

# Buffering the Effects of Students' Perceived Task Difficulty on Cognitive Engagement in EFL Writing Classrooms: The Role of Foreign Language Enjoyment and Growth Mindset

Sana A. Almutlaq

Department of English Language and Literature, Imam Mohammad ibn Saud Islamic University (IMSIU), Riyadh, Kingdom of Saudi Arabia

**Abstract**—Submitted Currently, research on second language acquisition (SLA) and psychology of language learning has conceived foreign language learning as a complex system of beliefs, thoughts, emotions, and actions that contribute immensely to shape students' learning experiences. The significance of such research lies in the fact that they provide a holistic perspective of FL learning by considering the multiple and interrelated interactions of beliefs, emotional and cognitive factors, rather than examining any single variable in isolation. Therefore, this study seeks to provide such insights by examining the interaction between perception of task difficulty and cognitive engagement in an EFL writing classroom, taking into consideration the possible effects of foreign language enjoyment (FLE) and mindset on such relationship. Data were collected from 218 Saudi undergraduate students using a questionnaire. Results revealed that: a) students' perception of task difficulty is linked to their cognitive engagement; b) FLE acts as a buffer against the negative effects of difficult EFL writing tasks on students' cognitive engagement; c) growth mindset has no moderating role in the relationship between perceived difficulty and cognitive engagement.

**Index Terms**—perceived task difficulty, cognitive engagement, foreign language enjoyment, mindset

## I. INTRODUCTION

Globally, English writing proficiency is mandatory for the prospects and academic success of students (Sun et al., 2021; Al-Asmari, 2013) and for enhancing their career opportunities as well (Naghdi-pour, 2021; Khadawardi, 2022). Thus, improving English writing education, especially in countries where English is spoken as a foreign language has become invaluable important. English is a veritable tool for effective communication as a foreign language in Saudi Arabia. Therefore, the country needs a higher degree of proficiency in writing skills to bring this into reality. It must be noted that today, English has occupied the status of a world language and hence, has no boundaries. This is why it must be domiciled more among Saudi learning environments through various levels of engagements. A sound and formidable structure of the language will ensure international acceptability, domestic efficacy and efficiency of use and of course effective classroom teaching and learning in Saudi. However, one of the challenges faced by FL writing instructors, researchers, as well as students is its perceived difficulty. For example, mastery of FL writing prerequisites acquiring new writing conventions, a decent level of linguistic knowledge, grammar and vocabulary and demands the use of cognitive and meta-cognitive strategies that facilitate expressing ideas and expressions in the other language (Javadi-Safa, 2018; Khadawardi, 2022).

Perceived task difficulty refers to the degree to which a learner believes that a task represents a challenge that requires an extra amount of cognitive and/or physical efforts in order to produce a greater level of competence (Nawaz et al., 2020; Awwad, 2019). It is the subjective evaluation of task difficulty that is based on circumstanced judgments. Thus, while it is true that FL writing tasks come at varying levels of difficulty, perception of task difficulty is learner-dependent. Therefore, individual learners' appraisals of the difficulty of a certain task differ from one performer to another and they are usually related to variations in their language skills, ability and/or their affective domain (Robinson, 2011). Some triggers of high perceptions of task difficulty that are reported in the literature are lack of familiarity with task types, insufficient clarity of task purpose (Nunan & Keobke, 1995), unstructured tasks (Tavakoli & Skehan, 2005), greater cognitive levels, linguistic demands and the amount of information needed to complete a task (Tavakoli, 2009). Based on Bandura (1977), students' personal beliefs and perceptions are major determinants of their cognitive engagement as they particularly affect the amount of effort they put into and their sustainable performance.

Cognitive engagement is often described as the level of mental effort and involvement that a student invests in the learning process. It is characterized by active processing and making sense of new information, relating it to prior knowledge and integrating it into their existing schema. Recent research (e.g. Li et al., 2007; Nuutila et al., 2021; Zhang et al., 2021) suggests that an increase in levels of task difficulty perceived by students typically contributes to a decline

in their self-efficacy, expectancy of success, intrinsic motivation, and interest which in turn leads to an overall decrease in students' cognitive engagement and motivation. Fulmer and Frijters (2011) observed that students given an excessively challenging reading task are more likely to disengage and not persist when given the chance to stop reading. They perceive themselves as failing due to excessive anxiety and worry. Only high interest in the reading topics heightens their enjoyment and diminishes the negative effects of very challenging passages.

This is in line with the recent findings from positive psychology research that state that positive emotions such as Foreign Language Engagement (FLE) as well as positive beliefs such as a growth mindset can buffer the enduring effects of negative learning experiences. Particularly, MacIntyre and Gregersen (2012), stressed that the influence of positive emotions such as enjoyment in FL classrooms goes beyond a mere internal feeling of happiness. Frequent positive emotions boost learners' ability to absorb FL input, strengthen their resilience through challenges and promote their engagement. Prior studies have indicated a lack of interest in EFL writing among Saudi undergraduate students, their high levels of writing apprehension along with a negative attitude and weaknesses in EFL writing (Alshammari, 2020; Al-Khairy, 2013; Almuhaileb, 2016). Students' perceptions of EFL writing task difficulty could influence their cognitive engagement and the extent learners are willing and able to take on the learning task at hand. Therefore, this paper aims at investigating the relationship between perceived task difficulty and cognitive engagement in FL writing context among Saudi EFL learners and the role FLE and growth mindset plays in such relationship. We suggest that highly perceived task difficulty can cause a decrease in students' cognitive engagement. However, higher levels of FLE and growth mindset can help undo the negative effects of perceived task difficulty and spur more proactive reactions to promote resilience and engagement.

## II. LITERATURE REVIEW

### A. *Perceived Difficulty and Cognitive Engagement*

Levels of perceived difficulty can be estimated in students by measuring the disparity between their ability and the perceived challenge of a given task which is usually driven from previous experiences and outcomes of performing various tasks at varying levels of difficulty (Scassera, 2008). Although a student's perception of task difficulty is crucial in manipulating their cognitive processes while engaging in writing EFL tasks, it has long been neglected by researchers in SLA by considering it a mere realization of self-efficacy rather than an independent motivational variable (Nuutila et al., 2021). Eklund (2011), differentiates between the two constructs in which self-efficacy basic premises are one's beliefs and personal feeling about their capabilities and chances of success or failure to achieve a given goal. Perceived difficulty, on the other hand, is based on knowledge and feelings in regard to the task itself. For example, beliefs about the difficulty levels of the task and the amount of effort needed. Excessive task difficulty may pose negative effects on the flow and effectiveness of learners' learning experiences through engagement (e.g. Li et al., 2007; Nuutila et al., 2021; Zhang et al., 2021). In Zhang et al. (2021), for example, for very difficult EFL speaking tasks, learners report experiencing anxiety, significantly low confidence and interest to tackle the tasks given. They also show lower cognitive engagement and lack of efforts to implement cognitive and meta-cognitive strategies to engage in these speaking tasks.

Students' decisions to withdraw from challenging tasks are adaptation strategies to lessen their feeling of inferiority but will likely result in missing out on great opportunities for acquiring and developing knowledge and skills (Fulmer & Frijters, 2011). While it would be logically possible to believe that difficulty is a hindrance for learning, there is a general consensus among SLA scholars that a certain amount of difficulty is required to amplify students' motivation and engagement as well as their performance (e.g. Brunstein & Schmitt, 2010; Namaziandost et al., 2019; Ryan & Deci, 2017). They insist that increasing the level of challenge slightly beyond students' competence level could prevent boredom, as students need to exert mental efforts and sharpen their concentration, knowledge and skills to meet the challenge. Therefore, a moderate level of challenge is associated with deeper engagement as well as enjoyment of learning. It also boosts students' sense of efficacy, success and control of their own learning development (Shernoff et al., 2003). Sulis and Philp (2021), on the other hand, argued that only high challenging tasks simulate students' engagement, trigger and sustain their enjoyment. Students tend to exert more efforts and focus only when they believe the materials are intellectually very challenging.

Noticeably, engagement is one of the constructs that has been repeatedly reported in the literature as related to students' perceived difficulty. However, reviewing literature regarding students' engagement reveals variations in its definitions and scopes (Bond et al., 2020; Hiver et al., 2021). Skinner et al. (2009), for example, conceptualized engagement as energized, directed and sustained actions. These motivational actions are initiated, guided and endured by learners' emotions, beliefs and goals. Reeve (2012) pointed out that engagement implies students' intellectual involvement, attentiveness and physical participation in learning activities. Accordingly, engaged students are more likely to take an active role in their learning, exert more efforts, persist longer in the face of difficulties, direct their attention to the task at hand, adhere to features of the language, gather and exploit resources, and ultimately perform better than their less engaged counterparts. Recently, SLA researchers advocate the conceptualization of students' engagement as a multidimensional construct which consists of at least three dimensions: cognitive; behavioral, and emotional (Fredricks et al., 2004; Hiver et al., 2021; Hiver et al., 2020). Cognitive engagement refers to students' mental investment in learning and their deployment of cognitive and self-regulated strategies in order to comprehend

knowledge and accomplish tasks (Zhao & Li, 2021; Al-Hoorie & Hiver, 2021). Behavioural engagement pertains to students adhering to norms (e.g. presence, attendance and participation) while emotional engagement can be shown in students' interest and positive affects towards learning activities (Wang & Ye, 2021; Zhao & Li, 2021). These different facets of engagement capture related but separately distinct dimensions of students' language learning experience (Wang & Eccles, 2012; Pietarinen et al., 2014).

Cognitive engagement, which is the scope of this research, is highly dependent on the particular characteristics and demands of the learning tasks and environment (Pietarinen et al., 2014). According to existing literature on cognitive engagement in relation to FL writing, cognitively engaged students are more likely to demonstrate better academic outcomes (Al-Hoorie & Hiver, 2021; Quinto et al., 2021). Particularly, it is associated with better essay writing in terms of grades, essay's accuracy and lexical complexity.

### *B. Foreign Language Enjoyment (FLE)*

The concept of foreign language enjoyment (FLE) has been introduced recently into SLA literature by Dewaele and MacIntyre (2014), as a potential positive counterpart to the excessively investigated negative emotion of foreign language classroom anxiety (FLCA) (Li et al., 2021). In fact, researching enjoyment in FL is still in its infancy and researchers (e.g. Dewaele & Dewaele, 2020; Dewaele & MacIntyre, 2014; Dewaele & Alfawzan, 2018; Hosseini et al., 2022; Fathi & Mohammaddokht, 2021) have contributed significantly in defining it, stating its sources and impacts on a domain general study of FL learning. According to Broaden and Build Theory (Fredrickson, 2001), FLE promotes broadening behaviours such as engagement and attentive awareness to learning, and builds language resources and resilience to cope with difficulties (MacIntyre & Gregersen, 2012). Moreover, in his Control-Value Theory, Pekrun (2006), presented FLE as a positive achievement emotion that has a positive influence on FL overall learning experiences through increasing motivation, engagement, as well as enhancing learners' achievement (Dewaele & Li, 2020; Li et al., 2021).

When students think an activity is beyond their language abilities, they show a low level of engagement, enjoyment and display low efforts to learn (Fulmer & Frijters, 2011; Patall et al., 2018). Tulis and Fulmer (2013) found out that students' rating of the perceived difficulty of Mathematics and reading tasks is associated with lower levels of enjoyment and higher levels of stress and boredom. This is indeed a basic challenge for most users of FL as a tool for writing and reasoning. However, it has been found that high on-task interest and self-efficacy may mitigate such negative effect by boosting learners' enjoyment and strengthening their persistence (Fulmer & Frijters, 2011; Malmberg et al., 2013). Students who display positive attitudes towards the FL, like their FL teachers and are advanced language learners are more likely to enjoy their FL learning (Dewaele et al., 2018). Nuutila et al. (2021), on the other hand, found no significant connection between students' perceived task difficulty and their on-task interest and enjoyment. Yet, lack of appropriate challenge is associated with boredom and disengagement in FL classrooms (Kruk et al., 2021; Pawlak et al., 2020; Nakamura et al., 2021). Students who display low amount of interest and joy are demotivated to engage in activities that are perceived as being easy-to-grasp (Zhou et al., 2019).

### *C. Mindset*

Bandura (1997) argued that individuals with fixed mindsets, who believe ability is an innate talent, perceive performance results as signs of the levels of their inherent capability and intelligence. Therefore, they tend to avoid difficult tasks and seek easier ones to demonstrate their ability and conceal their weaknesses even at the expense of learning development. Although one can easily assume a relationship between students' mindset and their perception of task difficulty, such a connection has not been empirically tested in SLA domain. However, Dweck (2015) asserted that although complex demanding tasks are more likely to cause disengagement in classrooms, a proper level of challenge abets students in developing a growth mindset. As students struggle to overcome challenges; as they realize that challenges and setbacks are a natural part of the process of learning, the need to make conscious efforts with their mind becomes seamless.

Learners' beliefs about the malleability of their language ability and academic skills can determine the levels of engagement, experience in language classes as well as how much they persist in the face of challenge (Bandura, 1977). EFL students with a more of fixed mindset tend to be quiet and disengaged when the task becomes harder because mistakes and failure are a result of lack of ability (Al-Hoorie & Hiver, 2021). On the contrary, growth mindset learners, who believe that there is a chance to intellectually grow and learn, are more likely to feel confident when using the language and more likely to positively reappraise challenges as opportunities rather than threats (Lou et al., 2022). Teimouri et al. (2022), pointed out that gritty students who believe that they can become more successful through dedication and hard work are more likely to feel less anxious and enjoy their FL learning process. Khajavy et al. (2022) noted that FL learners with a growth FL reading mindset report higher levels of enjoyment in FL reading classes than their fixed FL reading mindset counterparts. Finally, Wang et al. (2021), confirmed a positive relationship between a growth language mindset and an experience of joy and feeling of pride among EFL students. Fixed language mindset, on the other hand, is linked to feeling bored in English classes.



outlining. Then, they wrote their first drafts, and were given two weeks to write, edit and finalize their essays before submitting the final versions. During this period, they were asked to comment on one another's writings, utilizing a feedback rubric that facilitated the process and helped them to generate formative and specific comments. Peer feedback allows students to be aware of their own writing competence and to notice the gap between their inter-language and the target language (Balachandran, 2018). It also creates an interactive environment that increases students' engagement in the class as well as their enjoyment (Alsehibany, 2021).

### B. Measures

The data were gathered through administering perceived task difficulty scale (Révész et al., 2016), cognitive engagement scale adopted from (Hiver et al., 2020a), short version of FLE scale (Botes et al., 2021) and Language Mindsets Inventory (LMI) (Lou & Noels, 2017).

#### (a). Perceived Task Difficulty Scale

The widely employed Révész et al. (2016) perceived task difficulty self-rating survey was used in this study. It includes a statement that participants need to judge on a 9-point Likert scale after completing a task. It measures their perception of task difficulty with 1 implying that the task is not difficult while 9 suggesting that the task is extremely difficult. Révész et al. (2016) stressed that self-rating surveys can yield valid and reliable outcomes, particularly when assessing an individual's perception.

not difficult at all	extremely difficult
1      2      3      4      5      6      7      8      9	

#### (b). Cognitive Engagement Scale

The scale consists of 8 items that is developed to assess learners' cognitive engagement in the language classroom. More recently, this questionnaire has been used in a sequence of studies and has proven its validity and reliability (e.g. Hiver et al., 2020b; Al-Horrie & Hiver, 2021). It includes items such as "I tried to understand my mistakes when I got something wrong", "I thought about different ways to solve problems in my work" and "I only studied the easy parts because the class was hard". Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach's  $\alpha$  for this scale was .91.

#### (c). Short Version of FLE Scale (S-FLES)

The scale introduced by Botes et al. (2021) is aimed at measuring positive emotions in language learning, with items such as 'I enjoy my class' and 'In class, I feel proud of my accomplishments'. Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale has been used in several studies of FL learning and development in different contexts and provided valid and reliable results. Additionally, it can be easily integrated in any survey to assess students' differences in language learning (Botes et al., 2021; Dewaele & Proietti Ergün, 2020; Dewaele et al., 2022; Botes et al., 2023). The Cronbach's  $\alpha$  for this scale was .81.

#### (d). Language Mindsets Inventory (LMI)

The scale introduced by Lou and Noels (2017), is aimed at measuring students' beliefs about the malleability of their language ability, with 18 items that measure FL aptitude beliefs, age sensitivity beliefs about language learning and general language intelligence beliefs such as 'It is difficult to change how good you are at foreign languages' and 'To be honest, you can't really change your language intelligence'. Items are rated on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The Cronbach's  $\alpha$  for this scale was .91.

## V. RESULTS

Data collected from 218 Saudi EFL learners were entered into SPSS for analysis. General descriptive tests, such as frequencies, percentages, mean and standard deviation, were run to explore the general characteristics of the research participants in regard to the investigated variables. Then, Pearson Correlation Test was used to test the relation between the studied variables along with Pearson's Chi-squared test ( $\chi^2$ ). Finally, to examine the direct and moderating effect among the researched variables, a simple and multiple regression analyses were implemented following a three-step approach outlined by Baron and Kenny (1986).

### A. Statistical Result

Among the 218 participants in this study, results showed that the highest percent of Saudi EFL learners, around 88%, perceive EFL writing tasks to be of easy or moderate difficulty, while only 12% find them to be difficult or extremely difficult. The mean score was 4.16 with a standard deviation of 1.93. Additionally, the majority of Saudi EFL learners (76%) enjoy their English writing classes and engage cognitively in completing their tasks (77%). Around half of these Saudi students endorse a fixed mindset about their English writing abilities while the other half are growth mindsets. The mean score was 3.70 with a standard deviation of .454. Table 1 summarizes the mean and standard deviation for all the researched variables.

TABLE 1  
DESCRIPTIVE STATISTICS FOR THE STUDIED VARIABLES

	Mean	Standard deviation
Perceived task difficulty	4.16	1.93
Cognitive engagement	3.85	.601
FLE	3.85	.632
Mindset	3.70	.454

(a). Relationship Between the Perceived Task Difficulty and Cognitive Engagement

A correlation test was performed to answer the second research question by investigating the relationship between the two variables; perceived task difficulty and cognitive engagement, see Table 2. It is important to stress that such a test gives indication on whether or not a relation exists between the variables and says nothing about the causation of the relationship.

The results of the correlation test revealed that there is a significantly negative correlation ( $r = -0.176$ ;  $p\text{-value} = 0.009 < 0.01$ ) between students' perception of task difficulty and their levels of cognitive engagement when performing EFL writing tasks. In other words, students are less likely to put in a lot of mental efforts and to persist when the task is perceived to be too difficult.

TABLE 2  
PEARSON CORRELATION MATRIX FOR THE RESEARCHED VARIABLES IN THIS STUDY

		Perceived task difficulty	Cognitive engagement
Perceived task difficulty	Pearson Correlation	1	-.176**
	Sig. (2-tailed)		.009
	N	218	218
Cognitive engagement	Pearson Correlation	-.176**	1
	Sig. (2-tailed)	.009	
	N	218	218

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

(b). FLE as a Moderator

Both simple and multiple regression tests were performed to answer the third research question about whether an FLE can play a role in buffering the effect of task difficulty on students' cognitive enjoyment. A multi-collinearity test was carried out for all regression models, the results revealed VIF (the variance inflation factor) for all models were  $< 3$  indicating the non-existence of multi-collinearity problem. Moreover, all models' residual were normally distributed. Thus, the assumptions for regression analysis were met.

Results of the simple regression indicated that cognitive engagement relates significantly to perceived task difficulty. The model was well fit. ( $R = 0.176$ ,  $F = 6.917$ ,  $p < 0.01$ ) showed a negative significant effect ( $B = -0.564$ ,  $t = 7.567$ ,  $p < 0.05$ ). Additionally, there is a significant relationship between cognitive engagement and FLE. The model was well fit. ( $R = 0.238$ ,  $F = 12.942$ ,  $p < 0.01$ ) showed a positive significant effect ( $B = 0.250$ ,  $t = 3.597$ ,  $p < 0.01$ ). Finally, as illustrated in Table 3, in the multiple regression, model was well fit. ( $R = 0.243$ ,  $F = 6.761$ ,  $p < 0.01$ ) showed a negative significant effect of FLE on the relationship between perceived task difficulty and cognitive engagement ( $B = -0.527$ ,  $t = -2.536$ ,  $p < 0.05$ ), while cognitive engagement decreased from step two ( $B = -0.564$ ,  $t = 7.567$ ,  $p < 0.05$ ) to step three ( $B = -0.433$ ,  $t = -1.984$ ,  $p < 0.05$ ). It can be concluded that FLE moderates the relationship between perceived task difficulty and cognitive engagement in EFL writing classes.

TABLE 3  
REGRESSION MODELS RESULTS FOR FLE AS A MODERATOR

	R	F Value	p-value (F- Test)	Beta coefficient	T value	p-value (T- Test)
Cognitive engagement → perceived task difficulty	0.176	6.917	0.009**	-0.564	7.567	<0.001**
Cognitive engagement → FLE	0.238	12.94	0.009**	0.250	3.597	<0.001**
Cognitive engagement → FLE → perceived task difficulty	0.243	6.761	0.001**	-0.433	-1.984	0.049*
				-0.527	-2.536	0.012*

\*: Significant at 0.05, \*\*: Significant at 0.01.

(c). Students Mindset as a Moderator

To answer the fourth research question, simple and multiple linear regression tests were conducted. First, in the simple regression test, cognitive engagement has no significant relationship to perceived task difficulty. Model was well fit as ( $R = 0.105$ ,  $F = 1.117$ ,  $p = 0.282$ ) revealed no significant effect ( $B = -0.416$ ,  $t = -1.082$ ,  $p = 0.282$ ). Secondly, the simple regression test showed that cognitive engagement relates significantly to growth mindset. The model was well fit. ( $R = 0.209$ ,  $F = 4.819$ ,  $p < 0.01$ ) showed a positive significant effect ( $B = 0.125$ ,  $t = 2.195$ ,  $p < 0.01$ ). Finally, in the

multiple regression test the model was well fit. ( $R = 0.263$ ,  $F = 3.906$ ,  $p = 0.023 < 0.05$ ) indicated no significant effect of the moderating variable and students' growth mindset on the relationship between cognitive engagement and perceived task difficulty ( $B = -0.621$ ,  $t = -1.621$ ,  $p = 0.108$ ). However, the cognitive engagement remained significant ( $B = 1.642$ ,  $t = -2.565$ ,  $p = 0.012 < 0.05$ ), as shown in Table 4. Therefore, it can be concluded that students' growth mindset does not moderate the relationship between perceived task difficulty and cognitive engagement in EFL writing classes.

TABLE 4  
REGRESSION MODELS FOR STUDENTS' GROWTH MINDSET AS A MODERATOR

	R	F Value	p-value (F- Test)	Beta coefficient	T value	p-value (T- Test)
Cognitive engagement → perceived task difficulty	0.105	1.171	0.282	-0.416	-1.082	0.282
Cognitive engagement → growth mindset	0.209	4.819	0.030*	0.125	2.195	0.030*
Cognitive engagement → growth mindset → perceived task difficulty	0.263	3.906	0.023*	-0.621	-1.621	0.108
				1.642	2.565	0.012*

## VI. DISCUSSION

The first research hypothesis is rejected, as the results contended that most undergraduate Saudi learners in this study perceive writing as attainable, not that hard, and show great willingness towards it. They express their great enjoyment in writing their tasks. This result is comparable to those by Alharbi (2022) wherein, the majority of his Saudi participants exhibited positive attitudes towards the English Language and its learning and find their English classes to be enjoyable. It is also in agreement with Jiang and Dewaele's (2019) who reported that EFL learners experience more enjoyment than anxiety in their English classes. Such a result is a promising finding as FLE is found to be a pivotal positive emotion that is associated with a good learning experience (Li & Wei, 2022; Dewaele & Alfawzan, 2018). For example, it is linked to a lower FLCA (Dewaele & MacIntyre, 2019), a greater willingness to engage in EFL communication (Khajavy et al., 2018; Lee et al., 2022), and a higher motivation, interest and persistence in face of difficulties in leaning EFL (Dewaele & MacIntyre, 2016; Hosseini et al., 2022).

Learning necessitates learner action (Hiver, 2022). Fortunately, results demonstrated that the majority of Saudi EFL learners who participated in this study are cognitively engaged in writing their EFL tasks. This finding is in complete agreement with Yu et al.'s (2019) who reported that EFL learners are generally engaged in EFL writing classes. When EFL learners are cognitively engaged they are more likely to pay attention and invest more mental efforts in completing tasks at hands (Cho, 2019). As Christenson et al. (2012) asserts that cognitively engaged students are self-regulated ones. They participate actively in generating ideas, reorganizing sentences, planning their essays, monitoring their progress and evaluating their final outcomes.

A possible explanation of such positive results is the fact that these students were given the opportunity to choose their own topics based on their interest which fostered their enjoyment and engagement in the task at hand (Zhou et al., 2019). Additionally, students participated in pre-writing activities which eased their anxiety by focusing their attentions on what they had already known and built on their prior knowledge (Oishi, 2015).

Correlation tests supported the second research hypothesis that there is a significant negative relationship between perceived task difficulty and cognitive engagement. Overall, these findings are in accordance with findings reported by previous researchers such as Li et al. (2007), Nuutila et al. (2021), Zhang et al. (2021) and Fulmer and Frijters (2011).

Although, a cause and effect relationship could not be confirmed, due to the inherent limitations of the statistical procedures, prior research in the fields of SLA and educational psychology has suggested that perception of task difficulty can influence learners' development through their effect on their expectancies and values (Wigfield & Eccles, 2000; Li et al., 2007). Believing that writing exceeds ones' ability can often create higher levels of anxiety and expectancies of failure which in turn lead to a greater withdrawal of efforts and disengagement. Once these negative thoughts occupy students' minds, they consume a great deal of cognitive and resources needed for on-task performance (Burmeister et al., 2022). As a result of such resource depletion, students face difficulties engaging cognitively as only fewer resources are left available to deploy attention towards task accomplishment, strategic learning techniques and progress monitoring. Thus, it can be argued that the levels of difficulty perceived by EFL students can predict their cognitive engagement in writing classes.

The third research hypothesis has been supported, too. Data analyses reveal that FLE plays a moderating role in the relationship between perceived task difficulty and cognitive engagement. That is, FLE is very effective in reducing the negative consequences of difficult tasks on the extent to which students are willing to focus on, invest mental efforts and persist in the learning tasks at hand. According to the Broaden and Build Theory (Fredrickson, 2001), enjoyment works as a contributor to broaden students' attention, and enhance their resilience and hardiness which could affect both the rate and speed of learning (Dewaele & Dewaele, 2020; Zhang et al., 2021; Fathi & Mohammaddockht, 2021). High levels of enjoyment can foster greater cognitive engagement (Hosseini et al., 2022; Alrabai & Alamer, 2022) which can in turn affect students' judgment of the learning difficulty. This was further confirmed by Dewaele and Alfawzan's (2018) findings that FLE facilitates attending to, processing and acquisition of EFL. It can be argued that learners who feel further enjoyment in EFL writing classrooms are more likely to embrace challenges, show greater involvement and

use strategies and tactics to overcome challenges. Enjoyment will fuel their enthusiasm to thrive through obstacles, leading to heightened cognitive engagement in the learning process.

Finally, the fourth research hypothesis has been rejected, as the relationship between perceived task difficulty and cognitive engagement is mostly not moderated by students' growth mindset. This may be due to the fact that Saudi students in this study experience more positive emotions. 76% enjoy their learning, and have good learning experience; 77% are cognitively engaged. Therefore, students' beliefs about their intelligence may not pose a great influence on their cognitive engagement when they encounter a difficult task. Another possible explanation of the lack of significant moderating role is due to a statistical deficiency. Since half of the research participants have fixed mindset, the number of participants with growth mindset was too small to show any significant effect.

## VII. CONCLUSION, LIMITATIONS AND IMPLICATIONS FOR FURTHER RESEARCH

The findings of this study have contributed significantly to understanding how perceived task difficulty affects EFL learners' performance via its relationship with cognitive engagement, FLE and mindset. It adds to the dearth of literature that has adopted a holistic perspective through which language learning process is examined as it is affected by how people feel, think and believe. To the best of our knowledge, it is the first study that investigates such relationships in EFL context. Moreover, this study could be of considerable value as it fills a gap in the literature by demonstrating the moderation roles that both FLE and growth mindset play in buffering the negative effect of task difficulty on students' cognitive engagement.

The findings of this study could be of considerable value to EFL practitioners as well as teachers. First, the results showed the relationship between perceived difficulty and cognitive engagement. Teachers should design their learning material to meet a certain level of difficulty that promotes optimal cognitive engagement. A level that presents a challenge to their students' current capabilities but at the same time does not interfere with their learning leading to frustration and disengagement. Secondly, results showed the importance of enjoyment in boosting students' attentiveness and enhancing their learning engagement even in the face of challenges. Since unlike negative emotions, positive emotions including FLE are mostly provoked by teachers' characteristics and their teaching methods (Alrabai, 2022; Dewaele & Dewaele, 2020; Jiang & Dewaele, 2019). We encourage teachers to focus their efforts on lessening students' apprehension and leveling their engagement. This can be achieved by creating learning opportunities and activities that elevate their enjoyment, interest, engagement, optimism and pride; and at the same time diminish their sense of anxiety, fear and shame. Relatedly, students' affective and cognitive engagement increase when teachers create a pleasant, friendly, and creative learning environment (Dewaele & Dewaele, 2020; Hosseini et al., 2022). A further implication this study recognizes is that teachers need to manipulate their students' perceptions of task difficulty in order to sustain their engagement, interest and enjoyment to complete the tasks. Li et al. (2007) suggested that making a task relevant to their previous learning experience, providing them with enough time to practice, monitoring their progress and giving individual feedback can be very helpful in making difficult tasks seem more attainable.

It is important to consider the limitations of this study when interpreting its findings. First, the research delimits its findings to undergraduate EFL students in a university in Saudi Arabia, so generalizing the results to other learning contexts may not be possible. Secondly, research in this area is still in its infancy stage. There is a scarcity of literature on the relationship between perceived task difficulty, cognitive engagement, mindset as well as Foreign Language Enjoyment (FLE). This work, therefore, recommends considering a structural equation model (SEM) study to better understand the complex relationship among these variables.

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**Sana A. Almutlaq** is an assistant professor at College of Languages and Translation at Imam Mohammad ibn Saud Islamic University (IMSIU), Riyadh, Kingdom of Saudi Arabia. Her research interests include all aspects of the psychology surrounding the foreign language learning experience.