Language Testing in Asia

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Tapping the alphabets of learning-oriented assessment: self-assessment, classroom climate, mindsets, trait emotional intelligence, and academic engagement are in focus

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Abstract

This study investigates the role of self-assessment (SA), classroom climate (CC), and psychological variables in learning-oriented assessment (LOA) within English as a foreign language (EFL) education. Utilizing a mixed-methods approach, data was collected through surveys and semi-structured interviews from EFL learners and instructors. Findings reveal that SA plays a pivotal role in promoting learner autonomy, self-regulated learning, and academic engagement (AE). By actively involving students in the assessment process and providing opportunities for reflection and feedback, educators can empower learners to take ownership of their learning journey and enhance their overall learning outcomes. Moreover, the study underscores the importance of creating a supportive CC characterized by mutual respect, collaboration, and inclusivity. Positive teacher-student relationships and inclusive learning environments contribute significantly to students' academic and socioemotional development. Additionally, the study highlights the influence of psychological variables such as growth mindset and emotional intelligence (EI) on student learning outcomes. Learners who adopt a growth-oriented mindset and possess high levels of EI are more likely to persevere in the face of challenges and actively engage in the learning process. The implications of this study suggest the importance of adopting a holistic approach to assessment and instruction in EFL education, with stakeholders urged to incorporate strategies to promote SA, create supportive CC, and foster psychological variables for enhanced student learning and well-being.

Keywords: Academic engagement, Classroom climate, Learning-oriented assessment, Mindsets, Self-assessment, Trait emotional intelligence

Introduction

An alternative approach to assessment known as LOA emphasizes assessment that is integrated with the learning process and focuses on scaffolding provided by the evaluator through facilitative feedback, both immediate and focused on learning improvement (Hamp-Lyons, 2017). LOA is often used interchangeably with assessment for learning (AFL), an instructional strategy that involves learners in the learning process,

offers feedback to enhance their language performance, promotes autonomy, and clarifies learning objectives (Ali, 2013; Lee & Coniam, 2013). In essence, LOA places priority on assessment that is intertwined with learning activities in EFL/ESL classrooms, where discussions revolve around theories of teaching and learning, including what should be learned, how it should be assessed, and how students' progress should be evaluated (Al-Abri et al., 2024; Watkins et al., 2005).

SA, which could be regarded as an instance of LOA, involves a range of psychological attributes including self-efficacy, consciousness, emotional resilience, and locus of control (Judge et al., 1997; Yan et al., 2023). Essentially, SA entails critically evaluating one's own behaviors, attitudes, or performance (Bachman & Palmer, 2010; Yan & Carless, 2022), emphasizing the importance of instructing students on how to gauge their own progress. Andrade (2019) further elaborates on SA, emphasizing its focus on competencies such as metacognitive knowledge, supervision, and self-regulated learning. Participation in self-evaluation activities enables students to develop critical thinking skills and make informed decisions, thereby strengthening their ability to overcome educational challenges (Heydarnejad et al., 2022). External influences such as grades and feedback from instructors, along with internal factors like consciousness and goal setting, significantly influence the development of SA (Bourke & Mentis, 2013).

As a feature that could facilitate learning within educational contexts, CC has emerged as a cohesive concept illustrating how various learning encounters combine and accumulate to shape academic, behavioral, and socioemotional outcomes in children and adolescents (Chapman et al., 2013; Hattie, 2009; Wang et al., 2020a, 2020b). Numerous countries have prioritized enhancing CC and dynamics as a key objective of educational reform efforts, reflecting a global consensus on its significance in fostering school quality and the academic and psychological well-being of children (Wang & Degol, 2016; Wang et al., 2020a, 2020b). Viewed from a bioecological standpoint, CC encompasses various dimensions, including the structure and organization of the classroom setting, instructional methods, disciplinary practices, curriculum content, and interpersonal relationships among students and between students and teachers (Jones et al., 2008; Wang & Degol, 2016). These dimensions constitute a set of proximal processes that can mediate or moderate the impact of external contexts, such as family and neighborhood, on children's outcomes. While these processes are interconnected, they each capture essential aspects of children's learning environments and exert distinct influences on their academic and psychosocial development (Wang et al., 2020a, 2020b).

Learners' mindset could also affect learning gains. Dweck (1999) investigated the disparity in students' attitudes toward learning challenging tasks, observing that some embraced difficulty while others were anxious or reluctant. She formulated the concept of mindset, delineating a continuum from fixed to growth mindsets. This spectrum illustrates how individuals may hold different mindsets—fixed or growth—across various aspects of their lives. For instance, a student may exhibit a fixed mindset regarding academic tasks while maintaining a growth mindset in sports like baseball. Those with a fixed mindset believe intelligence to be immutable (Dweck, 1999, 2006; Mueller & Dweck, 1998). Typically, individuals with a fixed mindset interpret failures, whether academic or otherwise, as indicative of their intelligence. Furthermore, the combination of effort exertion and subsequent failure is particularly

discouraging for fixed-mindset individuals, leading them to attribute their shortcomings solely to perceived intelligence deficits (Dweck, 2006).

Trait emotional intelligence (EI) denotes a collection of self-perceptions associated with emotions positioned within the lower echelons of personality structures (Kumar & Tankha, 2023) and evaluated through the Trait Emotional Intelligence Questionnaire (Petrides et al., 2007). It distinguishes itself as the exclusive operational definition in its field recognizing the inherent subjectivity embedded in emotional encounters (Petrides, 2010). Additionally, studies propose that the facets of trait EI resemble personality traits rather than competencies, cognitive abilities, or enablers. This assertion is bolstered by evidence suggesting that the same genetic components influencing individual disparities in the Big Five personality traits also impact variations in trait EI (Vernon et al., 2008).

As another key construct of this study, the notion of AE encompasses the degree and duration of students' involvement in classroom tasks and activities (Meng & Zhang, 2023; Sharma & Bhaumik, 2013). AE serves as an expression of student motivation, providing the impetus and enthusiasm for academic pursuit and achievement (Fredricks et al., 2004; Hu & Wang, 2023). Participation in language acquisition fosters the development of various competencies, which serves as the ultimate goal (Teng et al., 2022). It is widely acknowledged that the concept of AE is dynamic, constantly evolving, and influenced by a multitude of internal and external factors (Shu, 2022). To clarify further, it has been acknowledged that various phenomenological, personal, and instructional factors play a crucial role in determining the level of AE among EFL students (Sharma & Bhaumik, 2013). According to the research findings, social media and technology may impact the level of engagement students exhibit in L2 classrooms (Ritonga et al., 2023).

In EFL education, the effectiveness of LOA remains a critical area of inquiry. This study seeks to address the multifaceted influence of SA and CC on EFL learners' mindsets, trait EI, and AE within the LOA framework. Despite the acknowledged importance of SA and CC in fostering a conducive learning environment, there is a paucity of research examining their specific impacts on psychological factors and AE among EFL learners. By delving into these interrelated aspects, this study aims to contribute to a deeper understanding of the complex dynamics at play within the EFL classroom context. Furthermore, investigating EFL learners' attitudes toward SA and CC within the LOA framework will provide valuable insights into their perceptions and experiences, thereby informing pedagogical practices and curriculum development in EFL settings. This study not only addresses gaps in the existing literature but also has practical implications for educators and policymakers striving to enhance the quality of EFL instruction and promote student success. Therefore, the following research questions are addressed in this study:

1. Does EFL learners' self-assessment influence the state of mindsets, trait emotional intelligence, and academic engagement in LOA?
2. Does EFL learners' classroom climate influence the state of mindsets, trait emotional intelligence, and academic engagement in LOA?
3. What is EFL learners' attitudes toward self-assessment and classroom climate in LOA?

This study can hold significant implications for both theory and practice in the field of EFL education. By investigating the influence of SA and CC on EFL learners' mindsets, trait EI, and AE within the framework of LOA, this research contributes to a deeper understanding of the complex dynamics shaping students' learning experiences. The findings of this study can inform educators and policymakers about effective strategies for enhancing student motivation, self-regulation, and overall academic achievement in EFL classrooms. Furthermore, by exploring EFL learners' attitudes toward SA and CC within the LOA framework, this study offers valuable insights into students' perceptions and experiences, thereby guiding the development of student-centered pedagogical approaches and curriculum design. Ultimately, the outcomes of this research have the potential to improve the quality of EFL instruction, promote student success, and foster a supportive learning environment conducive to the holistic development of EFL learners.

Literature review

Theoretical framework

Learning-oriented assessment

LOA is fundamentally defined as an assessment method focused on gathering and analyzing performance evidence to inform decisions for ongoing language enhancement (Al-Abri et al., 2024; Purpura, 2004). It is recognized for its capacity to promote student learning and support instructional scaffolding (Ploegh et al., 2009). Moreover, LOA serves as a formative assessment approach that adapts to the changing needs of learners, addresses pertinent learning objectives, and aids students in attaining these objectives, thereby fostering and facilitating effective teaching and learning (Carless, 2007).

LOA is primarily distinguished from assessment of learning (AOL), which primarily centers on using assessment outcomes to form judgments about student learning for administrative purposes (Wiliam, 2001). In AOL, learners' current achievements and future potentials are evaluated against established and customized learning standards, objectives, and criteria, often serving reporting purposes. Conversely, LOA prioritizes the enhancement of both learning and teaching processes (Earl, 2003). LOA facilitates the identification of students' strengths and weaknesses to enhance learning and assist educators in adjusting teaching objectives and methods. Within LOA, students transition from passive participants to active contributors throughout the entire assessment cycle (Gardner, 2006).

Black and Wiliam (1998) demonstrated significant advancements in student learning outcomes when educators shifted their focus toward utilizing assessment to support and enhance the learning process. As emphasized by Carless (2007), summative assessment often carries negative connotations and adverse effects within the educational landscape. However, it is believed that LOA has the potential to alleviate some of the tensions surrounding testing and evaluation. In contrast to AOL, which is typically designed for ranking purposes and confirming competency, LOA encourages educators and students to offer supportive feedback to improve learning and teaching practices. This form of assessment proves truly beneficial when the results are thoughtfully utilized to enhance instruction and address learning needs (Black et al., 2004). According

to Black and Wiliam (1998), the primary objective of LOA is to leverage assessment to promote student learning.

Jones (2010) outlines four essential tenets of LOA, all centered around the learner. Initially, educators should take into account learners' existing and past levels of understanding. Second, it is imperative to encourage learners' active engagement in learning endeavors. Third, learners should grasp the significance of the learning journey and the objectives they are actively striving to achieve; they should possess a thorough understanding of the criteria upon which the entire assessment is founded. Lastly, the incorporation of self and peer assessment within the classroom setting allows students to attain a more holistic comprehension of the requirements and methods for enhancing their academic performance.

Self-assessment

Andrade and Valtcheva (2009) characterize SA as a process wherein students gather information regarding their performance or progress, compare it against explicitly stated criteria, goals, or standards, and continuously revise. This delineation underscores its formative nature for evaluation and emphasizes that SA extends beyond the mere assignment of a numerical score. The primary purpose of engaging in SA is to enhance learning and achievement, promote self-management and control, and regulate one's own learning. They identify three fundamental elements of SA: firstly, the availability of rubrics to both students and evaluators. There should be a transparent process of consultation and mutual agreement between teachers and learners to establish a clear description and comprehensive understanding of rubrics and rating criteria well in advance of the assessment process. Second, students should engage in critical reflection individually, utilizing the scoring rubrics. Third, students refine their work based on feedback obtained from the initial revision.

Mahlberg (2015) discovered that classes incorporating SA demonstrated higher levels of self-regulation, leading to a significant increase in students' purposeful and independent engagement in extensive study. According to Segers et al. (2006), SA in writing encompasses any techniques or tasks wherein writers evaluate and revise their own writing regularly. Similarly, Rezai et al. (2022) explored the potential of SA, noting a notable increase in students' awareness accompanied by heightened motivation. Consequently, writers improve their skills and develop the necessary competence for future writing endeavors. To facilitate learners in SA, students must acquire the ability to monitor the entire performance process, including the end product and the steps involved in achieving it, as each step holds equal importance.

Classroom climate

Bronfenbrenner's bioecological model proposes that human development unfolds within interconnected contexts, where proximal processes play a pivotal role in shaping individuals' experiences, thoughts, emotions, and actions (Bronfenbrenner & Morris, 2006). These proximal processes, occurring within daily and prolonged interactions, are recognized as the most influential factors in development (Bronfenbrenner, 1994). Examining these processes within the classroom setting is insightful, given that classrooms serve as unique developmental environments characterized by instructional, social,

and organizational dynamics (Wang et al., 2020a, 2020b). It is through the interactions between students and teachers that the CC fosters the growth of children's and adolescents' academic, socioemotional, and behavioral skills.

Viewed through a bioecological lens, the CC encompasses various facets, including the arrangement and structure of the learning environment, teaching methodologies, disciplinary strategies, and curriculum implementation, along with the interpersonal dynamics among students, peers, and educators (Jones et al., 2008; Wang & Degol, 2016). These elements collectively constitute a series of immediate processes that can either mediate or moderate the impact of external factors (e.g., family or community environments) on children's outcomes. While interconnected, these processes differ in how they capture crucial aspects of the learning environment and shape children's academic and socioemotional development. Despite a lack of unanimous agreement on the definition of CC, its multifaceted nature has been extensively explored in scholarly literature.

Initial studies on CC primarily focused on teaching methodologies, analyzing the distribution of teacher interactions with students, such as the proportion of teacher-led activities compared to student-initiated activities (Anderson, 1939; Withall, 1949). Subsequent research expanded to encompass the management and arrangement of the classroom environment (Fraser et al., 1982; Trickett & Moos, 1973; Walberg, 1968). For instance, Trickett and Moos (1973) underscored the socio-psychological aspects of secondary school classrooms, conceptualizing the classroom as a dynamic system comprising teaching methods, task attributes, clarity of rules, and overall orderliness.

Recent conceptualizations of CC have shifted toward examining interactions between students and teachers within the classroom, highlighting the diverse nature of CC (Danielson, 2011; Leff et al., 2011). For instance, Jones et al. (2008) suggested that both teaching methodologies and teacher-student rapport contribute to the overall quality of the classroom's instructional and emotional environments, which subsequently influence students' outcomes. In 2009, Klieme and colleagues outlined three fundamental dimensions of instructional or classroom quality, encompassing cognitive engagement, teacher assistance, and classroom governance. Similarly, Pianta and Hamre (2009) introduced a framework for classroom quality, elucidating how the structure and dynamics of teacher-student interactions impact child development, with a focus on instructional assistance, emotional support, and classroom management.

Undoubtedly, CC is a multifaceted construct, complicated further by the diversity of operational conceptualizations proposed by researchers. Nevertheless, these conceptualizations consistently underscore three fundamental components of teacher-student interactions: instructional support, socioemotional support, and classroom organization and management. While these dimensions may be termed differently in various theoretical frameworks and research findings, they align with several prominent models (Fauth et al., 2014; Wang et al., 2020a, 2020b). Within each of these dimensions lie specific indicators of classroom interactions that are predictive of outcomes for students (Klieme et al., 2009; Miller & Wang, 2019; Pianta & Hamre, 2009; Wang & Holcombe, 2010).

Mindset

Dweck (1999) explored the variation in students' attitudes toward tackling challenging tasks, noting that while some embraced difficulty, others felt anxious or hesitant.

She introduced the concept of mindset, outlining a spectrum from fixed to growth mindsets. This continuum illustrates how individuals may adopt different mindsets—fixed or growth—across various aspects of their lives. For example, a student might adopt a fixed mindset toward academic tasks while maintaining a growth mindset in activities like sports such as baseball. Those with a fixed mindset perceive intelligence as unchangeable (Dweck, 1999, 2006; Mueller & Dweck, 1998). Typically, individuals with a fixed mindset interpret failures, whether academic or otherwise, as reflective of their intelligence. Moreover, the combination of effort and subsequent failure is particularly disheartening for those with a fixed mindset, leading them to attribute their failures solely to perceived deficits in intelligence (Dweck, 2006).

Individuals holding a fixed mindset typically disregard helpful feedback and perceive their peers' success as intimidating (Saunders, 2013). They often attribute their failures to external factors. For example, when facing a test failure, those with a fixed mindset might attribute it to their teachers, stating, "They didn't cover that," or "That wasn't in the study materials." Consequently, individuals with a fixed mindset tend to attribute their failures not to their own lack of ability or effort, but rather to external circumstances (Dweck, 2006).

Conversely, individuals with a growth mindset held the belief that intelligence was adaptable and could be developed, viewing failure as an opportunity for learning and growth. Emphasizing the importance of effort allowed those with a growth mindset to see setbacks as motivational factors propelling them forward in their learning journey (Blackwell et al., 2007; Plaks & Stecher, 2007). Over time, their persistence and determination led to eventual success (Dweck, 1999, 2006). Additionally, individuals with a growth mindset actively sought and utilized constructive feedback to enhance their learning and benefited from observing the success of others (Saunders, 2013). Even in the face of negative feedback, Dweck (2006) observed improvements among those with a growth mindset. Unlike their fixed mindset counterparts, they did not attribute failures to external factors and instead focused on ways to enhance their performance in subsequent assessments. Notably, simply boosting students' self-esteem through praise did not necessarily enhance their motivation or academic achievement. Dweck (2006) noted that feedback from teachers could significantly influence students' self-perception, motivation, and academic performance. Moreover, excessive praise might be interpreted as underestimating students' capabilities and potential for further accomplishment (Dweck, 1999).

Hartmann (2013) proposed that students in special education settings often exhibited a more fixed mindset compared to their peers without special needs. Individuals requiring special education support, particularly those with specific learning disabilities, demonstrated lower levels of academic achievement compared to their typical counterparts (Frederickson, Simmonds, Evans, & Soulsby, 2007). These students frequently encountered failure or unsatisfactory grades as part of their academic experiences (Hartmann, 2013). Consequently, when educators or parents emphasized students' accomplishments as a measure of success, these students inferred that they were also judged based on their failures. Consequently, they tended to focus more on their performance rather than on the process of acquiring knowledge (Hartmann, 2013).

Trait emotional intelligence

Trait EI encompasses an individual's self-perceived ability to understand and manage emotions in various situations. It represents a form of intelligence that goes beyond cognitive abilities, enabling adaptability and flexibility, particularly in social contexts, which are crucial for personal growth and overall well-being. Therefore, trait EI appears to play a significant role in improving individuals' quality of life across multiple domains, including health, well-being, and personal and professional adjustment (Di Fabio & Kenny, 2016; Di Fabio & Saklofske, 2014; Martins et al., 2010). For instance, research has consistently linked trait EI with happiness in young adults (Badri et al., 2021), leadership effectiveness (Walter et al., 2011), work engagement (Akhtar et al., 2015), job satisfaction (Schutte & Loi, 2014), and fostering positive relationships among colleagues (Huang et al., 2019). Moreover, trait EI serves as a reliable predictor of positive mental health, reduced cortisol levels during stress, and effective coping with challenging situations. Additionally, it promotes prosocial behavior in schoolchildren and enhances academic performance, highlighting its relevance in education and youth development. By influencing academic success and related factors across various educational levels, trait EI equips students to navigate academic challenges and maintain good health. Consequently, it emerges as a valuable asset for college students in building resilience and effectively managing life's stressors.

Academic engagement

Engagement is a complex concept that encompasses various dimensions, influencing learners' motivation, cognition, behavior, and emotions (Robinson & Hullinger, 2008; Sharma & Bhaumik, 2013). In education, engagement has been examined from multiple perspectives, including school engagement, study engagement, student course engagement, and teacher engagement (Deng et al., 2022; Fredricks et al., 2004; Xu et al., 2022). Various models and theories have been proposed to conceptualize engagement, with the models developed by Fredricks et al. (2004) and Schaufeli et al. (2002) being widely recognized and utilized in empirical research due to their reliability and applicability across different contexts.

The model of engagement proposed by Fredricks et al. (2004) defines engagement as a dynamic and adaptable construct encompassing behavioral, cognitive, and emotional dimensions, which they argue are interconnected. Meanwhile, according to Schaufeli et al. (2002), engagement comprises absorption, vigor, and dedication. While these models assess different facets of student engagement, they both underscore the significance of engagement in students' AE. Within these frameworks, cognitive engagement and enthusiasm are characterized by students' active participation in school-related activities and their eagerness to learn (Rezai et al., 2022; Tuominen-Soini & Salmela-Aro, 2014). Moreover, Fredricks et al. (2004) and Schaufeli et al. (2002) posit that AE enhances students' resilience, persistence, and positive attitudes toward learning.

Over the years, AE has been extensively investigated, with numerous empirical studies highlighting its impact on learners' well-being. For example, Alonso-Tapia et al. (2022) observed a positive correlation between AE and motivation, self-efficacy, emotion, self-regulation, and satisfaction (cited in Riswanto et al., 2022). Hosseinmardi et al. (2022) identified reciprocal relationships between AE, school engagement, and motivation.

Similarly, Amerstorfer and Freiin von Münster-Kistner (2021) explored the factors influencing AE, suggesting that it is influenced by personal attributes, teacher characteristics, teaching methodologies, peer interactions, and the learning environment. They argued that cognitive, metacognitive, affective, social, task-related, and language-related factors play a role in shaping AE. In a recent study conducted by Namaziandost et al. (2023), the mediating role of emotion regulation in fostering engagement, self-efficacy, and anger among higher education students was confirmed. They concluded that effective emotion regulation contributes to a sense of engagement and self-efficacy among university students, enabling them to better manage and control their emotional responses, including anger.

In EFL education, the effectiveness of LOA remains a crucial area of exploration. LOA, characterized by its focus on facilitating learning and instructional scaffolding, stands in contrast to traditional AOL methods, prioritizing student learning over administrative judgment (Ploegh et al., 2009; Purpura, 2004; Wiliam, 2001). Despite its potential to alleviate tensions surrounding assessment and enhance student learning outcomes, the specific impacts of SA and CC within the LOA framework remain relatively underexplored. SA, a formative evaluation process aimed at promoting learning and self-regulation, has been recognized for its potential to enhance student engagement and self-regulated learning (Andrade & Valtcheva, 2009; Mahlberg, 2015). Additionally, CC, encompassing various dimensions of the learning environment and teacher-student interactions, plays a crucial role in shaping students' academic and socioemotional development (Bronfenbrenner & Morris, 2006; Jones et al., 2008). Moreover, factors such as mindset, trait EI, and AE have been identified as key psychological variables influencing student learning outcomes (Di Fabio & Kenny, 2016; Dweck, 1999; Fredricks et al., 2004). Therefore, understanding the interplay between SA, CC, and these psychological variables within the LOA framework is essential for informing effective pedagogical practices and enhancing student learning experiences in EFL settings.

Method

Participants and procedures involved

The current study employed convenience sampling to conduct a survey of 218 EFL university students from Iran (Khorasan Razavi and Khuzestan Provinces), of which 97 were male and 121 were female. The students' ages ranged from 18 to 25 years old, and their academic subjects included teaching English as a foreign language and English literature at the BA level. A portion of their academic classes were conducted virtually (i.e., English grammar, reading strategies, advanced writing, and study skills). Data was gathered via an online survey conducted over a period of 5 months in 2023. The survey had a response rate of 79.25% and no data loss occurred due to the design of the electronic tests. To complete the data analysis, as the first step, the Kolmogorov–Smirnov test (K-ST) was applied to verify the normality of the data. The results of (K-ST) reflected that the data was not normally distributed. The data was analyzed using confirmatory factor analysis (CFA) and structural equation modeling (SEM), with Smart PLS serving as an appropriate modeling strategy for analyzing non-normal data. Furthermore, to triangulate the data, qualitative method (i.e., semi-structured interview) was applied. These interviews served as a valuable methodological approach to gaining

in-depth insights into the perspectives and experiences of EFL students regarding SA practices and the CC. In the online survey, a section was included to invite the students who were eager to participate in following semi-structured interviews. Twenty-two students were questioned, and the resulting data were meticulously transcribed to assure the accuracy and authenticity of the participants' responses. Following that, a thorough thematic analysis was conducted to identify major themes and patterns arising from the interview data. Thematic analysis facilitated the systematic exploration of participants' narratives, allowing for the identification of recurring topics, concepts, and discourses related to SA and CC in the context of LOA. This methodological approach provided a rich and nuanced understanding of EFL learners' perceptions and attitudes, shedding light on their experiences within the learning environment. By delving into the intricacies of students' perspectives through semi-structured interviews and thematic analysis, this study aimed to contribute valuable insights to the existing literature on SA and CC in LOA within the EFL context.

Measure

The CSAQ, created and validated by Judge et al. (2003), was utilized to evaluate the core self-evaluations of university students. This measure consists of 12 items rated on a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The ratings on this scale varied between 12 and 60. High scores on this scale indicated a favorable SA, while low numbers indicated an unfavorable SA. The current investigation found that the dependability of CSAQ was 0.788, indicating a satisfactory level of reliability.

Three dimensions—teacher academic assistance, teacher emotional support, and classroom mutual respect—were included in the instrument that Joe et al. (2017) created to gauge participants' perceptions of the classroom environment. A 5-point Likert scale was used by participants to score the nine aspects, with 1 representing "strongly disagree" and 5 representing "strongly agree." It is noteworthy to emphasize that the dependability of all three of these subscales is acceptable in this research.

The Language Mindsets Inventory (Lou & Noels, 2017) was used to evaluate the growth attitude of the participants. Lou and Noels (2017) developed an 18-item measure to assess the presence of a growth or fixed mindset in language acquisition. This questionnaire had three sub-constructs: general language intelligence beliefs, second language aptitude beliefs, and age sensitivity views about language acquisition. The participants were instructed to provide responses to all the topics using a Likert scale style with five points, ranging from 1 (indicating severe disagreement) to 5 (indicating strong agreement). The sub-constructs' respective Cronbach's alphas in the current research were 0.855, 0.862, and 0.842.

The trait EI scale consists of 153 items, and the short form (Petrides et al., 2004) employed in this study is a shortened version with 30 items. The four components of emotional intelligence, sociability, emotionality, self-control, and well-being are measured on a 7-point Likert scale in both formats. Numerous research, including ones done in a variety of foreign language contexts like Chinese EFL settings, have shown that the short form's dependability is good (Li et al., 2022). The Cronbach's report for the present research was 0.844, indicating a satisfactory level of dependability.

The SInAPSi AE Scale was developed and verified by Freda et al. (2021) to assess and measure the level of active involvement and inclusion of university students. This instrument consists of six aspects measured on a 5-point Likert scale as outlined below: The survey includes six sections: (1) university value and sense of belonging, (2) perception of the capability to persist in the university choice, (3) value of university course, (4) engagement with university professors, (5) engagement with university peers, and (6) relationships between university and relational net. The present research yielded a Cronbach's alpha coefficient of 0.872, indicating a satisfactory level of dependability.

Results

The outcomes of the data screening evaluation and the rigorous statistical analysis are presented in this section. Table 1 displays the findings of the descriptive statistics.

To determine if the study components had a normal distribution, the K-MT test was performed. Table 2 presents the results of the testing.

The hypothesis that the study variables are normally distributed is disproved as the analysis's confidence level for each component is less than 0.05. By using Smart PLS software to analyze the structural equations, the research claims are put to the test. Convergent, divergent, content, and construct validity have all been evaluated in order to prove the measuring instrument's validity.

To determine content validity, which refers to the degree to which assessment indicators correspond with current research, we administered a survey to four EFL instructors. Indicators that demonstrate appropriate factor structures for evaluating the structures being studied in the model are deemed to have strong construct validity (Table 3). This

Table 1 Descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
Self-assessment	218	12	60	40.014	10.583
Teacher's academic assistance	218	3	15	10.229	2.917
Teacher's emotional support	218	3	15	9.784	3.131
Classroom's mutual respect	218	3	15	9.890	2.881
Classroom climate	218	9	45	29.904	7.974
General language intelligence beliefs	218	6	30	20.271	5.783
Second language aptitude beliefs	218	6	30	20.794	5.658
Age sensitivity beliefs about language learning	218	7	30	19.156	5.427
Growth mindset	218	19	90	60.220	14.778
Emotionality	218	23	54	36.367	6.849
Self-control	218	28	56	47.812	5.514
Sociability	218	16	35	23.482	4.248
Well-being	218	25	47	33.628	5.669
Trait emotional intelligence	218	112	192	141.289	12.727
University value	218	8	30	21.651	5.295
Perception of the capability	218	4	20	13.624	3.512
Value of university course	218	13	35	26.601	5.225
Engagement with teachers	218	6	20	14.032	3.249
Engagement with peers	218	9	25	16.748	3.995
Relationships between academic net	218	3	15	10.748	3.202
Academic engagement	218	49	145	103.404	20.577

Table 2 K-MT results

	Kolmogorov–Smirnov *Z*	Asymp. Sig. (2-tailed)
Self-assessment	1.834	0.004
Teacher's academic assistance	1.810	0.003
Teacher's emotional support	1.881	0.002
Classroom's mutual respect	2.535	0.000
Classroom climate	1.753	0.020
General language intelligence beliefs	1.755	0.038
Second language aptitude beliefs	2.095	0.000
Age sensitivity beliefs about language learning	1.613	0.011
Growth mindset	1.990	0.028
Emotionality	1.642	0.009
Self-control	1.589	0.019
Sociability	2.495	0.000
Well-being	1.907	0.001
Trait emotional intelligence	2.864	0.000
University value	1.729	0.010
Perception of the capability	1.407	0.038
Value of university course	1.424	0.035
Engagement with teachers	1.932	0.001
Engagement with peers	2.321	0.000
Relationships between academic net	2.157	0.000
Academic engagement	1.937	0.001

attribute assists to authenticate the precision and importance of the indications. In order to analyze this occurrence, *t* values were used to finish this section. When the indicators in the research model have a value greater than 1.96, they may be used to evaluate the dimensions being examined with a confidence level of 95%.

Convergent validity pertains to the need for a substantial connection between the indicators of each concept. As stated by reference Fornell and Larcker (1981), a minimum average variance extracted (AVE) of 0.5 is necessary to show convergent validity. When the coefficients are above 0.7, it signifies that the questionnaire is reliable. Table 4 presents a thorough analysis of the convergent validity and reliability outcomes of the measuring instrument.

Divergent validity is the third validity metric in the PLS approach. Acceptable divergent validity shows that a concept in the model has a stronger relationship with its indicators than with other concepts. Fornell and Larker (1981) define divergent validity as when AVE for each construct exceeds the shared variance between that construct and the others, suggesting that the square root of AVE is larger than the correlation coefficients (Table 5). To provide sufficient divergent validity, the numbers in the major diameter (AVE root) must be higher than their corresponding values.

$$\mathrm{GOF} = \sqrt{0.676 * 0.593} = 0.633$$

According to Table 6, a GOF score of 0.633 suggests a good fit to the model, with scores of 0.01 classed as weak, 0.25 as medium, and 0.36 as strong (Tenenhaus et al.,

Table 3 Construct validity check

	Constructs	Questions	Original sample	*T*-statistics
Self-assessment	Self-assessment	s1	0.650	13.082
		s2	0.769	23.893
		s3	0.507	6.059
		s4	0.893	44.623
		s5	0.697	15.891
		s6	0.569	7.199
		s7	0.534	6.497
		s8	0.735	15.926
		s9	0.805	26.864
		s10	0.779	23.261
		s11	0.831	34.537
		s12	0.782	24.998
Classroom climate	Teacher's academic assistance	c1	0.853	36.450
		c2	0.877	42.918
		c3	0.843	35.476
	Teacher's emotional support	c4	0.835	38.183
		c5	0.849	37.015
		c6	0.841	36.173
	Classroom's mutual respect	c7	0.851	35.138
		c8	0.883	44.845
		c9	0.575	7.561
Growth mindset	General language intelligence beliefs	g1	0.786	23.925
		g2	0.848	39.173
		g3	0.839	28.643
		g4	0.844	36.920
		g5	0.815	29.270
		g6	0.728	20.678
	Second language aptitude beliefs	g7	0.751	18.906
		g8	0.857	45.262
		g9	0.732	17.122
		g10	0.781	26.482
		g11	0.817	23.133
		g12	0.812	33.738
	Age sensitivity beliefs about language learning	g13	0.714	21.421
		g14	0.677	17.958
		g15	0.742	17.001
		g16	0.800	24.525
		g17	0.738	20.088
		g18	0.731	19.801

Table 3 (continued)

	Constructs	Questions	Original sample	*T*-statistics
Trait emotional intelligence	Emotionality	t1	0.744	21.838
		t2	0.739	20.836
		t3	0.795	31.921
		t4	0.694	18.694
		t5	0.707	21.824
		t6	0.686	14.531
		t7	0.601	10.294
		t8	0.897	40.690
	Self-control	t9	0.608	11.699
		t10	0.794	31.150
		t11	0.658	14.046
		t12	0.719	23.075
		t13	0.795	32.107
		t14	0.813	42.041
		t15	0.740	21.597
		t16	0.566	11.926
	Sociability	t17	0.631	13.423
		t18	0.718	21.763
		t19	0.814	31.640
		t20	0.885	34.504
		t21	0.643	13.602
		t22	0.698	16.143
		t23	0.742	22.146
	Well-being	t24	0.684	14.558
		t25	0.865	32.127
		t26	0.786	24.501
		t27	0.633	11.263
		t28	0.717	20.596
		t29	0.689	16.214
		t30	0.567	10.489

Table 3 (continued)

	Constructs	Questions	Original sample	*T*-statistics
Academic engagement	University value	a1	0.757	21.995
		a2	0.651	11.785
		a3	0.828	37.009
		a4	0.874	60.143
		a5	0.826	36.206
		a6	0.714	17.583
	Perception of the capability	a7	0.773	26.660
		a8	0.684	16.641
		a9	0.859	34.094
		a10	0.798	26.709
	Value of university course	a11	0.796	25.584
		a12	0.754	21.424
		a13	0.673	11.261
		a14	0.619	9.259
		a15	0.796	49.690
		a16	0.780	39.185
		a17	0.594	8.246
	Engagement with teachers	a18	0.778	25.320
		a19	0.784	26.714
		a20	0.706	15.804
		a21	0.692	18.163
	Engagement with peers	a22	0.816	23.908
		a23	0.738	12.034
		a24	0.798	39.084
		a25	0.717	19.337
		a26	0.685	12.403
	Relationships between academic net	a27	0.865	53.894
		a28	0.917	90.118
		a29	0.903	61.484

2004). Subsequently, the correlation between internal and external latent variables is investigated. *T*-statistics are used to evaluate the impact of each independent variable on the dependent variables. If the statistic exceeds 1.96 or falls below − 1.96, it indicates support for the hypothesis.

Figures 1 and 2, as shown in Table 7, thoroughly evaluate the strength and reliability of the causal relationships between the variables being studied. The study found that SA had a substantial and advantageous effect on GM ($\beta = 0.454$, $t = 7.082$), TEI ($\beta = 0.463$, $t = 8.694$), and AE ($\beta = 0.384$, $t = 4.665$). Moreover, the study found that

Table 4 Convergent validity and reliability of instruments

Constructs		Average variance extracted (AVE)	Composite reliability
Self-assessment	Self-assessment	0.512	0.891
Classroom climate	Teacher's academic assistance	0.736	0.893
	Teacher's emotional support	0.708	0.879
	Classroom's mutual respect	0.612	0.821
	Total	0.685	0.917
Growth mindset	General language intelligence beliefs	0.658	0.920
	Second language aptitude beliefs	0.628	0.910
	Age sensitivity beliefs about language learning	0.540	0.875
	Total	0.609	0.943
Trait emotional intelligence	Emotionality	0.544	0.769
	Self-control	0.514	0.871
	Sociability	0.544	0.864
	Well-being	0.507	0.806
	Total	0.527	0.876
Academic engagement	University value	0.607	0.902
	Perception of the capability	0.610	0.862
	Value of university course	0.519	0.874
	Engagement with teachers	0.549	0.829
	Engagement with peers	0.566	0.815
	Relationships between academic net	0.802	0.924
	Total	0.574	0.951

Table 5 Assessing divergent validity and correlation coefficients among research variables

	Self-assessment	Classroom climate	Growth mindset	Trait emotional intelligence	Academic engagement
Self-assessment	0.715				
Classroom climate	0.558**	0.828			
Growth mindset	0.677**	0.812**	0.780		
Trait emotional intelligence	0.689**	0.624**	0.477**	0.726	
Academic engagement	0.546**	0.751**	0.508**	0.621**	0.758**

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

Table 6 Fit indices of the first model

	Q^2	R^2
Growth mindset	0.294	0.667
Trait emotional intelligence	0.235	0.510
Academic engagement	0.245	0.602

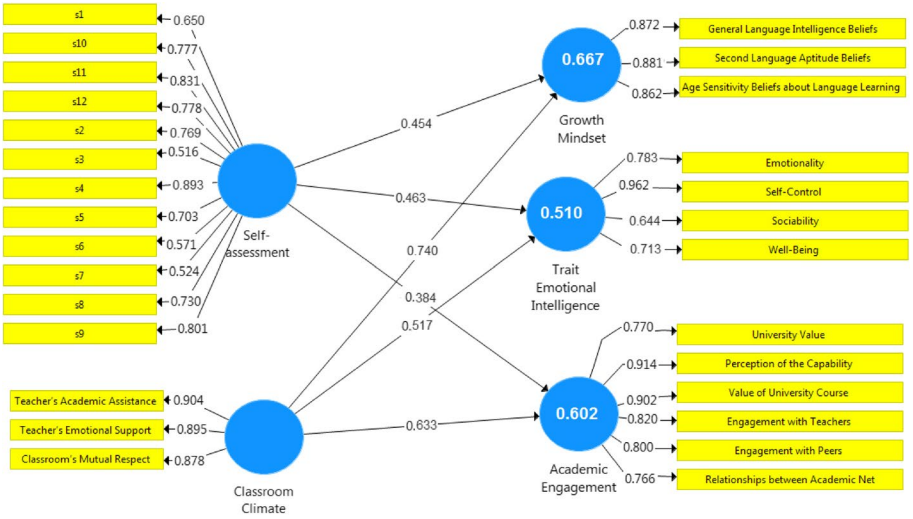

Fig. 1 Path and factor coefficients of the first research model

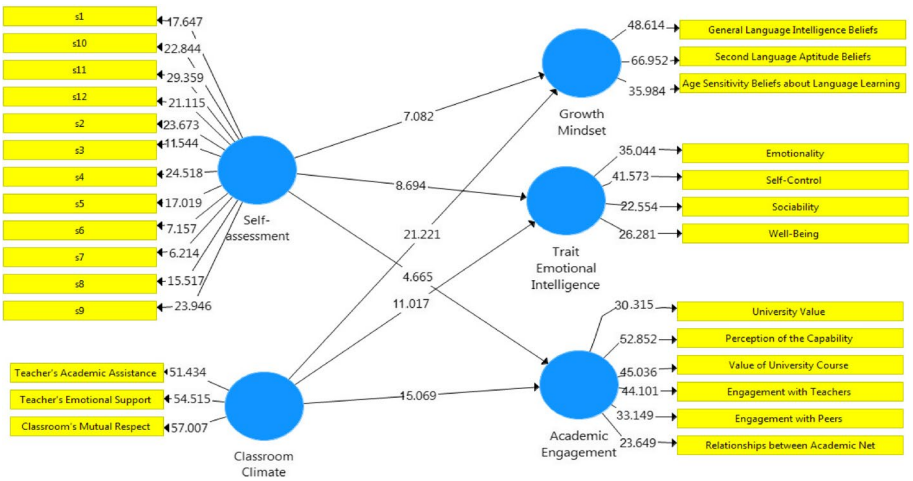

Fig. 2 *T* values of the first research model

Table 7 Analyzing the connections between variables (initial model)

Paths			Path coefficient	*T*-statistics	Test results
Self-assessment	→	Growth mindset	0.454	7.082	Supported
Self-assessment	→	Trait emotional intelligence	0.463	8.694	Supported
Self-assessment	→	Academic engagement	0.384	4.665	Supported
Classroom climate	→	Growth mindset	0.740	21.221	Supported
Classroom climate	→	Trait emotional intelligence	0.517	11.017	Supported
Classroom climate	→	Academic engagement	0.633	15.069	Supported

Table 8 Fit indices of the second model

	Q^2	R^2
Growth mindset	0.375	0.692
Trait emotional intelligence	0.242	0.513
Academic engagement	0.268	0.637

Table 9 Analyzing the connections between variables (second model)

Paths			Path coefficient	*T*-statistics	Test results
Self-assessment	→	Growth mindset	0.454	6.512	Supported
Self-assessment	→	Trait emotional intelligence	0.463	7.998	Supported
Self-assessment	→	Academic engagement	0.384	4.771	Supported
Teacher's academic assistance	→	Growth mindset	0.710	20.792	Supported
Teacher's academic assistance	→	Trait emotional intelligence	0.511	12.263	Supported
Teacher's academic assistance	→	Academic engagement	0.692	17.247	Supported
Teacher's emotional support	→	Growth mindset	0.773	24.216	Supported
Teacher's emotional support	→	Trait emotional intelligence	0.547	13.778	Supported
Teacher's emotional support	→	Academic engagement	0.654	16.151	Supported
Classroom's mutual respect	→	Growth mindset	0.754	24.101	Supported
Classroom's mutual respect	→	Trait emotional intelligence	0.494	8.382	Supported
Classroom's mutual respect	→	Academic engagement	0.589	14.890	Supported

GM ($\beta = 0.740$, $t = 21.221$), TEI ($\beta = 0.517$, $t = 11.017$), and AE ($\beta = 0.633$, $t = 15.069$) were all significantly and favorably impacted by CC.

$$\text{GOF} = \sqrt{0.663 * 0.614} = 0.638$$

The model's fit is evaluated using GOF scores. A GOF score of 0.638 indicates a high degree of fit (Table 8). Next, the link between internal and external latent variables is examined. Following this stage, *T*-statistics (Table 9) are used to calculate the impact of each independent variable on the dependent variables.

This section provides detailed explanations of the current correlations among latent variables in model 2, as shown by the coefficients reported in Table 9 and Figs. 3 and 4. There is a notable correlation between SA and GM ($\beta = 0.454$, $t = 6.512$), TEI ($\beta = 0.463$, $t = 7.998$), and AE ($\beta = 0.384$, $t = 4.771$) in the second model. In addition, the research revealed that teacher's academic assistance had a substantial and positive effect on GM ($\beta = 0.710$, $t = 20.792$), TEI ($\beta = 0.511$, $t = 12.263$), and AE ($\beta = 0.692$, $t = 17.247$). According to the outcomes, GM ($\beta = 0.773$, $t = 24.216$), TEI ($\beta = 0.547$, $t = 13.778$), and AE ($\beta = 0.654$, $t = 16.151$) were all observed to be significantly and positively affected by teacher's emotional support. Furthermore, with regard to the findings of the research, it was discovered that GM ($\beta = 0.754$, $t = 24.101$), TEI ($\beta = 0.494$, $t = 8.382$), and AE ($\beta = 0.589$, $t = 14.890$) were all substantially and favorably influenced by classroom's mutual respect.

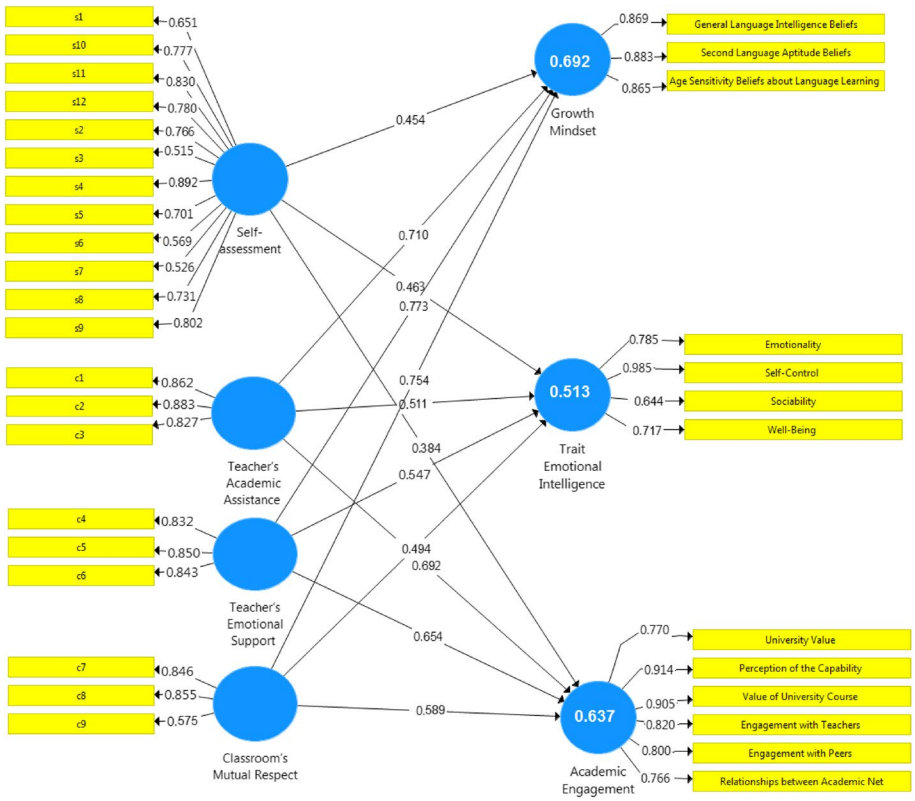

Fig. 3 Path and factor coefficients of the second research model

EFL learners' attitudes toward self-assessment and classroom climate in *LOA*

The semi-structured interviews provided rich insights into the attitudes of EFL learners toward SA practices within the LOA framework. A nuanced understanding emerged, reflecting diverse perspectives and experiences among the participants. Many participants expressed a positive outlook toward SA, highlighting its multifaceted benefits in promoting learner autonomy, self-regulation, and deeper engagement with the learning process. Participants appreciated the opportunity to actively participate in assessing their own learning progress, emphasizing the empowerment and ownership it afforded them over their educational journey. Moreover, SA was perceived as a valuable tool for enhancing metacognitive awareness, as participants described how it encouraged them to reflect critically on their learning strategies, strengths, and areas for improvement.

Conversely, the interviews also revealed a subset of participants who harbored reservations or apprehensions toward SA. Some expressed concerns about the reliability and validity of SA judgments, questioning their ability to accurately evaluate their own performance without biased perceptions. This skepticism stemmed from uncertainties regarding the consistency of assessment criteria and the potential influence of personal biases or misconceptions. Additionally, participants highlighted the need for clear guidance and support from educators to facilitate effective SA practices, suggesting a desire for structured frameworks and feedback mechanisms to enhance the credibility and utility of SA processes.

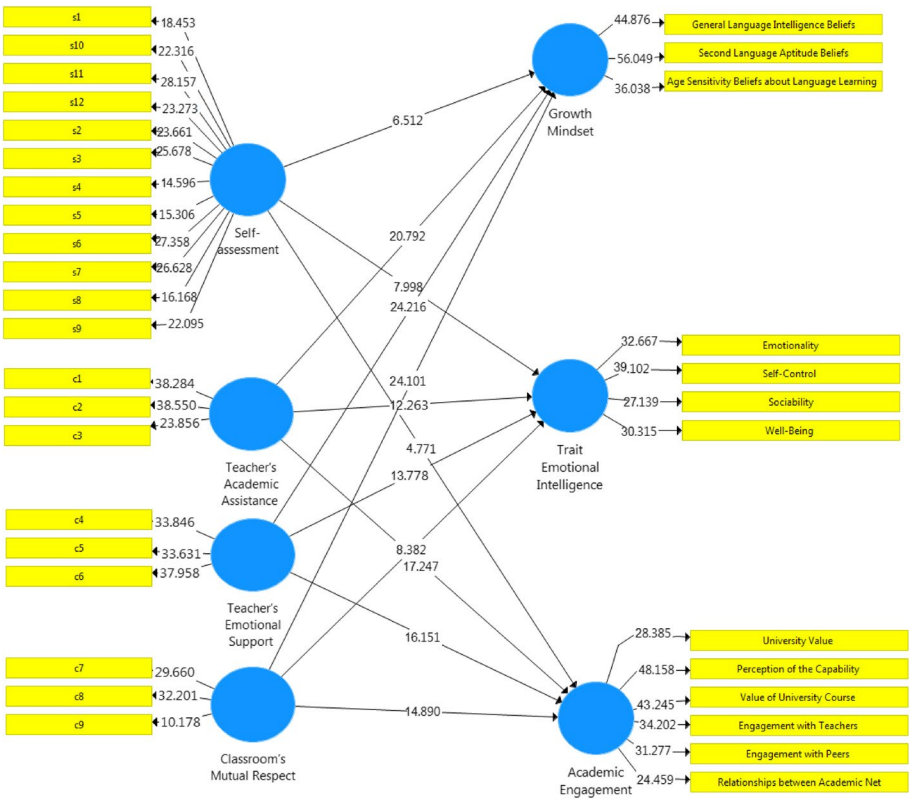

Fig. 4 *T* values of the second research model

The interviews yielded diverse perspectives on the CC experienced by EFL learners, illuminating the multifaceted nature of the learning environment and its impact on student engagement and well-being. Participants described a spectrum of CC, ranging from highly supportive and conducive to learning to challenging or even detrimental to students' academic experiences. Those who described positive CC emphasized the importance of teacher-student relationships characterized by mutual respect, trust, and open communication. These participants highlighted the role of supportive pedagogical practices, collaborative learning opportunities, and inclusive classroom dynamics in fostering a sense of belonging and motivation among students.

Conversely, participants who reported challenges related to CC identified various factors contributing to their perceived difficulties. These included instances of perceived favoritism or bias in teacher-student interactions, where some students felt marginalized or overlooked in classroom discussions or assessment processes. Additionally, disruptive peer behavior, lack of classroom organization, and insufficient instructional support were cited as barriers to creating a conducive learning environment. Participants underscored the importance of addressing these challenges to cultivate a positive and inclusive CC that promotes student engagement, participation, and academic success.

Overall, semi-structured interviews yielded several themes regarding EFL learners' attitudes toward SA and CC:

1. Empowerment through self-assessment: Participants expressed a theme of empowerment through SA, highlighting how the practice enabled them to take ownership of their learning process. They described feeling more engaged and motivated when given the opportunity to evaluate their own progress and identify areas for improvement independently.
2. Challenges in self-assessment accuracy: A recurring theme among participants was the challenge of accurately assessing their own performance. Many expressed concerns about the subjective nature of SA and the difficulty in objectively evaluating their work without external benchmarks or feedback from peers and educators.
3. Need for clear assessment criteria: Participants emphasized the importance of clear assessment criteria and guidelines to support effective SA practices. They expressed a desire for transparent rubrics and examples to help them understand expectations and evaluate their work more confidently.
4. Impact of feedback on self-assessment: The role of feedback emerged as a significant theme in participants' attitudes toward SA. They highlighted the importance of timely and constructive feedback in facilitating their learning and guiding their SA process.
5. Perceptions of classroom climate: Participants discussed their perceptions of the CC, describing environments that ranged from supportive and inclusive to challenging and stressful. Themes related to teacher-student relationships, peer interactions, and instructional practices emerged as influential factors shaping their classroom experiences.
6. Positive teacher-student relationships: Participants identified positive teacher-student relationships as essential components of a conducive CC. They emphasized the importance of approachable and supportive educators who fostered trust, respect, and open communication in the classroom.
7. Importance of inclusive learning environments: Inclusive learning environments emerged as a key theme, with participants expressing the need for classrooms that welcomed diversity and accommodated various learning styles and abilities. They emphasized the importance of feeling valued and included in classroom discussions and activities.
8. Challenges with classroom dynamics: Some participants described challenges related to classroom dynamics, including disruptive behavior, unequal participation, and perceived favoritism. These themes underscored the impact of peer interactions and classroom management strategies on students' perceptions of the learning environment.
9. Desire for engagement and participation: Participants expressed a desire for engaging and participatory learning experiences, highlighting the importance of interactive activities, collaborative projects, and student-centered pedagogies in promoting their engagement and motivation.
10. Call for supportive learning environments: Overall, participants emphasized the need for supportive learning environments that fostered autonomy, collaboration, and academic growth. They called for educators to prioritize creating inclusive classrooms where all students felt valued, respected, and empowered to succeed.

These themes provide insights into the attitudes and experiences of EFL learners regarding SA and CC within the LOA framework. They highlight the complex interplay between individual perceptions, instructional practices, and the broader learning environment in shaping students' learning experiences and outcomes.

Discussion

The present study aimed to investigate EFL learners' attitudes toward SA practices and CC within the framework of LOA. By employing a mixed-methods approach that integrated quantitative analysis with qualitative insights from semi-structured interviews, this research sought to provide a comprehensive understanding of the complex interplay between individual perceptions, instructional practices, and the learning environment.

The study employed SEM to analyze the relationships between key variables, including SA, CC, emotional intelligence, and academic engagement. SEM allowed for the examination of complex interrelations among latent variables and provided insights into the underlying mechanisms driving students' attitudes and behaviors in the educational context. The findings revealed significant and positive associations between SA, CC, emotional intelligence, and AE, highlighting the importance of these factors in shaping students' learning experiences and outcomes.

One of the central themes that emerged from both the quantitative analysis and qualitative interviews was the theme of empowerment through SA. EFL learners expressed a positive outlook toward SA, highlighting its role in promoting learner autonomy, self-regulation, and deeper engagement with the learning process. The findings suggest that when students are actively involved in assessing their own learning progress, they feel more motivated and empowered to take ownership of their educational journey. This aligns with previous research highlighting the benefits of learner-centered approaches in fostering a sense of agency and responsibility among students (Nicol & Macfarlane-Dick, 2006).

Despite the perceived benefits of SA, participants also voiced concerns about the accuracy and reliability of SA judgments. This theme underscores the challenges inherent in evaluating one's own performance without external benchmarks or feedback mechanisms. The findings suggest a need for structured frameworks, clear assessment criteria, and guidance from educators to enhance the credibility and utility of SA practices.

The qualitative insights from the semi-structured interviews shed light on the diverse perceptions of CC experienced by EFL learners. Positive CC characterized by supportive teacher-student relationships, inclusive pedagogical practices, and collaborative learning opportunities were associated with higher levels of student engagement and well-being. In contrast, challenges related to classroom dynamics, perceived bias or favoritism, and disruptive peer behavior were identified as barriers to creating a conducive learning environment. These findings underscore the critical role of CC in shaping students' attitudes, motivation, and academic experiences (Wentzel et al., 2010).

The findings of the current study resonate with the theoretical underpinnings of LOA as delineated in the literature. LOA, characterized by its emphasis on enhancing student learning and supporting instructional scaffolding, offers a paradigm shift from traditional AOL methods, prioritizing student development over administrative judgment (Purpura, 2004; Wiliam, 2001). Our study aligns with previous research demonstrating

the potential of LOA to alleviate tensions surrounding assessment and foster student engagement and achievement (Black & Wiliam, 1998; Carless, 2007).

The findings regarding SA corroborate existing literature emphasizing its formative nature and its role in promoting self-regulated learning and AE (Andrade & Valtcheva, 2009; Mahlberg, 2015). Our study revealed that EFL learners perceived SA as a valuable tool for enhancing metacognitive awareness and promoting ownership of the learning process. This aligns with Jones' (2010) assertion that SA fosters active student participation and a deeper understanding of learning objectives and assessment criteria. Moreover, the incorporation of SA within the LOA framework empowers students to monitor their progress and make informed adjustments to their learning strategies, thereby promoting continuous improvement (Rezai et al., 2022).

The multifaceted nature of CC, encompassing instructional, social, and organizational dynamics, emerged as a critical factor influencing students' academic and socioemotional development (Bronfenbrenner & Morris, 2006; Jones et al., 2008). Consistent with prior research, our study found that positive CC characterized by supportive teacher-student relationships and inclusive pedagogical practices were associated with higher levels of student engagement and well-being (Danielson, 2011; Pianta & Hamre, 2009). Conversely, challenges related to classroom dynamics and perceived biases or favoritism were identified as barriers to creating conducive learning environments, highlighting the importance of addressing these issues to promote student success (Wang et al., 2020a, 2020b).

In addition to SA and CC, our study examined the influence of psychological variables such as mindset, trait EI, and AE on student learning outcomes. Consistent with Dweck's (1999) theory of mindset, our findings suggest that students' beliefs about intelligence play a significant role in shaping their motivation, persistence, and response to feedback. Those with a growth mindset were more likely to embrace challenges, seek feedback, and adopt adaptive learning strategies, contributing to their academic success (Plaks & Stecher, 2007). Similarly, trait EI emerged as a key predictor of positive academic outcomes, highlighting the importance of EI in promoting resilience, well-being, and effective coping with academic stressors (Di Fabio & Kenny, 2016). Moreover, AE, characterized by active participation, enthusiasm, and persistence in learning activities, was positively associated with student motivation, self-efficacy, and satisfaction (Fredricks et al., 2004; Hosseinmardi et al., 2022).

The novelty of this study lies in its comprehensive examination of the interrelationships between SA, CC, psychological variables, and academic outcomes within the context of LOA in EFL settings. While previous research has explored these constructs individually, this study integrates them within a unified theoretical framework, shedding light on their collective impact on student learning experiences and outcomes. By adopting a multidimensional approach, this study moves beyond traditional assessment paradigms and explores the dynamic interactions between pedagogical practices, socioemotional factors, and cognitive processes in EFL education. Additionally, this study contributes to the existing literature by highlighting the importance of fostering supportive CC and promoting psychological variables such as growth mindset and EI in enhancing student engagement, well-being, and academic success. Through its holistic perspective and methodological rigor, this study provides valuable insights into the

complexities of student learning within the LOA framework, offering practical implications for educators and policymakers seeking to optimize teaching and assessment practices in EFL contexts.

This study contributes to the existing body of literature by integrating quantitative analysis with qualitative insights from semi-structured interviews, offering a comprehensive understanding of the complex interplay between individual perceptions, instructional practices, and the learning environment in the context of EFL education. Furthermore, by examining the influence of psychological variables such as mindset and emotional intelligence on student learning outcomes within the LOA framework, this study extends our understanding of the factors that shape student engagement, motivation, and academic success in EFL settings. Additionally, the study underscores the importance of adopting a holistic approach to assessment and instruction, highlighting the interrelationships between pedagogical practices, socioemotional factors, and cognitive processes in language learning. By elucidating these dynamics, the study provides valuable insights for educators, policymakers, and researchers seeking to optimize teaching and assessment practices and promote the holistic development of EFL learners.

Implications of the study

For language teachers, this study offers valuable insights into the implementation of effective assessment practices within EFL classrooms. By embracing the principles of LOA, teachers can transcend the traditional role of assessors and become facilitators of student learning journeys. Encouraging SA not only empowers learners to monitor their own progress but also fosters autonomy and self-regulated learning. To capitalize on these insights, teachers can design instructional activities that integrate SA opportunities, allowing students to reflect on their learning experiences and make informed adjustments. Additionally, cultivating a supportive CC is paramount. Teachers can nurture positive teacher-student relationships, foster inclusive classroom dynamics, and enhance student engagement by implementing strategies such as cooperative learning and peer support mechanisms. Furthermore, by incorporating techniques to promote psychological variables like growth mindset and EI, teachers can create a holistic learning environment that nurtures students' academic and socioemotional development, thereby facilitating improved learning outcomes.

For language learners, the implications of this study are twofold. Firstly, learners can leverage a deeper understanding of the assessment process to become active participants in their learning journey. Embracing SA practices empowers learners to take ownership of their progress, fostering metacognitive awareness and adaptive learning strategies. Moreover, insights into fostering a supportive CC environment enable learners to advocate for inclusive and nurturing learning environments where they feel valued and motivated to engage actively. Understanding the influence of psychological variables such as growth mindset and EI equips learners with invaluable tools to overcome challenges and persist in their language learning endeavors. By cultivating a growth-oriented mindset and enhancing emotional self-awareness, learners can navigate the complexities of language acquisition more effectively, ultimately becoming self-directed and resilient learners capable of thriving in diverse educational settings.

For materials developers, this study underscores the importance of aligning instructional materials with the principles of LOA and promoting student-centered approaches to language learning. Developers can play a pivotal role in facilitating effective learning experiences by designing materials that integrate SA opportunities and reflection exercises. Incorporating elements that foster a positive CC, such as cooperative learning tasks and culturally inclusive content, can enhance student engagement and create a supportive learning environment. Additionally, materials developers can contribute to the promotion of psychological variables like growth mindset and EI by embedding content that encourages learners to adopt adaptive learning strategies and develop emotional self-regulation skills. By aligning materials with the holistic nature of language learning and assessment, developers can enhance the quality and effectiveness of language learning resources, thereby facilitating improved learning outcomes for language learners.

For policymakers, this study underscores the importance of incorporating principles of LOA into educational policies and frameworks. Recognizing the value of assessment as a tool for promoting student learning, policymakers can advocate for policies that prioritize formative assessment approaches over summative ones. Moreover, policymakers can support initiatives aimed at creating inclusive and supportive learning environments by allocating resources for professional development opportunities for educators. Additionally, policymakers can promote research and initiatives focused on fostering psychological variables such as growth mindset and EI in educational settings, thereby contributing to the holistic development of learners. By aligning policies with the principles of LOA and supporting evidence-based practices, policymakers can facilitate the creation of educational systems that empower learners to thrive in the twenty-first century.

Conclusion

In conclusion, this study has explored the interplay between SA, CC, psychological variables, and learning outcomes within the context of LOA in EFL education. Through a rigorous analysis of data gathered from surveys and interviews, several key findings have emerged. Firstly, the study revealed the significant impact of SA on promoting learner autonomy, self-regulated learning, and AE among EFL students. By actively involving students in the assessment process and providing opportunities for reflection and feedback, educators can empower learners to take ownership of their learning journey and enhance their overall learning outcomes. Additionally, the study highlighted the importance of creating a supportive CC characterized by mutual respect, collaboration, and inclusivity. Such environments not only foster positive teacher-student relationships but also contribute to students' academic and socioemotional development.

Furthermore, the study shed light on the influence of psychological variables such as growth mindset and EI on student learning outcomes. Learners who adopt a growth-oriented mindset and possess high levels of emotional intelligence are more likely to persevere in the face of challenges, seek feedback, and actively engage in the learning process. By cultivating these psychological attributes, educators can help students develop the resilience and adaptive skills necessary for success in language learning and beyond. Overall, the findings of this study underscore the importance

of adopting a holistic approach to assessment and instruction that takes into account not only students' academic performance but also their psychological well-being and socioemotional development.

The significance of adopting a holistic approach to assessment and instruction in EFL education cannot be overstated. By recognizing the interconnectedness of various factors influencing student learning outcomes, stakeholders can foster environments that promote not only academic achievement but also holistic development. Embracing LOA allows educators to shift from traditional assessment paradigms toward student-centered approaches that prioritize individual growth and empowerment. Integrating SA, fostering a supportive CC, and promoting psychological variables like growth mindset and EI are essential components of this holistic approach. Moreover, evidence-based practices serve as the foundation for informed decision-making and effective pedagogy. Therefore, stakeholders must prioritize research-driven strategies and interventions that have been demonstrated to enhance student learning experiences and outcomes. By embracing evidence-based practices and championing a holistic approach to assessment and instruction, stakeholders can create learning environments that nurture the diverse needs and potentials of EFL learners, ultimately fostering their success in the globalized world.

Moving forward, it is imperative for educators, materials developers, policymakers, and other stakeholders in EFL education to heed the implications of this study. By embracing the principles of LOA and incorporating strategies to promote SA, create supportive CC, and foster psychological variables, stakeholders can enhance the quality of English language teaching and learning experiences. Moreover, future research endeavors should continue to explore the complex dynamics of assessment, CC, and psychological factors in EFL education, with a focus on identifying effective pedagogical practices and interventions to support student learning and well-being. By working collaboratively and remaining committed to evidence-based approaches, stakeholders can collectively contribute to the advancement of EFL education and the cultivation of successful language learners in diverse educational contexts.

While this study provides valuable insights into the dynamics of SA, CC, and psychological variables in EFL education, several limitations should be acknowledged. Firstly, the sample primarily consisted of university students from Iran, limiting the generalizability of the findings to other cultural and educational contexts. Additionally, the reliance on convenience sampling may have introduced sampling bias, affecting the representativeness of the sample. Furthermore, the study's statistical analysis precludes causal inferences and longitudinal analysis of the relationships between variables. Suggestions for further research include conducting longitudinal studies to explore the long-term effects of SA and CC on student outcomes, as well as investigating the influence of cultural factors on these relationships. Additionally, comparative studies across different educational settings and age groups could provide valuable insights into the universality of the observed patterns. Finally, qualitative research exploring students' perceptions and experiences in greater depth could enrich our understanding of the mechanisms underlying the observed associations.

Abbreviations

SA	Self-assessment
CC	Classroom climate
LOA	Learning-oriented assessment
EFL	English as a foreign language
AE	Academic engagement
EI	Emotional intelligence
AFL	Assessment for learning
AOL	Assessment of learning
CDI	Curriculum Development Institute
K-ST	Kolmogorov-Smirnov test
CFA	Confirmatory factor analysis
SEM	Structural equation modeling
CSAQ	Core of Self-assessments Questionnaire
AVE	Average variance extracted

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Authors' contributions
All authors had adequate and equal contributions.

Authors' information
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