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Unveiling the effects of enjoyment and hope on students' English learning effort

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Recent research has highlighted the significant impact of students' enjoyment, hope, and effort on their academic English learning within social contexts. However, the complex interconnections among these factors remain unexplored. To address this gap, the present study employs a quantitative approach to investigate the combined influence of specific dimensions of students' enjoyment and hope on their effort in learning English. A sample of 711 Chinese senior high school students participated in the study by completing questionnaires on enjoyment, hope and effort. The findings, based on structural equation modeling, suggest that FLE-Private (one dimension of foreign language enjoyment) and pathways (one dimension of hope) directly and positively influence students' effort in foreign language learning. This research offers valuable insights for educators aiming to enhance students' enjoyment in English learning, foster their strategic approach to language acquisition, and promote their academic success.

The emergence of the "positive psychology turn"[1] in applied linguistics has led to a greater attention towards psychological factors such as flow[2,3] resilience[4–7] grit[8–10] and enjoyment[11–13] which are critical for mitigating psychological distress—a concern amplified by COVID-19's toll on mental health[14]. In China's educational context, where high-stakes exams and teacher-centred pedagogy often dominate, fostering such emotions as buffers against stress and anxiety is of particular import and urgency[15] which also aligns with the national curriculum standards that advocate for holistic development and students' well-being[16].

Research on positive emotions in language learning has highlighted enjoyment, a positive affective experience characterized by pleasure and satisfaction[11] as being shaped by factors such as teacher attributes (e.g., predictability, friendliness, patience, behaviour, and L2 use) and peer dynamics (e.g., student cooperation)[11,17–19]. Crucially, enjoyment exhibits a negative relationship with factors such as anxiety[13,20] while positively correlating with language learning effort[21–23]. Similarly, hope has emerged as an important research focus[24] which is especially vital for navigating the lengthy process of language learning and coping with various setbacks and challenges[25]. For instance, Zhao and Wang[26] highlight its capacity to help learners navigate setbacks, while Hejazi and Sadoughi[21] and Rand et al.[27] further demonstrate its positive associations with both subjective well-being and long-term learning effort. Effort, defined as the time and energy learners invest in language-related activities[28] has also been found to correlate with both enjoyment and hope[21,29]. These findings highlight the complex interplay between psychological factors (e.g., hope and enjoyment) and academic diligence, underscoring the need for holistic approaches to understanding and fostering students' effort in educational settings.

The Control-Value Theory (CVT)[30,31] offers a comprehensive framework for understanding learners' emotions, both positive and negative, and dissecting their dynamics in L2 educational settings[32]. According to CVT, achievement emotions—categorized as outcome-focused (e.g., joy, hope, and anxiety) and activity-focused (e.g., enjoyment and frustration)—significantly influence academic accomplishments[30]. In this light, this study focuses on three CVT-aligned constructs—namely, enjoyment (positive emotion associated with learning activities), hope (positive emotion linked to future outcomes), and effort (observable behaviors in language learning). Specifically, effort, which directly influences academic performance[33] is classified as achievement performance within this framework.

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While prior research underscores the positive impact of enjoyment and hope on effort, their combined dynamics remain underexplored, especially in the Chinese L2 contexts. To address this gap, the current study examines:

RQ1: What are the levels of students' enjoyment, *hope and effort*?
RQ2: How do these three constructs correlate with each other *within the language learning process*?
RQ3: How do students' enjoyment and hope predict their effort?

By integrating CVT with empirical evidence, this study advances understanding of how the positive emotional factors collectively influence effort in foreign language learning, offering insights for cultivating resilience and engagement in L2 classrooms.

Literature review
Foreign Language enjoyment
Enjoyment plays a crucial role in language education, as emphasized by numerous scholars[12,18,34–36]. It represents the positive emotions experienced by learners when overcoming challenges, completing tasks, and fulfilling psychological needs during the language learning process[18]. Foreign language enjoyment (FLE) encompasses both trait emotional experiences and state-specific responses to learning tasks[12]. While FLE is inherently multidimensional, its conceptualization has evolved through distinct structural frameworks. Dewaele and MacIntyre[18] proposed a foundational two-dimensional model, distinguishing between FLE-Social (enjoyment derived from supportive teacher-peer interactions and classroom atmospheres) and FLE-Private (enjoyment rooted in individuals' accomplishment in language learning). Jin and Zhang[12] later expanded this framework by identifying a three-factor structure, which includes enjoyment from teacher support, peer support, and the intrinsic appeal of language learning. However, the original two-dimensional model remains widely adopted due to its cross-cultural validity, as evidenced in studies across diverse contexts such as China[13] and Belgium[34]. For this study, we prioritize Dewaele and MacIntyre's[18] two-dimensional structure to align with its established applicability and theoretical clarity in examining the interplay between emotional support and personal achievement. Furthermore, research in educational psychology has also established a positive correlation between enjoyment and hope[27,37]. Additionally, studies have indicated that L2 learners who experience higher levels of enjoyment demonstrate increased effort in their language learning endeavors[21,22,26,38].

English learning hope
The current literature on hope in the field of second language education is relatively sparse, yet hope is recognized as playing a crucial role in language learning, particularly when learners encounter various obstacles and challenges[39,40]. According to Snyder et al.[41] hope is defined as a mental state characterized by the belief in one's ability to successfully achieve goals through determined action and strategic planning. This positive motivational state consists of three key components: goal-directed thinking, agency, and pathways. Goal-directed thinking involves the capacity to establish clear and attainable goals, while agency pertains to the belief in one's capability to accomplish those goals. Pathways, as defined by Oxford's[42] taxonomy, relate to the capacity to identify and pursue multiple routes to achieve one's goals.

Research has shown that hope can positively influence various aspects of students' lives, such as overall life satisfaction, personal adjustment, GPA, and self-efficacy beliefs[43] and has also been associated with improved academic performance[44]. Previous research has consistently identified a moderate[45,46] to strong[47] positive correlation between hope and effort in language learning, with a predominant focus on high school[29,48] and undergraduate students[49]. Moreover, it is noteworthy that various dimensions of enjoyment have been identified as positively influencing different aspects of hope, including agency and pathways (metacognitive strategies)[50–52].

English learning effort
Effort, as defined by Carbonaro[53] refers to the time and energy students dedicate to meeting formal academic requirements. It is widely recognized that effort plays a crucial role in academic success[54,55]. While effort is often operationalized through quantitative metrics, frameworks such as Carbonaro's[53] intellectual effort and Katsantonis and McLellan's[56] regulation of effort highlight qualitative distinctions in how effort is allocated. Nevertheless, this study emphasizes quantitative effort—measurable investments of time and energy—to align with existing applied linguistics research[54,57] and ensure comparability across contexts.

In language learning, effort is closely associated with attention, involving the allocation of cognitive resources toward specific objectives[58]. It has been assessed through two dimensions: actual effort[57] reflecting the tangible actions and behaviours students invest in their language learning process, both inside and outside of the classroom, in order to effectively acquire the language[30] and intended effort[59–61] which captures learners' aspirations to become proficient L2 users[28]. Psychological factors further shape effort, exhibiting negative correlations with stressors like anxiety[35,62,63] and positive links to well-being factors such as enjoyment and hope[21,22,26,29,46,64].

The Control-Value Theory[30] provides a foundational framework for understanding how emotions like enjoyment and hope influence academic outcomes[32] through their interplay with control and value appraisals. Empirical studies in applied linguistics have largely validated this framework, demonstrating that enjoyment and hope correlate with increased effort[21,29] and, subsequently, improved language proficiency[22,26]. However, despite these findings, there remains limited exploration into the complex relationships between foreign language enjoyment, English learning hope, and English learning effort. Critically, most CVT-informed research in language learning tends to focus on the connections between positive emotional constructs (e.g., foreign language enjoyment) and their negative counterparts (e.g., anxiety), rather than delving into the multifaceted

Factor	α	Convergent validity			Discriminant validity (r)	
		p	CR	AVE	FLE-Pr	FLE-So
FLE-Pr	0.880	0.000	0.86	0.47	**0.687**	0.170
FLE-So	0.845	0.000	0.87	0.69	0.170	**0.831**

Table 1. Reliability, convergent validity, and discriminant validity of FLE. FLE-So = Foreign Language Enjoyment-Social, FLE-Pr = Foreign Language Enjoyment-Private. The bold number in discriminant validity represents the square root value of AVE.

Factor	α	Convergent validity		
		p	CR	AVE
Hope	0.824	0.000	0.81	0.52

Table 2. Reliability and convergent validity of hope.

interrelations among these constructs. Drawing from empirical evidence[21,45] s classified as achiethis study posits that enjoyment and hope collectively influence students' efforts in the context of English learning.

Methods
Participants
A total of 736 senior high school students from three cities in Northeast China were invited to respond to questions regarding their experiences of enjoyment, hope, and effort in learning English. Prior to participation, participants and their parents received comprehensive information about the research objectives, with assurances of anonymity and confidentiality. A rigorous screening process eliminated the invalid responses and resulted in a valid sample of 711 students. Among them, 342 students (48.1%) were male and 369 (51.9%) were female. The distribution across different grade levels was as follows: 266 students from grade 1 (37.41%), 219 from grade 2 (30.80%), and 226 from grade 3 (31.79%).

Research instrument
The current study employed a questionnaire as the tool for gathering quantitative data. The questionnaire began with inquiries regarding the respondents' personal details, such as gender and grade. The following sections consisted of three 5-point Likert scales revolving on enjoyment, hope, and learning effort. All items on these scales were rated from 1 ("strongly disagree") to 5 ("strongly agree"), and were presented in Chinese. To ensure clear comprehension by participants, the English versions of the scales were translated into Chinese. The translation process involved an initial translation by the first author, followed by review and refinement by a Chinese-English bilingual speaker, with any discrepancies resolved through discussion.

Foreign language enjoyment
The 21-item scale by Dewaele and MacIntyre[18] was used to measure students' foreign language enjoyment. We validated the scale and found a two-dimensional structure, namely FLE-Private and FLE-Social. FLE-Private examined individual learners' enjoyment ($n = 7$, $α = 0.880$; e.g., Item 03: *I don't get bored*). FLE-Social detected enjoyment arising from teachers' support and a supportive atmosphere ($n = 3$, $α = 0.845$; e.g., Item 17: *The teacher is supportive*). In this study, this scale was found to have good reliability ($α = 0.790$). According to the benchmarks, the two-dimensional confirmatory factor analysis (CFA) model displayed a satisfactory model fit after removing 11 items with all factor loadings more than 0.5 ($χ^2/df = 2.816$, GFI = 0.951, AGFI = 0.918, CFI = 0.962, TLI = 0.948, RMSEA = 0.072, and RMR = 0.043). Moreover, the average variance extracted (AVE) values were higher than 0.4, and the composite reliability (CR) values were higher than 0.7, indicating good convergent validity of the model[65]. Furthermore, the square root value of the AVE for each subscale was higher than its corresponding correlation coefficient (r), indicating good discriminant validity among the constructs (see Table 1).

English learning hope
The current study aimed to evaluate the efficacy of the English Learning Hope Scale (ELHS), which was adapted from the Trait Hope Scale (TTHS) developed by Snyder et al.[41] with items rephrased to reflect L2-specific goals and challenges. The scale validation resulted in a one-factor structure ($α = 0.867$) after removing four items, specifically pathways (developing ways to achieve goals, $n = 4$; $α = 0.824$; e.g., Item 22: *I can think of many ways to overcome challenges in English learning.*). Its model fit met the theoretical criteria with all factor loadings more than 0.5[66] ($χ^2/df = 1.873$, GFI = 0.995, AGFI = 0.974, CFI = 0.996, TLI = 0.989, RMSEA = 0.050, and RMR = 0.019). The CR and AVE were 0.81 and 0.52, supporting the good convergent validity of the model[65]. Owing to the unidimensionality of the construct, the discriminant validity was not examined (see Table 2).

Factor	α	Convergent validity		
		p	CR	AVE
LLE	0.752	0.000	0.75	0.51

Table 3. Reliability and convergent validity of LLE. LLE = Language Learning Effort.

Variables	Min	Max	M	SD	Skew	Kurt
1 FLE-Social	1.00	5.00	4.50	0.64	− 1.590	3.827
2 FLE-Private	1.00	5.00	3.48	0.76	− 0.337	0.074
3 Global ELE	1.00	5.00	3.74	0.61	− 0.155	− 0.293
4 Hope	1.00	5.00	3.27	0.84	− 0.340	0.150
5 Effort	1.00	5.00	2.97	0.63	0.020	0.590

Table 4. Results of descriptive analysis of FLE, hope and effort. *N* = 711, FLE-Social = foreign language enjoyment-social; FLE-Private = foreign language enjoyment-private.

	1	2	3	4
1 FLE-Private	1			
2 FLE-Social	0.167**	1		
3 Hope	0.416**	0.069	1	
4 Effort	0.629**	0.126**	0.368**	1

Table 5. The correlation analysis. **$p \leq 0.01$ level.

English learning effort

The English Learning Effort Scale (ELES) was adapted from Gao's[57] work and assessed learners' actual effort through 11 items describing specific, observable behaviors in their English learning. Five negative descriptions were reversed during data processing. After validation testing by CFA, eight items were deleted, resulting in a final three-item construct of effort with high reliability (α = 0.752). The modified CFA model produced a saturated model with all factor loadings exceeding 0.5. The CR and AVE were 0.75 and 0.51, supporting adequate convergent validity of the model[65]. Discriminant validity was not assessed due to the unidimensional structure of the construct (see Table 3).

Data collection and data analysis

The questionnaire was distributed in June 2023 via the Wenjuanxing questionnaire system (https://www.wjx.cn/) (accessed on 1 June 2023). Participants were informed of the research objectives in advance and encouraged to provide candid responses based on their genuine learning experiences. The data analysis processing comprised of three steps. In the first step, univariate normality tests were conducted to ensure the normal distribution of the collected data, with skewness and kurtosis values less than |2.0| as the criterion for normality, in line with recommended guidelines[67]. Second, descriptive and correlational statistical analyses were performed using SPSS 26.0 to have an overall view of the levels of the targeted variables and examine the correlations between our targeted variables. In the last step, we conducted multiple linear regressions to explore the role of FLE-Social, FLE-Private, and hope (pathways) on effort.

Results

General patterns of students' foreign Language enjoyment, hope and effort

The results of the descriptive analysis in Table 4 indicate that the participants experienced moderate levels of enjoyment and hope (3.74 and 3.27 out of 5, respectively) and moderate to low levels of effort (2.97 out of 5).

The predictive effect of enjoyment and hope on effort

Table 5 shows that the correlations among the three variables are significant except for the correlation efficient between FLE-So and Hope. Given the non-significant correlation between FLE-So and Hope, the practical association between these two constructs should be interpreted as weak and limited.

The results of the regression method "enter" indicated that except for "FLE-Social", the other two independent variables have a significant positive predictive role in effort (as shown in Table 6). The R-squared value of 0.352 suggests that the combination of FLE-Private, FLE-Social, and Hope can account for 35.2% of the variance in students' effort scores. Table 3 displays that the standardized regression coefficient (Beta) for FLE-Private (Beta = 0.537) is higher than that for hope (Beta = 0.117), indicating that FLE-private has a stronger explanatory power for the variance in student effort than hope. Additionally, both the standardized coefficients for FLE-

Variables		R	R^2	Adjusted R^2	F	Beta	t	Tolerance	VIF
DV	Effort	0.59	0.352	0.350	128.211				
IV	FLE-Social					−0.009	-0.304	0.972	1.029
	FLE-Private					0.537	15.939*	0.808	1.237
	Hope					0.117	3.526*	0.827	1.209

Table 6. Multiple linear regression: important statistics ($n = 711$).

private and hope in relation to student empathy are positive, suggesting that the higher FLE-private and hope students have, the more effort they exert. The standardized regression equation for this analysis is expressed as:

$$\text{Effort} = 0.537(\text{FLE - Private}) + 0.117(\text{Hope})$$

Discussion

According to Dewaele and Alfawzan's[36] assessment of FLE levels, this study utilizes a 5-point Likert scale, where 3–4 points indicate a moderate level. Table 1 presents the average FLE score of high school students in learning English, which is 3.74, indicating a reasonable level of FLE. The overall findings of the study revealed that students' enjoyment levels were average, consistent with the previous research by Dewaele and Li[68]. Additionally, following Snyder's[69] classification of hope levels, a score range of 0.6–1.25 points is considered moderate. Moreover, the reported level of effort also indicates that Chinese senior high school students generally allocate a moderate to low level of actual effort towards English learning, even when positive emotions are present. On the whole, these quantitative results align with the research conducted by Schweder and Raufelder[70].

This study extends Control-Value Theory (CVT) by conducting in-depth investigation into the specific impacts of enjoyment and hope on effort in foreign language learning using Amos path analysis. It is revealed that overall enjoyment positively predicts effort, particularly regarding relation to FLE-Private. Previous research has consistently shown that when students derive enjoyment from their educational experiences, they demonstrate a greater willingness to exert effort, actively engage in classroom activities, and persevere through challenges[70]. Furthermore, research has indicated that enjoyment is a positive predictor of effort in various contexts, including foreign language learning[21,22,26,71]. For example, Hejazi and Sadoughi's[21] study demonstrates that enjoyment contributes to sustained effort and interest in challenging second language learning processes. However, the impact of FLE-Social on effort was found to be insignificant. Subsequent confirmatory factor analysis revealed that the remaining items in the FLE-Social section specifically related to enjoyment derived from teacher support. According to Pekrun's Control-Value Theory, when individuals value an achievement-related activity and perceive it as controllable, they are hypothesized to experience feelings of pleasure. Accordingly, the internal perception of value can consistently serve as a motivator for students to derive enjoyment. On the other hand, teacher support offers external assistance and helps students recognize external values in learning. However, due to its lack of constancy and enduring presence, teacher support leads to inherently unstable enjoyment, with limited impact on student effort.

Furthermore, the findings suggest that hope, operationalized specifically as pathways, is a significant positive predictor of effort in language learning. Research has shown that hope directly and positively influences effort[46,69,72]. According to Snyder[69] hope acts as a motivator for increased determination and effort, as individuals with hope tend to view obstacles as challenges to be overcome rather than insurmountable barriers. Similarly, MacIntyre and Gregersen[72] demonstrate that hope, defined as the belief in one's ability to overcome challenges and succeed, is linked to higher levels of effort in the face of difficulties. Additionally, Jiang and Liu[46] also found that students with higher level of hope tended to be more willing to plan their study and put more efforts in English learning. In this study, hope is conceptualized as pathways, highlighting the importance of learning strategies, particularly metacognitive ones such as making plans. Recent research has shown that students' enjoyment and use of metacognitive strategies significantly influence their effort levels[70]. Moreover, students with proactive attitudes towards problem-solving are more likely to set meaningful goals, remain optimistic about future outcomes, and dedicate effort to achieving those goals[73].

Conclusion and implications

The present study has examined the complex interactions between enjoyment, hope, and effort. The findings indicated that students demonstrated moderate levels of enjoyment and hope (3.74 and 3.27 out of 5, respectively) and moderate to low levels of effort (2.97 out of 5). Multiple linear regressions analysis revealed that both FLE-Private and hope were significant and positive predictors of students' effort. In other words, higher levels of FLE-Private and pathways were associated with increased effort from students.

The findings of this study make a valuable contribution to the existing body of theoretical knowledge. Firstly, it advances research on emotions in foreign language learning by exploring the correlation between two positive academic emotions (enjoyment and hope) and effort based on CVT theory. Secondly, it deepens the understanding of hope in foreign language education and reveals that only the component of pathways was retained in the final dimension of hope, highlighting the need for further investigation in future research. Lastly, this study emphasizes actual effort, as opposed to intended effort, which has been the focus of most previous studies[59–61].

However, cultural factors can influence intended effort and introduce a certain degree of unpredictability[61]. This study, therefore, aims to investigate the correlation between positive psychological factors and actual effort,

with the goal of providing practical insights for educational practice. In the context of English teaching, educators should utilize students' past achievements and interests to foster a sense of accomplishment and enjoyment, where highlighting the tangible benefits of English proficiency and linking language learning to students' future aspirations is essential. In addition, encouraging self-directed learning empowers students to independently explore effective learning strategies, promoting autonomy and self-efficacy.

Furthermore, it is essential for teachers to recognize and reward students' efforts in order to foster a positive learning environment. Acknowledging their progress not only boosts self-confidence but also motivates further investment in their language learning process. Additionally, cultivating a growth mindset by instilling belief in students' abilities and providing constructive feedback also helps foster resilience in the face of challenges.

To enhance students' enjoyment of learning English, teachers should incorporate diverse instructional strategies. Specifically, interactive and communicative language activities, real-world applications, and collaborative learning opportunities not only make learning engaging but also cultivate a sense of belonging and camaraderie among students.

Moreover, academic support services should address both language proficiency and psychological aspects of learning. Guidance counsellors can support students in setting realistic and motivating language learning objectives, while emphasizing the importance of perseverance and resilience. Incorporating activities focused on pathway development, such as reflective exercises and progress tracking, can enhance students' awareness of their learning trajectory and strengthen their commitment to achieving their language learning goals.

Despite the attempt of the current study to unravel the intricate relationships between students' enjoyment, hope and effort, several limitations should be noted. Firstly, regarding the dataset, this study focused exclusively on one aspect of hope–specifically, pathways. This limitation is partly due to the cultural context in which the data was gathered. Future research is encouraged to gather data from a broader range of cultural contexts to enhance the comprehensiveness of the dataset. Secondly, it is recommended that future studies conduct qualitative follow-up research to track the participants' developmental changes in enjoyment, hope and effort over a continuous period, which would offer a more dynamic understanding of how these factors evolve over time.

Data availability
The data presented in this study are available on request from the corresponding author because the data are not publicly available due to privacy or ethical restrictions.

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Author contributions

H. L, Y. J and H. N; Investigation, H. L; Methodology, H. L and H. N; Supervision, H. L; Writing – original draft, H. L, Y. J and H. N; Writing – review & editing, H. L, Y. J and H. N.

Declarations

Competing interests

The authors declare no competing interests.

Ethics approval and consent to participate

All methods were carried out in accordance with the guidelines and regulations of the 1964 Helsinki declaration and its later amendments. Since this study does not involve intervention and it is low risk, ethical review and approval were waived according to the institutional review boards at School of Foreign Language in Soochow University.

Consent for publication

Not applicable.

Informed consent

Each participant was required to sign a written form of informed consent. All participants were informed about the aim of the study and their right to withdraw from the study at any time. All methods were carried out in accordance with relevant guidelines and regulations.

Additional information

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