

Suggestions for Future Research

Based on the findings, several directions for future research emerge from this study. Future research should expand ERG based motivation and grit among larger and more diverse respondents populations including age groups, academic levels and cultural contexts using random sampling to strengthen generalizability. Longitudinal studies are also recommended to explore how ERG needs develop over time and motivational changes influence sustained learning outcome and academic achievement. Furthermore, future researchers may focus on motivational differences across specific subject or discipline, particularly within fields not addressed in past studies such as arts, STEM domain and professional training. Additionally, employing qualitative or mixed method design could be employed to obtain deeper insight of students' motivational processes. Moreover, empirical evaluations could examine the effectiveness of instructional interventions by targeting multiple motivational dimensions which may offer practical guidance for enhancing students' motivation, learning process and academic achievement.

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