

TABLE OF CONTENT

Anita Christina Anthony Pre-Service ESL Teachers' Mindsets and their Approaches towards Assessments https://doi.org/10.24191/mvahvg19	1–21
Maryam Muidh Alsulami, Sharifah Shahnaz Syed Husain, Aini Faridah Azizul Hassan Saudi EFL Learners' Attitudes Towards Arabic-English Code-Switching https://doi.org/10.24191/yjvd8a60	22–37
Julazzmie Kambutong, Nur Farha Shaafi Content Validity of a Survey on Knowledge, Skills, and Readiness for Generative AI https://doi.org/10.24191/xnvcmw23	38–57
Aini Syahira Jamaluddin, Nabila Huda Nasir, Nur Azyyati Mohamad Sa'edin, Ummu Habibah Mohd Sakri @ Shukri Can Artificial Intelligence Replace Teachers? Perspectives from Pre-Service Teachers in Elementary Education https://doi.org/10.24191/vjk6sz19	58–73
Xia Yutong, Talaibek Musaev Grammar of Obligation: Syntactic Patterns in Malaysian Reddit AIED Discourse https://doi.org/10.24191/rs3g1v95	74–97
Mohd Hafiz Mat Adam, Geethanjali Narayanan, Juriani Jamaludin, Rafidah Abd Karim Fostering Independent Expository Essay Writing Development Using Song-Assisted Learning (SAL) to Avert AI Over-Reliance https://doi.org/10.24191/nhh8d038	98–112
Farhana Atiqah Ahmad Radzuan, Marina Mohd Arif Teacher Perspectives on ChatGPT Integrated Vocabulary Instruction in a Flipped ESL Classroom https://doi.org/10.24191/9deysg59	113–135
Damia Syafiqah Mohd Salleh, Norlina Mohd Sabri, Fazlin Marini Hussain SpeakEasy Nihongo: Mobile Application for Japanese Beginner Learners https://doi.org/10.24191/1k11n645	136–152



Pre-Service ESL Teachers' Mindsets and their Approaches towards Assessments

Anita Christina Anthony

anitaanthony@segi.edu.my

Faculty of Education, Languages, Psychology and Music
SEGi University, Kota Damansara, Petaling Jaya, Malaysia

Received: 21 October 2025

Accepted: 8 March 2026

Published: 25 May 2026

CITE THIS ARTICLE:

Anthony, A. C. (2026). Pre-service ESL teachers' mindsets and their approaches towards assessments. *Journal of Creative Practices in Language Learning and Teaching*, 14(1), 1–21. <https://doi.org/10.24191/mvahvg19>

ABSTRACT

Recent developments in assessment and evaluation practices have primarily focused on improving teachers' assessment literacy and pedagogical techniques. Despite extensive interventions, there is limited empirical research exploring why teachers persist with certain assessment approaches. This paper aims to empirically examine the relationship between pre-service ESL teachers' mindsets toward learning and their assessment approaches across four assessment themes. Using a descriptive quantitative analysis, the study sampled 60 pre-service ESL teachers from a university in Selangor, Malaysia. Results indicated that 48% of respondents had a mixed mindset, 38% had a growth mindset, and 13% had a fixed mindset. Statistically significant relationships were found between the growth mindset and all four assessment themes, demonstrating its influence on assessment approaches. Conversely, a significant relationship was identified between a fixed mindset and one specific assessment approach. Despite a majority having a mixed mindset, their assessment practices aligned more with growth mindset principles. The study highlights that a teacher's 'mindset' influences assessment literacy and that 'assessment mindset' stems from perceptions of learning intelligence. It contributes to identifying initial assessment mindsets and suggests developing responsive teacher education and mindset interventions to positively shape pre-service ESL teachers' assessment literacy.

Keywords: pre-service ESL teachers, growth mindset, assessment mindset, assessment approaches



INTRODUCTION

‘Assessment literacy’, coined by Stiggins (1991) captures the ability to design, implement and interpret assessments, offer feedback, and to guide self-assessment. It is fundamental to curriculum and instructional strategies; guiding decision-making and allowing continuous improvement based on students’ strengths and improvement areas (Pastore & Andrade, 2019). Research in this avenue has also expanded to consider how teachers’ personal values and beliefs shape their teaching approaches (James & Pedder, 2006; Looney et al., 2017).

The mindset theory, introduced by Dweck (2006), differentiates between growth and fixed mindsets. A growth mindset sees intelligence as improvable, whereas a fixed mindset views it as static. Numerous studies conducted based on this theory have discovered groundbreaking findings in the education field (Aronson et al., 2002; Blackwell et al., 2007; Bettinger et al., 2018; Hulleman & Harackiewicz, 2009; Paunesku et al., 2015; Sarrasin et al., 2018).

DeLuca et al. (2019a) pointed out that the teachers’ comprehension of assessment dimensions is influenced by their mindsets. Perceptions held towards intelligence; albeit growth, fixed or mixed mindsets; has an upperhand on their professional practices towards assessments (DeLuca et al., 2019a; Rissanen et al., 2019). This resonates with the remark by Tayyebi et al. (2022) in which they stated that teachers’ individual beliefs about assessment need to be prioritised in assessment trainings.

However, research on this avenue in Malaysia have widely focused on fortifying ESL teachers’ skills and knowledge in assessment practices (Singh et al., 2022a). The pertinence of regular teacher training in writing pedagogy (Tayyebi et al., 2022), proficiency in CEFR-aligned assessments (Marzaini et al., 2023) as well as on assessment measurement in terms of validity, reliability and test design (Norhasim & Mohamad, 2020) are among some of the solutions presented to fill in the knowledge gaps and skill development to improve assessment practices.

Nevertheless, other scholars have recognised that teachers’ attitudes towards assessments has an impact on their performance. Tayyebi et al. (2022) suggested that further research on improving assessment literacy should look into teachers’ personal assessment experiences and beliefs. Singh et al. (2022b) and Jamil et al. (2025) identified that underlying beliefs about assessments plays a factor in their evaluation of student performance. DeLuca et al. (2019a) recognised the potential of this element in which they identified that teachers with a growth mindset implemented personalised assessment methods to encourage meaningful expression of learnings. Assessment data was utilised to gauge achievable goals and pedagogical interventions to accentuate individual progress. In contrary, teachers with a fixed mindset may feel less accountable for students’ underperformance in assessments, hindering their engagement in their academic challenges (Patterson et al., 2016).

Despite emerging research on the mindset theory among educators, they have mostly focused on pedagogical methods, leaving a gap on assessing its impact on assessment approaches (Mesler et al., 2021; Rissanen et al., 2019; Uluduz & Gunbayi, 2018). The study by DeLuca et al. (2019a) is at forefront in exploring significant connections between teachers’ mindsets and assessment practices in the Western context, with a need for a similar study in the Asian setting among ESL



teachers. The scarce of studies in this avenue raises the need to explore how ESL teachers' mindsets influence their assessment practices in Asian educational contexts.

In this regard, the objectives of this study are to:

- identify the mindset of pre-service ESL teachers towards intelligence in correspondence to growth, mixed and fixed categories.
- identify the assessment approaches of pre-service ESL teachers across the four dimensions of assessment literacy.
- identify the relationship between pre-service teachers' mindsets and their approaches towards assessments across the four dimensions of assessment literacy.

LITERATURE REVIEW

Mindset Theory in Education

The 'mindset theory,' has profoundly impacted education significantly by shaping how educators approach teaching and learning. Research consistently shows that students' perceptions of intelligence; whether they see it as fixed or malleable; impacts their academic success as mindset interventions have demonstrated effectiveness in combating fixed mindsets (Aronson et al., 2002; Blackwell et al., 2007; Bettinger et al., 2018; Hulleman & Harackiewicz, 2009; Paunesku et al., 2015; Sarrasin et al., 2018).

Several studies have demonstrated the effectiveness of mindset interventions in promoting a growth mindset and improving academic outcomes. Aronson et al. (2002) presented that learning about the brain's ability to develop new neural connections promoted better academic success among learners. Similarly, Blackwell et al. (2007) discovered that exposing growth mindset concepts to seventh-graders, especially those at academic risk, to outperform their peers in learning.

Hulleman and Harackiewicz (2009) and Paunesku et al. (2015) discovered that connecting learning content to personal lives and learning about neuroplasticity allowed students to excel academically. Bettinger et al. (2018) further argued that fixed mindset students exposed to growth mindset intervention improved in algebra with lesser feelings of helplessness. These findings collectively suggest that integrating growth mindset principles into educational practices can enhance students' learning experiences and outcomes (Farrington et al., 2012; Stohlmann, 2022), in which this concept has even been embedded in educational resources (Cordova, 2017; Deak, 2017).

With compelling results promoting the benefits of a growth mindset, it depicts that teachers' mindsets greatly influences their pedagogical and assessment practices. Nevertheless, individuals may also hold elements of both mindsets, resulting in a 'mixed mindset'. They idealise the potential for improvement but still hold fixed beliefs about certain abilities (Claro et al., 2016). This may surface from belief systems influenced by their teaching environments and perceived academic expectations (Zarrinabadi & Afsharmehr, 2022).



DeLuca et al. (2019a) recognised that these varying mindsets shaped teachers' understanding of assessment purposes, processes, fairness and measurement theory. In turn, it has a direct impact of the the quality of their feedback and practices. The current study aims to probe further on how pre-service ESL teachers' mindsets affect their assessment approaches in the Asian context. It seeks to provide insights into how the mindset theory can be operationalised to improve educational strategies and assessment practices.

Assessment Approaches

Assessment Purposes

DeLuca et al. (2019a) presented that pre-service teachers with growth mindsets preferred Assessment as Learning (AaL), in which students are immersed in metacognitive processes and self-reflection without solely rectifying mistakes. As explained by Lam (2018), this builds resilience in learning and aligns with a growth mindset perspective. In contrary, teachers with a mixed mindset prioritised Assessment for Learning (AfL) which involves formative assessments and supportive feedback, resembling beliefs that intelligence can be molded. These two methods are a stark contrast with Assessment of Learning (AoL), dominantly favoured by those with a fixed mindset. It results with a single score awarded for an overall performance (Ghorbanpour et al., 2021).

Assessment Processes

Rattan et al. (2012) recognised that fixed mindset teachers refrained criticism and offered comforting feedback. This gradually lower student motivation as teachers tend to use "sugarcoating" strategies without presenting any improvement suggestions (Rissanen et al., 2016). This may include praising students' natural qualities, rather than highlighting areas to work on to progress. On the contrary, growth mindset teachers provide honest and constructive feedback as they view shortcomings as opportunities to learn. They also use phrases like "not yet" to promote persistence (Rissanen et al., 2019). They idealise the belief of gradual success which is attainable through effort and resilience, which motivates students to overcome challenges (Rissanen et al., 2016).

Assessment Fairness

DeLuca et al. (2019a) stated that teachers with the mixed mindset opted fair assessment methods in which they differentiated procedures to meet the needs of students with special learning needs. This is in line with the principles of the growth mindset on differing assessments to cater to individual student learning (DeLuca et al., 2019a). Similarly, Rissanen et al. (2016) recognised that growth mindset teachers avoided stereotypes and helped students to identify their strengths by utilising assesments that boost intrinsic motivation and performance based on their capabilities. In contrast, fixed mindset teachers viewed themselves less responsible for student outcomes and set learning goals to match current perceived abilities (Patterson et al., 2016; Rissanen et al., 2016). This raises concerns on the preference of standardised assessments over fair methods. It suggests a need for more research on how fixed mindsets shape assessment practices.



Measurement Theory

Growth mindset teachers give importance to the validity of assessments. They ensure that desired outcomes are measured through assessments with a focus on mastery-oriented learning (DeLuca et al., 2019a). They aim to use results to improve pedagogical strategies rather than alter assessments based on perceived intelligence and to shield students from challenges (Rissanen et al., 2016). No major differences were captured between mixed and growth mindset teachers by DeLuca et al. (2019a) relating to measurement theory, denoting positive findings yielding to growth mindset principles. Nevertheless, it highlights the need for further research to probe on fixed mindsets in this avenue.

METHODOLOGY

Research Design

This study uses a descriptive research design with a quantitative approach to explore the mindsets and assessment methods of pre-service ESL teachers. This design was chosen because it allows for a systematic investigation of patterns and characteristics within a specific phenomenon. This makes it appropriate for examining teachers' mindsets and assessment practices.

Population and Sample

The population of this study was pre-service ESL teachers in Selangor, Malaysia, who were at the end of their teacher education programme. A purposive sampling method was used to select participants from a university in Petaling Jaya, ensuring the sample was representative and relevant to the research questions. The criteria for participation included completing at least two years of undergraduate teacher education and willingness to participate in the study.

Research Instrument

The research instrument used was a questionnaire consisting of two surveys: the Implicit Theories of Intelligence Scale (Dweck, 2000) to assess teachers' mindset orientations and the Approaches to Classroom Assessment Inventory (ACAI) (DeLuca et al., 2016a) to evaluate their assessment approaches. The questionnaire was divided into three sections: informed consent and introduction, the Implicit Theories of Intelligence Scale, and one item from Part A: Classroom Assessment Scenarios of the Approaches to Classroom Assessment Inventory (ACAI).

The Implicit Theories of Intelligence Scale includes eight items to measure perceptions of intelligence's malleability, with responses recorded on a 5-point Likert scale. Four items assess a fixed mindset, while the remaining four measure a growth mindset, requiring reverse coding for consistency. The ACAI, which includes scenario-based items, assesses pre-service teachers' approaches to classroom assessment across four themes: assessment purpose, assessment processes, assessment fairness, and measurement theory. Participants were to select responses



that reflect their ideal approach within each theme, offering insights into their assessment literacy.

Reliability and Validity

The reliability of the research instruments was confirmed using Cronbach's Alpha, with previous studies indicating strong consistency for both the Implicit Theories of Intelligence Scale (Macakova & Wood, 2020; De Castella & Byrne, 2015) and Part A: Classroom Assessment Scenarios of the ACAI (Nayagi & Rajendran, 2020). The validity of these instruments is well-supported, with the Implicit Theories of Intelligence Scale recognised as a reliable tool to measure mindset (Costa & Faria, 2018; Macnamara & Burgoyne, 2023), and the ACAI validated by educational assessment experts and used in various international studies (DeLuca et al., 2019a; Barnes et al., 2020; Coombs et al., 2021).

Pilot Study

A pilot study was conducted to test the reliability of both the Implicit Theories of Intelligence Scale and the scenario-based item selected from (ACAI), in order to ensure consistency of data and findings. Based on the Cronbach's Alpha reliability scores as presented by Jugessur (2022), the results indicated that The Implicit Theories of Intelligence Scale had a score of 0.822, and the scenario-based item from ACAI had a score of 0.661, both within acceptable ranges for reliability.

Data Collection

The data for the research was collected through an online survey via the Google Forms platform. The online survey link was distributed to the participants of the study who have given their informed consent. The online survey collected data through three sections, (a) participants' demographic details (b) Implicit Theories of Intelligence Scale (c) ACAI Part A: Classroom Assessment Scenario.

The validation of the questionnaire took 2 weeks beginning from the submission of the final draft of the online questionnaire to a panel of experts, to amending the questionnaire according to the feedback received. Furthermore, the pilot study was conducted for 3 days in which the researcher obtained permission from the selected university and tested the reliability of the questionnaire. Once the questionnaire gained approval, the online questionnaire was then distributed to the respondents. The administration of the questionnaire took 2 months until the target number of respondents was reached.

Data Analysis

The Implicit Theories of Intelligence Scale contains eight items with scores ranging from 1 - 5 using the 5-point Likert scale. The average mindset score of the respondents was calculated by averaging their accumulated scores across the entire scale. Based on their average score, the respondents were assigned to one of the mindset categories. The mindset categories are as follows: 1.0 - 2.33 = fixed mindset; 2.34 - 3.66 = mixed mindset; 3.67 - 5 = growth mindset. The



frequency of each mindset category was evaluated and reported in percentages. Although previous research only probed on the fixed and growth mindsets, this study aims to further classify individuals who are on the centre scale alongside similar research by Claro et al. (2016).

The scenario-based item contains four items with one option that needs to be selected from the three response options. In this manner, respondents may be assigned to three possible approaches within four assessment themes based on their response. The frequency of the participants' assessment approach across the four assessment literacy themes respectively will be evaluated and reported in percentages.

In order to determine the significant relationship between assessment approaches and mindset category (e.g. fixed, mixed or growth), a 3 x 3 contingency table was developed to employ Pearson's chi-square tests to correlate the findings from the two research instruments used. Each table will consist of the frequency of the three assessment approaches across the three mindset categories. The significant relationship across all four themes was evaluated and reported in percentages. If the chi-square test indicated a significant relationship within the contingency table, a post-hoc analysis using a z-test of column proportions with Bonferroni adjustments to the significance level ($\alpha = 0.05$) was used to recognize significant differences between a mindset category within an assessment theme. This analysis serves to be the most suitable option to identify the relationship between two variables in the given sample.

RESULTS

Demographic Profile

The study's demographic analysis revealed that the majority of respondents were female (88.3%), with a small proportion being male (11.7%). Most participants were aged between 21 and 25 (75%), followed by those aged 26 to 30 (16.7%), and a few aged 30 and above (8.3%). Regarding class sizes, 35% of respondents taught more than 30 students, 33.3% taught 20 to 30 students, 23.3% had classes of 10 to 20 students, and 8.3% taught fewer than 10 students.

Mindset Orientation

The first research objective aimed to explore the mindset of pre-service ESL teachers, categorising them into fixed, mixed, and growth mindsets using The Implicit Theories of Intelligence Scale. Among the 60 respondents, a majority of the participants had a mixed mindset (48.3%, $N = 29$), followed by the growth mindset (38.3%, $N = 23$) and lowest with the fixed mindset (13.3%, $N = 8$). The mindset categories were analysed according to the demographic categories. The findings from the demographic categories are displayed in Table 4.1.



Table 4.1: Mindsets by Demographic Categories

Demographics		Frequency (%)			
		All Participants	Mindsets		
			Fixed	Mixed	Growth
Gender	Male	11.7	6.7	0	5
	Female	88.3	6.7	48.3	33.3
Age	21 - 25	75	8.3	28.3	38.3
	26 - 30	16.7	1.7	15	0
	> 30	8.3	3.3	5	0
Number of Students	> 10	8.3	0	3.3	5
	10 - 20	23.3	5	11.7	6.7
	20 - 30	33.3	6.7	10	16.7
	> 30	35	1.7	23.3	10
Total			13.3	48.3	38.3

Approaches towards Assessment

The second research question explored the assessment approaches of pre-service ESL teachers across the four dimensions of assessment literacy. In this regard, the Approaches to Classroom Assessment Inventory is used as a research instrument to identify the assessment approaches of the pre-service ESL teachers through a scenario-based item extracted from Part A: Classroom Assessment Scenario of the item.

The frequencies of the responses for each assessment approach across the four assessment literacy themes was calculated and tabulated as in Table 4.2.

Table 4.2: Frequency of Approaches to Assessment

Assessment Theme	Assessment Approach	Frequency (%)
Assessment Purposes	Assessment of Learning	25
	Assessment for Learning	35
	Assessment as Learning	40
Assessment Processes	Design	15
	Use/Scoring	31.7
	Communication	53.3
Assessment Fairness	Standard	48.3

Measurement Theory	Equitable	20
	Differentiated	31.7
	Reliability	10
	Validity	18
	Reliability + Validity	32

Relationship between Mindset and Assessment Approaches

In answering the third research question, a series of Chi-square tests of independence were conducted to examine the significant relationship between respondents' mindset and their assessment approaches in correspondence to four assessment literacy themes. For each assessment literacy theme, a 3 x 3 contingency table was used to identify the frequency of each of the three assessments across the three mindset categories.

If the chi-square test indicated a significant relationship within the contingency table, a post-hoc analysis using a z-test of column proportions with Bonferroni adjustments to the significance level ($\alpha = 0.05$) was used to recognise significant differences between a mindset category within an assessment theme. This analysis is the most suitable option to identify the relationship between two variables in the given sample.

The findings from the Chi-square tests are presented and tabulated in Table 4.3.

H₀: Pre-service teachers' mindset orientation in terms of growth, fixed and mixed mindset will not influence their assessment approaches.

H_a: Pre-service teachers' mindset orientation in terms of growth, fixed and mixed mindset will influence their assessment approaches. Pre-service teachers with a growth mindset will prefer assessment as learning, communication, differentiated as well as reliability and validity approaches towards assessments. Pre-service teachers with a fixed mindset will prefer assessment of learning, design, standard and reliability approaches towards assessments.

Table 4.3: Chi-square and Crosstabs for Assessment Dimensions

Assessment Theme	Assessment Approach	Mindsets (%)			Total (%)
		Fixed	Mixed	Growth	
Assessment Purposes	Assessment of Learning	6.7	15	3.3	25
	Assessment for Learning	3.3	20	11.7	35
	Assessment as Learning	3.3	13.3	23.3*	40
Assessment Processes	Design	0	10	5	15
	Use/Scoring	11.7	13.3	6.7	31.7
	Communication	1.7	25	26.7*	53.3



Assessment Fairness	Standard	13.3*	23.3	11.7	48.3
	Equitable	0	11.7	8.3	20
	Differentiated	0	13.3	18.3*	31.7
Measurement Theory	Reliability	5	6.7	5	16.7
	Validity	6.7	20	3.3	30
	Reliability + Validity	1.7	21.7	30*	53.3
	Validity				

Note: * denotes significance at alpha = 0.05

A significant association was found between mindset and Assessment Purposes, $\chi^2 (4, N = 60) = 9.64, p = 0.047$. Post-hoc analysis indicated that respondents with a growth mindset were more likely to prioritise assessment as learning, in contrast to those with a fixed mindset who preferred assessment of learning. Respondents with a mixed mindset favoured assessment for learning. This supports the alternative hypothesis, demonstrating that both growth and fixed mindsets influence assessment approaches.

Similarly, a significant relationship was observed in Assessment Processes, $\chi^2 (4, N = 60) = 15.04, p = 0.005$. The data showed that individuals with a growth mindset preferred the communication approach, while those with fixed or mixed mindsets preferred different approaches, supporting the alternative hypothesis, indicating that a growth mindset significantly influences the choice of assessment processes.

As for Assessment Fairness, a significant relationship was identified, $\chi^2 (4, N = 60) = 12.41, p = 0.015$. The post-hoc analysis revealed that respondents with a growth mindset preferred a differentiated approach, whereas the fixed mindset predominantly chose the standardised approach, and many with a mixed mindset also favoured this approach. This suggests that a growth mindset impacts how fairness is perceived and applied in assessment practices.

Lastly, a significant relationship was found between mindset and Measurement Theory, $\chi^2 (4, N = 60) = 13.78, p = 0.008$. Respondents with a growth mindset preferred a combined approach to reliability and validity, as opposed to treating them separately. This result supports the alternative hypothesis, highlighting that a growth mindset influences the approach to measurement theory. Respondents with a mixed mindset also preferred the combined approach, whereas those with a fixed mindset leaned towards a validity-focused approach.

Overall, the findings demonstrate statistically significant relationships between mindset orientation and assessment approaches across all four assessment literacy dimensions. with substantial differences found between growth and fixed mindsets in various aspects of assessment literacy.



DISCUSSION

Pre-service Teachers' Mindset Orientation

The first objective of this study was to identify the mindset orientation of pre-service ESL teachers. Findings revealed that 48.3% of respondents had a mixed mindset, which aligns with research by Herynková et al. (2020) showing a similar trend among in-service teachers. This result is consistent with studies in the Asian context, where mixed mindsets are common (Zhang et al., 2020; Zhang et al., 2022). However, this contrasts with other studies suggesting a growth mindset predominance among pre-service teachers (Cruz et al., 2018; Daniels et al., 2020; DeLuca et al., 2019a; Meierdirk & Fleischer, 2022). This discrepancy suggests that pre-service teachers may enter the profession with varying beliefs about intelligence and learning, which may subsequently influence their instructional and assessment practices.

In this regard, practicum experiences are said to influence these mindset orientations. The pre-service teachers in this study had completed a significant portion of their practicum, while studies reporting a growth mindset often involved teachers who had not yet started their clinical practice (Cruz et al., 2018; Daniels et al., 2020). This suggests that practicum experiences might lead to a mixed mindset orientation, as pre-service teachers' optimistic views often shift post-practicum (Rosyid, 2022; Soleas & Hong, 2020) resulting as a context-driven mindset.

However, practicum experiences can also positively influence mindset. DeLuca et al. (2019a) found that after a 21-week clinical practice, 54.3% of pre-service teachers exhibited a growth mindset. Similarly, Rosyid (2022) reported that 82% of pre-service teachers developed a 'growth mindset with some fixed mindset' post-practicum. Gutshall (2014) observed a significant increase in growth mindset orientation from 65.5% to 82.8% after a 16-week clinical practice, with no teachers remaining in the fixed mindset category. These findings suggest that clinical practice can enhance a growth mindset and self-efficacy in pre-service teachers (Suborna, 2021). Pre- and post-practicum comparisons reveal a deeper understanding of the growth mindset, with post-practicum teachers emphasizing resilience and active involvement, reflecting the positive impact of practicum experiences (Yilmaz, 2020; Kaya & Yuksel, 2022).

Pre-service Teachers' Assessment Approaches

The second research objective aimed to identify the assessment approaches of pre-service ESL teachers across the four dimensions of assessment literacy.

Assessment Purposes

The study depicted that a majority of pre-service ESL teachers valued the Assessment as Learning (AaL) approach with emphasis on self-regulation, metacognition and autonomy in learning (Lam, 2018). This preference stands out from the exam-focused education system in Malaysia and captures a shift towards promoting learner autonomy, in contrast to traditional summative assessments (Rosli et al., 2022). This differs from previous findings where educators preferred the Assessment for Learning (AfL) approach (Coombs et al., 2018; Coombs et al.,



2020; DeLuca et al., 2019c; Nayagi & Rajendran, 2020). These results suggest a positive improvement among teachers to view assessments as an instrument for progressive learning which may be impacted by their educational training or practicum experiences (Harapnuik, 2020).

Assessment Processes

The study found that most pre-service teachers endorsed the "communication" approach in Assessment Processes, where teachers negotiate the next steps to improve learning when students' achievement levels decline. This preference aligns with findings from other studies on pre-service and in-service teachers (DeLuca et al., 2019b; Coombs et al., 2020; Coombs et al., 2018; DeLuca et al., 2021). Teachers' emphasis on communication highlights the importance of keeping both students and parents informed about academic progress, involving parents in discussing areas of achievement and improvement, and addressing any learning barriers.

The practice of communicating assessment feedback has implications on multiple levels. At the teacher level, it informs adjustments in teaching strategies, while at the student level, it encourages self-assessment and identification of areas for improvement (Muthukrishnan et al., 2024). The teacher-student communication of feedback helps students understand the gap between their current performance and desired outcomes, motivating them to invest effort in addressing weaknesses to achieve their goals (Adarkwah, 2021).

However, when providing feedback, teachers must consider the nature of the assessment task and the student's potential response. Feedback for beginner students should be tailored differently than for more advanced learners who may benefit from detailed feedback (Fong et al., 2018). Ultimately, effective communication of assessment feedback can transform classrooms from being comparison-oriented, focused on grades, to learning-oriented environments that prioritise improving the quality of teaching and learning strategies (Adarkwah, 2021).

Assessment Fairness

The study reveals that pre-service teachers favour the "standardised" approach to Assessment Fairness. The predominance of among pre-service teachers raises important concerns in relation to contemporary inclusive assessment frameworks that recognise diverse learner needs and abilities. This may potentially cause students to feel unfairly treated, especially when they are not provided with opportunities to meet their achievement goals (Rasooli et al., 2018). This is similarly identified in the study by Marzaini and Yusoff (2025) where the findings depicted that despite the reformation to Classroom-Based Assessments (CBA), Malaysian teachers were still identified relying on traditional summative tests, mirroring the deeply embedded examination culture due to a lack of familiarity with the grading of diverse assessment methods. When high-stakes examinations continue to shape classroom practices, pre-service teachers may internalise standardised assessment as the most legitimate form of fairness, in spite of emerging differentiated assessment practices.

Interestingly, the study notes that varying career stages significantly influences teachers' assessment choices. Pre-service teachers typically prefer standardised or equitable approaches,



while experienced teachers tend to prioritise the differentiated approach (DeLuca et al., 2016b). For instance, DeLuca et al. (2016b) found that teachers with 0-4 years of experience primarily chose standardised (1.6%) or equitable (61.8%) approaches, while those with over 10 years of experience favoured the differentiated approach (50%). Similarly, Coombs et al. (2021) reported that older, more experienced teachers prefer differentiated assessments compared to younger teachers aged 20-30.

These findings suggest that teachers' preferences may evolve with experience. Early in their careers, teachers may use standardised assessments uniformly, but as they gain experience through professional development and classroom practice, they may begin to accommodate students' varying needs by providing differentiated assessments (DeLuca et al., 2016b). Therefore, it is likely that pre-service teachers, through trial-and-error and professional growth, will eventually shift from a standardized approach to a more student-centered approach to assessment fairness.

Measurement Theory

In this study, most pre-service teachers preferred a combination of reliability and validity in measurement theory. This is similarly identified in findings from pre-service (Coombs et al., 2018) and in-service teachers (Coombs et al., 2021). This approach emphasises learning that leads to the final outcome, aligning with Brookhart (2005). It involves the teachers' role of looking to signs of students' perseverance in terms of their progress and engagement in order to make rational choices about learning accommodations (McMillan, 2005). Nevertheless, some respondents still preferred either validity, ensuring the assessments measure what is claimed (Coombs et al., 2020; DeLuca et al., 2016b), or reliability, looking into consistency (Nayagi & Rajendran, 2020).

Relationship between Mindset and Assessment Approaches

The third research objective aims to identify the relationship between pre-service teachers' mindsets and their assessment approaches. Statistically significant associations were identified between the growth mindsets and assessment approaches of pre-service teachers across all four dimensions of assessment literacy.

Assessment Purposes

The findings revealed that growth mindset pre-service teachers prioritised the Assessment as Learning (AaL) compared to the mixed and fixed mindsets. This resonates with DeLuca et al. (2019a), who also identified that pre-service teachers with a growth mindset prefer AaL as it promotes personalised learning, self-reflection and metacognition. It also promotes resilience when encountering failures and looks into ways to improve (Lam, 2018) by providing supporting resources.

Pre-service teachers with a mixed mindset preferred Assessment for Learning (AfL) over AaL or AoL. This preference matches the findings of Lam (2018), in which they utilise formative assessments and feedback as mediums to develop intelligence. Nevertheless, their perceptions



towards the limitation of students' skills may hinder their full utilisation of AaL. Pre-service teachers with a fixed mindset opted AoL which involves using summative assessments to assign a single score for overall performance. This undeniably reflects the fixed mindset, which views intelligence as unchangeable (Ghorbanpour et al., 2021). This study actualises that growth mindset teachers prefer student-centered assessments, while fixed mindset teachers learn towards teacher-centered assessments.

Assessment Processes

The study showed that pre-service teachers with a growth mindset significantly prioritised the communication approach, similar to findings existing research by (Coombs et al., 2018; Coombs et al., 2020; DeLuca et al., 2019b; DeLuca et al., 2019c). Growth mindset teachers emphasise communication through critical, honest feedback, viewing failures as opportunities for learning by using phrases like “not yet,” which motivates improvement and educational optimism (Rissanen et al., 2019). With a positive outlook on the malleability of students' intelligence, they promote practices that induce the progress towards success (Campbell et al., 2019). This encourages incremental beliefs towards success (Rissanen et al., 2016). Mixed mindset teachers also valued the communication approach, leaning towards growth mindset traits.

Assessment Fairness

While most pre-service teachers preferred a standardised approach towards assessments, those with a growth mindset significantly favoured a differentiated approach tailored to student needs. This aligns with findings by DeLuca et al. (2019a) and Rissanen et al. (2016) where they identified that growth mindset teachers refrained from stereotyping and focused on assisting students to recognize their strengths. In contrary, fixed mindset teachers only chose standardized assessments as supported through findings by Patterson et al. (2016) and Rissanen et al. (2016), suggesting that they feel less accountable for student outcomes and do not believe in incremental intelligence. The mixed-mindset group also preferred standardized assessments showing a tendency learning towards fixed mindset traits.

Measurement Theory

The study identified that pre-service teachers with a growth and mixed mindset opted a combination of both reliability and validity in assessments, recognizing its ability to optimize alternative resources. Growth mindset educators place emphasis on progressive effort compared to the final outcome. This resonates with Brookhart (2005) in which elaborated the process leading to the final product is viewed more important with assistance and accommodations provided at the face of challenges. This allows them to make rational decisions by recognizing the perseverance of students and providing scaffold as needed (McMillan, 2005). This approach supports the initial hypothesis of the study, suggesting that growth mindset teachers value the process of attaining goals by providing guidance.

In contrast, fixed mindset pre-service teachers idealized assessments that emphasized final outcomes by maintaining consistent standards for all students. This approach reflects the fixed



mindset which prioritises the end result over invested process and effort. The study confirms the hypothesis that fixed mindset educators focus on standardised outcomes.

CONCLUSIONS AND RECOMMENDATIONS

The study probed into the mindset of pre-service ESL teachers, in terms of their mindset orientation and their assessment approaches across four dimensions. Majority of the respondents reflected a mixed mindset. Growth mindset teachers had positive outlooks on assessments approaches with most mixed mindset teachers leaning towards the traits of the growth-oriented approach. Despite orientations towards the fixed mindset, this study posits that professional training can help overcome this disposition.

While the findings offer valuable insights into the influence of the mindset on assessment methods, it should be viewed indicatively due to the limited sample size of a small group of mostly female respondents from a single university. Self-reported questionnaires may also lead to a social desirability bias. Nevertheless, this study may offer initial evidence which can guide future research to look into a larger, varied sample from different universities, or with an extension to in-service teachers. Pre-practicum and post-practicum periods can also be researched to identify possible shifts in mindset orientation.

The findings also highlight that shifting the emphasis away from academic performance may encourage growth mindset traits as pre-service teachers may be able to view clinical practice as a learning curve which reflect in their dealings with students.

REFERENCES

- Adarkwah, M. A. (2021). The power of assessment feedback in teaching and Learning: A narrative review and synthesis of the literature. *SN Social Sciences*, 1(3). <https://doi.org/10.1007/s43545-021-00086-w>
- Aronson, J., Fried, C. B., & Good, C. (2002). Reducing the Effects of Stereotype Threat on African American College Students by Shaping Theories of Intelligence. *Journal of Experimental Social Psychology*, 38(2), 113–125. <https://doi.org/10.1006/jesp.2001.1491>
- Barnes, N., Gareis, C., DeLuca, C., Coombs, A., & Uchiyama, K. (2020). Exploring the roles of coursework and field experience in teacher candidates' assessment literacy: A focus on approaches to assessment. *Assessment Matters*, 14, 5–41. <https://doi.org/10.18296/am.0045>
- Bettinger, E., Ludvigsen, S., Rege, M., Solli, I. F., & Yeager, D. (2018). Increasing Perseverance in Math: Evidence from a Field Experiment in Norway. *Journal of Economic Behavior & Organization*, 146, 1–15. <https://doi.org/10.1016/j.jebo.2017.11.032>
- Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit Theories of Intelligence Predict Achievement Across an Adolescent Transition: A Longitudinal Study and an Intervention. *Child Development*, 78(1), 246–263. <https://doi.org/10.1111/j.1467-8624.2007.00995.x>



- Brookhart, S. M. (2005). *Research on formative classroom assessment: State-of-the-Art*. Paper presented at the Annual meeting of the American Educational Research Association, Montreal.
- Campbell, A., Craig, T., & Collier-Reed, B. (2019). A Framework for Using Learning Theories to Inform ‘Growth Mindset’ Activities. *International Journal of Mathematical Education in Science and Technology*, 51(1), 26–43. <https://doi.org/10.1080/0020739x.2018.1562118>
- Claro, S., Paunesku, D., & Dweck, C. S. (2016). Growth mindset tempers the effects of poverty on academic achievement. *Proceedings of the National Academy of Sciences*, 113(31), 8664–8668. <https://doi.org/10.1073/pnas.1608207113>
- Coombs, A., DeLuca, C., & MacGregor, S. (2020). A person-centered analysis of teacher candidates’ approaches to assessment. *Teaching and Teacher Education*, 87, 102952. <https://doi.org/10.1016/j.tate.2019.102952>
- Coombs, A., DeLuca, C., LaPointe-McEwan, D., & Chalas, A. (2018). Changing approaches to classroom assessment: An empirical study across teacher career stages. *Teaching and Teacher Education*, 71, 134–144. <https://doi.org/10.1016/j.tate.2017.12.010>
- Coombs, A., Rickey, N., DeLuca, C., & Liu, S. (2021). Chinese teachers’ approaches to classroom assessment. *Educational Research for Policy and Practice*, 21(1), 1–18. <https://doi.org/10.1007/s10671-020-09289-z>
- Cordova, E. P. (2017). *I Can’t Do That, Yet: Growth Mindset*. (M. W. Adiputri, Illus.). CreateSpace Independent Publishing Platform.
- Costa, A., & Faria, L. (2018). Implicit theories of intelligence and academic achievement: A Meta-Analytic Review. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.00829>
- Cruz, P. M. D., Aquino, N. R. D., & Dino, C. A. (2018). Pre-Service Teachers’ Mindset Profiling. *Language Research*, 1. https://www.researchgate.net/publication/340680823_Pre-Service_Teachers%27_Mindset_Profiling
- Daniels, L. M., Goegan, L. D., Radil, A. I., & Dueck, B. S. (2020). Supporting Pre-service teachers’ motivation beliefs and approaches to instruction through an online intervention. *British Journal of Educational Psychology*, 91(2), 775–791. <https://doi.org/10.1111/bjep.12393>
- Deak, J. M. (2017). *Your Fantastic Elastic Brain: Stretch it, Shape it*. (S. Ackerley, Illus.). Little Pickle Press.
- DeLuca, C., Coombs, A., & LaPointe-McEwan, D. (2019a). Assessment mindset: Exploring the relationship between teacher mindset and approaches to classroom assessment. *Studies in Educational Evaluation*, 61, 159–169. <https://doi.org/10.1016/j.stueduc.2019.03.012>
- DeLuca, C., Coombs, A., MacGregor, S., & Rasooli, A. (2019b). Toward a differential and situated view of Assessment Literacy: Studying Teachers’ responses to classroom assessment scenarios. *Frontiers in Education*, 4. <https://doi.org/10.3389/feduc.2019.00094>
- DeLuca, C., LaPointe-McEwan, D., & Luhanga, U. (2016a). Approaches to classroom assessment inventory: A new instrument to support teacher assessment literacy. *Educational Assessment*, 21(4), 248–266. <https://doi.org/10.1080/10627197.2016.1236677>



- DeLuca, C., Rickey, N., & Coombs, A. (2021). Exploring assessment across cultures: Teachers' approaches to assessment in the U.S., China, and Canada. *Cogent Education*, 8(1). <https://doi.org/10.1080/2331186x.2021.1921903>
- DeLuca, C., Schneider, C., Coombs, A., Pozas, M., & Rasooli, A. (2019c). A cross-cultural comparison of German and Canadian student teachers' assessment competence. *Assessment in Education: Principles, Policy & Practice*, 27(1), 26–45. <https://doi.org/10.1080/0969594x.2019.1703171>
- DeLuca, C., Valiquette, A., Coombs, A., LaPointe-McEwan, D., & Luhanga, U. (2016b). Teachers' approaches to classroom assessment: A large-scale survey. *Assessment in Education: Principles, Policy & Practice*, 25(4), 355–375. <https://doi.org/10.1080/0969594x.2016.1244514>
- De Castella, K., & Byrne, D. (2015). My intelligence may be more malleable than yours: The revised implicit theories of intelligence (self-theory) scale is a better predictor of achievement, motivation, and student disengagement. *European Journal of Psychology of Education*, 30(3), 245–267. <https://doi.org/10.1007/s10212-015-0244-y>
- Dweck, C. S. (2000). *Self-theories: Their role in motivation, personality, and development*. Psychology Press.
- Dweck, C. S. (2006). *Mindset: The New Psychology of Success*. New York: Random House Publishing Group.
- Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). *Teaching Adolescents to Become Learners: The Role of Noncognitive Factors in Shaping School Performance: A Critical Literature Review*. Distributed by ERIC Clearinghouse. <https://files.eric.ed.gov/fulltext/ED542543.pdf>
- Fong, C. J., Schallert, D. L., Williams, K. M., Williamson, Z. H., Warner, J. R., Lin, S., & Kim, Y. W. (2018). When feedback signals failure but offers hope for improvement: A process model of constructive criticism. *Thinking Skills and Creativity*, 30, 42–53. <https://doi.org/10.1016/j.tsc.2018.02.014>
- Ghorbanpour, E., Abbasian, G. R., & Mohseni, A. (2021). Assessment Alternatives in Developing L2 Listening Ability: Assessment FOR, OF, AS Learning or Integration? (Assessment x Approach). *International Journal of Testing*, 11(1), 36–57. https://www.ijlt.ir/article_128359.html
- Gutshall, C. A. (2014). Pre-Service Teachers' Mindset Beliefs about Student Ability. *Electronic Journal of Research in Education Psychology*, 12(34), 785–802. <https://doi.org/10.25115/ejrep.34.14030>
- Harapnuik, D. (2020). *Assessment OF/FOR/AS Learning*. It's About Learning. <https://www.harapnuik.org/?p=8475>
- Herynková, M., Drašnarová, K., Očenášková, K., Perglerová, A., & Urbanová, S. (2020). A Pilot Study of Teachers' Feedback According to Carol Dweck's Mindset Theory. *European Proceedings of Social and Behavioural Sciences*. <https://doi.org/10.15405/epicepsy.20111.29>
- Hulleman, C. S., & Harackiewicz, J. M. (2009). Promoting Interest and Performance in High School Science Classes. *Science*, 326(5958), 1410–1412. <https://doi.org/10.1126/science.1177067>
- James, M., & Pedder, D. (2006). Beyond method: Assessment and Learning Practices and Values. *The Curriculum Journal*, 17(2), 109–138. <https://doi.org/10.1080/09585170600792712>

- Jamil, N. Z., Barghi, A. H., Nimehchisalem, V., & Ali, A. M. (2025). English language teachers' speaking assessment beliefs and practices in Malaysian Secondary Schools. *Journal of Language Teaching and Research*, 16(4), 1129–1136. <https://doi.org/10.17507/jltr.1604.08>
- Jugessur, Y. S. M. F. (2022). Reliability and Internal Consistency of data: Significance of Calculating Cronbach's Alpha Coefficient in Educational Research. *International Journal of Humanities and Social Science Invention (IJHSSI)*, 11(4), 9–14. [https://www.ijhssi.org/papers/vol11\(4\)/Ser-3/C1104030914.pdf](https://www.ijhssi.org/papers/vol11(4)/Ser-3/C1104030914.pdf)
- Kaya, S., & Yuksel, D. (2022). Teacher mindset and grit: How do they change by teacher training, gender, and subject taught? *Participatory Educational Research*, 9(6), 418–435. <https://doi.org/10.17275/per.22.146.9.6>
- Lam, R. (2018). Understanding Assessment as Learning in Writing Classrooms: The Case of Portfolio Assessment. *Iranian Journal of Language Teaching Research*, 6(3), 19–36. <https://doi.org/10.30466/IJLTR.2018.120599>
- Looney, A., Cumming, J., van Der Kleij, F., & Harris, K. (2017). Reconceptualising the Role of Teachers as Assessors: Teacher Assessment Identity. *Assessment in Education: Principles, Policy & Practice*, 25(5), 442–467. <https://doi.org/10.1080/0969594x.2016.1268090>
- Macakova, V., & Wood, C. (2020). The relationship between academic achievement, self-efficacy, implicit theories and basic psychological needs satisfaction among university students. *Studies in Higher Education*, 47(2), 259–269. <https://doi.org/10.1080/03075079.2020.1739017>
- Macnamara, B. N., & Burgoyne, A. P. (2023). Do growth mindset interventions impact students' academic achievement? A systematic review and meta-analysis with recommendations for best practices. *Psychological Bulletin*, 149(3-4), 133–173. <https://doi.org/10.1037/bul0000352>
- Marzaini, A. F. M., Sharil, W. N. H., Supramaniam, K., & Yusoff, S. M. (2023). Evaluating Teachers' Assessment Literacy in Enacting CEFR-aligned Classroom-based Assessment in Malaysian secondary schools ESL Classroom. *International Journal of Academic Research in Progressive Education and Development*, 12(1). <https://doi.org/10.6007/ijarped/v12-i1/15691>
- Marzaini, A. F. M., & Yusoff, S. M. (2025). A qualitative examination of misalignments in ESL teachers' grading practices within classroom based assessment in Malaysian Schools. *Discover Education*, 5(1). <https://doi.org/10.1007/s44217-025-01009-0>
- McMillan, J. H. (2005). Understanding and improving teachers' Classroom assessment decision making: Implications for theory and Practice. *Educational Measurement: Issues and Practice*, 22(4), 34–43. <https://doi.org/10.1111/j.1745-3992.2003.tb00142.x>
- Meierdirk, C., & Fleischer, S. (2022). Exploring the mindset and resilience of student teachers. *Teacher Development*, 26(2), 263–278. <https://doi.org/10.1080/13664530.2022.2048687>
- Mesler, R. M., Corbin, C. M., & Martin, B. H. (2021). Teacher Mindset is Associated with Development of Students' Growth Mindset. *Journal of Applied Developmental Psychology*, 76, 101299. <https://doi.org/10.1016/j.appdev.2021.101299>
- Muthukrishnan, P., Fung Lan, L., Anandhan, H., & Swamy D, P. (2024). The role of growth mindset on the relationships between students' perceptions of English language teachers' feedback and their ESL learning performance. *Education Sciences*, 14(10), 1073. <https://doi.org/10.3390/educsci14101073>



- Nayagi N, K., & Rajendran, M. (2020). Pre-service teachers' approaches to classroom assessment. *Humanities & Social Sciences Reviews*, 8(1), 666–673. <https://doi.org/10.18510/hssr.2020.8180>
- Norhasim, N. A., & Mohamad, M. (2020). Teachers' challenges on the implementation of classroom-based assessment for oral proficiency: A literature review. *Creative Education*, 11(10), 1922-1929.
- Pastore, S., & Andrade, H. L. (2019). Teacher Assessment Literacy: A Three-Dimensional Model. *Teaching and Teacher Education*, 84, 128–138. <https://doi.org/10.1016/j.tate.2019.05.003>
- Patterson, M. M., Kravchenko, N., Chen-Bouck, L., & Kelley, J. A. (2016). General and domain-specific beliefs about intelligence, ability, and effort among preservice and practicing teachers. *Teaching and Teacher Education*, 59, 180–190. <https://doi.org/10.1016/j.tate.2016.06.004>
- Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-Set Interventions are a Scalable Treatment for Academic Underachievement. *Psychological Science*, 26(6), 784–793. <https://doi.org/10.1177/0956797615571017>
- Rasooli, A., Zandi, H., & DeLuca, C. (2018). Re-conceptualizing Classroom assessment fairness: A systematic meta-ethnography of assessment literature and beyond. *Studies in Educational Evaluation*, 56, 164–181. <https://doi.org/10.1016/j.stueduc.2017.12.008>
- Rattan, A., Good, C., & Dweck, C. S. (2012). “it's OK — Not everyone can be good at Math”: Instructors with an entity theory comfort (and demotivate) students. *Journal of Experimental Social Psychology*, 48(3), 731–737. <https://doi.org/10.1016/j.jesp.2011.12.012>
- Rissanen, I., Kuusisto, E., Hanhimäki, E., & Tirri, K. (2016). Teachers' implicit meaning systems and their implications for pedagogical thinking and practice: A case study from Finland. *Scandinavian Journal of Educational Research*, 62(4), 487–500. <https://doi.org/10.1080/00313831.2016.1258667>
- Rissanen, I., Kuusisto, E., Tuominen, M., & Tirri, K. (2019). In search of a growth mindset pedagogy: A case study of one teacher's classroom practices in a Finnish elementary school. *Teaching and Teacher Education*, 77, 204–213. <https://doi.org/10.1016/j.tate.2018.10.002>
- Rosli, R., Mokhsein, S. E., & Suppian, Z. (2022). Classroom assessment practices in Malaysian Primary Schools: A meta-analysis. *International Journal of Academic Research in Progressive Education and Development*, 11(1). <https://doi.org/10.6007/ijarped/v11-i1/11516>
- Rosyid, A. (2022). Relationship between mindset of pre-service elementary school teacher and academic achievement. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 1(3), 143–150. <https://doi.org/10.54443/sibatik.v1i3.20>
- Sarrasin, J. B., Nenciovisci, L., Foisy, L. M. B., Allaire-Duquette, G., Riopel, M., & Masson, S. (2018). Effects of Teaching the Concept of Neuroplasticity to Induce a Growth Mindset on Motivation, Achievement, and Brain Activity: A Meta-Analysis. *Trends in Neuroscience and Education*, 12, 22–31. <https://doi.org/10.1016/j.tine.2018.07.003>
- Singh, C. K. S., Muhammad, M. M., Mostafa, N. A., Yunus, M. M., Noordin, N., & Darmi, R. (2022a). Exploring ESL teachers' Alternative Assessment Strategies and Practices in the



- Classroom. *Journal of Language and Linguistic Studies*, 18(1), 411-426. <https://files.eric.ed.gov/fulltext/EJ1325859.pdf>
- Singh, C. K. S., Singh, H. K. J., Singh, T. S. M., Moneyam, S., Abdullah, N. Y., & Zaini, M. F. (2022b). ESL Teachers' Assessment Literacy in Classroom: A Review of Past Studies. *Journal of Language and Linguistic Studies*, 18(1), 1-17. <https://files.eric.ed.gov/fulltext/EJ1328752.pdf>
- Soleas, E. K., & Hong, J. (2020). The School of Hard Knocks: Pre-service teachers' mindset and motivational changes during their practicum. *Foro de Educación*, 18(2), 237-257.
- Stiggins, R. J. (1991). Assessment Literacy. *Phi Delta Kappan*, 72, 534-539.
- Stohlmann, M. (2022). Growth Mindset in K-8 STEM Education: A Review of the Literature since 2007. *Journal of Pedagogical Research*. <https://doi.org/10.33902/jpr.202213029>
- Suborna, T. N. (2021). Impact of Teachers' Growth Mindset on Teachers' Self-efficacy, and Psychological Wellbeing: A Study on Bangladeshi High School Teachers. *International Journal of Management Sciences and Business Research*, 10(3). https://www.researchgate.net/publication/351047724_Impact_of_Teachers'_Growth_Mindset_on_Teachers'_Self-efficacy_and_Psychological_Wellbeing_A_Study_on_Bangladeshi_High_School_Teachers
- Tayyebi, M., Abbasabady, M. M., & Abbassian, G.-R. (2022). Examining classroom writing assessment literacy: A focus on in-service EFL teachers in Iran. *Language Testing in Asia*, 12(1). <https://doi.org/10.1186/s40468-022-00161-w>
- Uluduz, H., & Gunbayi, I. (2018). Growth Mindset in the Classroom. *European Journal of Education Studies*, 4(9). <https://zenodo.org/records/1297201>
- Yilmaz, A. (2020). The Relationship Between In-Service Teachers' Mindset Types and Their Efficacy Beliefs in Instructional Strategies. *İZÜ Eğitim Dergisi*, 2(4), 191-203. <https://doi.org/10.46423/izujed.752446>
- Zarrinabadi, N., & Afsharmehr, E. (2022). Teachers' mindsets about L2 learning: Exploring the influences on pedagogical practices. *RELC Journal*, 55(1), 96-110. <https://doi.org/10.1177/00336882211067049>
- Zhang, J., Cai, M., Li, D., & Lv, L. (2022). *Different mindset, same pedagogy? Situations boost or compromise the correspondence between mindset and pedagogy* (dissertation). https://www.researchgate.net/publication/361562930_Different_mindset_same_pedagogy_Situations_boost_or_compromise_the_correspondence_between_mindset_and_pedagogy
- Zhang, J., Kuusisto, E., & Tirri, K. (2020). Same mindset, different pedagogical strategies: A case study comparing Chinese and Finnish teachers. *International Journal of Learning, Teaching and Educational Research*, 19(2), 248-262. <https://doi.org/10.26803/ijlter.19.2.15>



Declaration of Generative AI and AI-assisted Technologies in the Writing Process

This manuscript was developed with the assistance of Google Gemini for the purpose of refining the clarity, coherence, and academic style of the text. The tools supported the author in reviewing and refining the content, and the author assume full responsibility for the final version submitted for publication.

Conflict of Interest

The authors declare that there is no potential conflict of interest associated with this research.

Acknowledgements

The author gratefully acknowledges the invaluable support of SEGi University for its continuous guidance in the pursuit of academic excellence and research. The author also wishes to extend heartfelt appreciation to Mr. Radine Chacko Sam for his unwavering support and motivation throughout this research and beyond, in which the author will be eternally grateful.

Authors' Contributions

The author affirms sole responsibility for the study's conception, design, data collection, findings, analysis, interpretation, and paper creation.