



International Journal of Advanced Academic Studies

E-ISSN: 2706-8927

P-ISSN: 2706-8919

www.allstudyjournal.com

IJAAS 2024; 6(3): 38-49

Received: 08-01-2024

Accepted: 16-02-2024

Suharabi Nalakath Veetil

Research Scholar, Department
of English and Modern
European Languages,
Banasthali University,
Rajasthan, India

Dr. Mandvi Singh

Associate Professor,
Department of English and
Modern European Languages,
Banasthali University,
Rajasthan, India

Corresponding Author:

Suharabi Nalakath Veetil

Research Scholar, Department
of English and Modern
European Languages,
Banasthali University,
Rajasthan, India

Assessing critical thinking abilities: A study on teachers' perspective

Suharabi Nalakath Veetil and Dr. Mandvi Singh

DOI: <https://doi.org/10.33545/27068919.2024.v6.i3a.1134>

Abstract

This study looks at the advantages of assessing students' critical thinking abilities in language teaching from the standpoint of the teachers in Oman. For students to excel in academic and professional settings, critical thinking abilities are essential in both the academic and real-world contexts.

The assessment of these skills, however, is not given enough attention in ESL classes, which can retard the development of students' critical thinking skills. A study conducted by Stearns and Kida (2018) found that evaluating critical thinking in the classroom can have several benefits, such as promoting students' engagement, motivation, and learning, as well as providing feedback to teachers to improve their teaching practices.

This study tries to better understand how educators view the evaluation of critical thinking in ESL classes in elementary schools in Oman. The lecture will go through the results of a quantitative approach that entailed surveying ESL instructors to learn more about their attitudes, convictions, and routines related to critical thinking evaluation. According to the findings, many teachers understand how important it is to evaluate students' critical thinking, but they have trouble putting good evaluation techniques into practice. The study emphasizes the need for greater chances for professional development for educators so they may better understand and evaluate critical thinking in ESL courses. The presentation finishes with suggestions for better preparing students for future academic and professional pursuits by incorporating critical thinking assessment into ESL curriculum and practice.

Keywords: Critical thinking, professional development, quantitative approach

Introductions

Learning in the 21st century requires critical thinking, a cornerstone of the ever-changing landscape of education. Within the realm of English as a Second Language (ESL) instruction, critical thinking stands out as a highly significant aspect. Going beyond simply learning grammar and vocabulary, one must possess the capacity to explore more deeply, analyse information in detail, and participate in nuanced analysis. This skill, which is not only a luxury but rather a fundamental aspect of successful learning, requires our focused attention as instructors. As mentioned by Quirk TJ (1975) [18], the purpose of education is to provide students with the necessary abilities to flourish as proactive, accountable, and involved members of society. On the other hand, students who are well equipped for the future have the potential to become agents of change. These kids possess the ability to exert a beneficial impact on their environment, shape the course of events to come, comprehend the motives, behaviours, and emotions of others, and foresee the immediate and lasting outcomes of their own actions. However, evaluating critical thinking in the ESL classroom has distinct difficulties and advantages.

Our exploration of this field of investigation commences with a fundamental query: Is it necessary to have a specific evaluation process for critical thinking in ESL classrooms? The answer, derived from extensive study, consideration of student needs, and the changing nature of education, unequivocally affirms a positive response. In order to fully comprehend the importance of this command, we must initially dissect the intricate complexity of critical thinking itself.

Defining the Elusive: Critical thinking, akin to a chameleon, eludes a clear definition. It includes a wide range of mental activities, such as distinguishing between fact and opinion and formulating logical arguments.

The process entails challenging assumptions, assessing data, and integrating multiple views to form a comprehensive knowledge. Essentially, it enables individuals to become self-sufficient learners, skilled not only in acquiring information, but also in actively analysing and interpreting it, and finally, converting it into knowledge.

Significance in ESL: For pupils who are learning a new language, critical thinking serves as an essential guide. It provides them with the necessary resources to negotiate the complex realm of semantics, to decode cultural subtleties inherent in language, and to steer clear of the dangers of miscomprehension. It enables individuals to actively engage in their learning process, rather than passively receiving pre-digested information.

Moreover, in an interconnected world that is becoming more and more defined by intricate information environments, the ability to think critically is not only a desired skill, but an indispensable one. It equips pupils with the skills to become knowledgeable individuals, capable of analysing information critically, dispelling false information, and making autonomous judgements.

The Dilemma of Assessment: Evaluating critical thinking in the ESL classroom poses distinct difficulties, despite its unquestionable significance. Critical thinking, unlike skills such as grammar or vocabulary learning, cannot be effectively measured using standardised examinations due to its abstract nature. The multidimensional character of this subject requires sophisticated assessment procedures that encompass the whole range of its components, including problem-solving, analysis, evaluation, and debate.

Furthermore, the presence of cultural and linguistic disparities might add complexity to the evaluation procedure. An argument that is logically sound and supported by evidence may be perceived as complex or confusing in a different cultural setting. The expertise in language might itself provide a hindrance, as pupils might face difficulty in expressing their critical thinking abilities due to a restricted vocabulary or grammatical limitations.

Accepting the Challenge: Nevertheless, these obstacles should not discourage, but rather encourage individuals to exhibit inventiveness and ingenuity. In order to adequately evaluate critical thinking skills in ESL courses, it is necessary to go beyond conventional methodologies and adopt a comprehensive approach. This may entail utilising a blend of tactics, such as.

- Performance-based examinations, such as debates, simulations, and project-based learning, offer genuine chances for students to showcase their critical thinking abilities within real-life situations.
- Open-ended questions facilitate the development of critical thinking skills such as analysis, evaluation, and reasoning by moving away from multiple-choice exams and promoting open-ended inquiry.
- Reflective writing: Offering students opportunities to contemplate their cognitive processes might yield significant insights into their growth in critical thinking.
- Rubrics that are designed to be aware and respectful of different cultural perspectives and values. Developing evaluation instruments that consider cultural origins and linguistic proficiency can guarantee impartiality and precision.

Assessing critical thinking in ESL classrooms necessitates a collective endeavour that goes beyond individual teachers and involves the knowledge and skills of curriculum developers, assessment professionals, and researchers. By cultivating a culture that promotes ongoing enhancement and originality, we can guarantee that our ESL classrooms not only provide students with the necessary language skills for communication, but also equip them with the essential cognitive abilities to flourish in a multifaceted and constantly evolving society.

Literature review

The advantages of evaluating critical thinking in language teaching

Assessing critical thinking in language training has many significant advantages, according to proponents. For starters, evaluation can act as a catalyst for increased student involvement and greater learning. Students are more likely to approach the topic with heightened focus and active engagement when they are aware that their critical thinking skills will be evaluated.

Secondly evaluation provides teachers with useful feedback, allowing them to measure the success of their teaching methods and identify areas for improvement. Teachers are able to modify their curriculum to accommodate specific needs and build a more conducive learning atmosphere by evaluating how effectively students are developing their critical thinking abilities.

Furthermore, identifying critical thinking helps students succeed academically and professionally. Students who have been examined and coached in critical thinking are better ready to excel in their future efforts in a world where critical thinking is highly valued.

The challenges of evaluating critical thinking in language teaching

Although the advantages of testing critical thinking are obvious, teachers encounter problems in applying effective assessment procedures. One problem is creating assessment instruments that accurately and consistently measure critical thinking abilities. Critical thinking is a complicated and varied talent, and capturing its intricacies in a standardised evaluation can be difficult. Lack of training in this matter is also one of the imperative complaints among teachers. With regard to the opportunities of training received about critical thinking skills, instructors expressed significant dissatisfaction over the little training and feedback they received on critical thinking education. This responsibility should be fulfilled by the training centre, senior instructors, and supervisors.

The impact of critical thinking instruction is extensively recorded to be contingent upon the level of training imparted to the teachers. Sodoma and Else (2009) clearly revealed the advantages of training in their study. They found that providing training chances for instructors helps them feel more at ease when facing the difficulties of new situations.

Another obstacle stems from the contextual aspect of critical thinking. Students may display critical thinking talents in one setting, such as analysing a literary piece, but struggle to apply those same skills in another, such as evaluating a scientific argument. This makes it challenging to create assessment instruments that cover the entire range of critical thinking abilities.

A further challenge teachers come across is balancing the need to measure critical thinking with other assessment demands. Teachers are responsible for assessing language skills, grammar, vocabulary, and other areas of language proficiency in addition to critical thinking. Finding the correct balance between these assessment requirements might be difficult.

Educators' views on critical thinking assessment

According to the findings of this study, many ESL teachers acknowledge the necessity of assessing critical thinking. However, they encounter a number of obstacles in doing so. Among the difficulties identified by teachers were:

- Creating useful assessment tools
- Critical thinking is evaluated in a context-dependent manner.
- Trying to strike a balance between the need to assess critical thinking and other assessment demands.
- Time and resources are limited.

Despite the difficulties, several teachers in this current research reported a strong desire to measure critical thinking in their courses. They believe that critical thinking is an important talent for kids to learn and are prepared to go above and beyond to assess it properly.

Teachers' views on assessing critical thinking: Insights from Oman and around the world

To acquire a better grasp of teachers' perspectives on measuring critical thinking, researchers explore Oman, a country that has placed a major emphasis on developing critical thinking abilities in its education system. Zou'bi (2021) argues that a crucial difficulty of the 21st century is the increasing necessity for critical thinking in a world that must confront readily available knowledge, contemporary employment opportunities, and misinformation. While there is a general consensus on the significance of enhancing students' critical thinking abilities, primary school learners exhibit a deficiency in such capabilities, Davies, M. (2013) [7]. Al-Kindi and AL-Mekhlafi (2017) [1] conducted a study to examine how post-basic English teachers implement critical thinking skills and the difficulties they encounter when teaching these abilities in EFL classrooms. Upon examining the utilisation of behaviours that foster critical thinking abilities among post-basic EFL teachers, the study demonstrates that these teachers infrequently employ such behaviours.

As observed by Al Kharusi *et al.* (2019) [2] it is inferred that peer learning strategy at school for general education diploma level has been faulted and thereby it affected adversely on students' capacity building of critical thinking. In support of this finding, researchers like Salvin (1996), Van Meter and Stevens (2000) [23] and Williams and Worth (2001) [26] found that critical thinking ability may not improve in peer learning as students try to copy peers other than trying to articulate their own argument.

A separate investigation conducted by Mehta and Al-Mahrooqi (2014) [15] explored the difficulties and potential advantages of incorporating critical thinking skills into English as a Foreign Language (EFL) schools in Oman. The study revealed that educators frequently had difficulties in locating suitable instructional resources that successfully nurtured the development of critical thinking abilities. The research conducted in Oman align with the worldwide

discussion on evaluating critical thinking in language instruction. Although critical thinking is widely acknowledged as being important, the actual application of assessment methodologies continues to be difficult. Teachers require assistance in creating efficient assessment instruments, comprehending the context-specific aspects of critical thinking, and managing the challenges of evaluating critical thinking with other assessment obligations.

Annually, in the Sultanate of Oman, approximately 40,000-50,000 students complete their secondary schooling, but just over half of these pupils are granted admission to higher education universities (Ministry of Education & the World Bank, 2012 [16]; Times News Service, 2014). Out of the total, around 3,000 students are granted admission to Sultan Qaboos University (SQU). More over 50% of the recently enrolled students at SQU did not pass either the math or the technology placement exams, and less than 10% successfully passed the English proficiency test for university preparedness. Research has shown a positive correlation between strong critical thinking abilities and improved academic performance (IP, Lee, Lee, Chau, Wootton, & Chang, 2000 [10]; Phan, 2008 [17]; Hohmann & Grillo, 2014) [9]. Hence, it is crucial to ascertain the characteristics that can promote the cultivation of critical thinking abilities among university students.

As per Li Li (2023) [13], asserts that critical thinking is essential for achieving scholastic success and fostering effectiveness and innovation in the business. Nevertheless, there is a lack of comprehensive understanding regarding how language instructors conceptualise critical thinking and incorporate it into their instructional practices. This is particularly accurate in English as a Foreign Language (EFL) settings and specifically at the secondary education level.

Interactions among students in the classroom are not limited to those between the student and the teacher. In recent times, there has been an increasing focus on the significance of peer communication. According to Havnes (2008), the process of learning from peers differs from learning from professors due to the presence of stress-free debates, diverse answers, and contradictory views. According to Brookfield (2012) [5], peers typically employ a language that is more similar to the language used by students than the language used by teachers. When students engage with teachers, it is desirable for them to pose challenging questions that prompt the teacher to enhance the quality of their reasoning. This process involves the teacher critically examining their own assumptions and evidence to support their stance (Browne & Keeley, 2010) [6].

Investing in various educational activities that encourage collaborative work among students helps foster the development of critical thinking skills. Wass and Harland (2011) [25] conducted a study where they investigated the learning process of students in developing critical thinking skills. The study examined the hypothesis that the development of critical thinking skills is not an independent process, but rather involves the interaction among a cohort of students at the University of Otago, New Zealand.

According to the incorporation of critical thinking into language training has been of secondary importance, especially in the context of teaching foreign languages. Hence, acquiring a comprehensive comprehension of teacher cognition regarding critical thinking will establish a robust groundwork for teacher training, enabling them to

effectively execute a curriculum centred on thinking skills. Furthermore, investigating the perspectives of foreign language teachers about cognitive abilities and professional methods assists policymakers, investigators, plus educators in recognising the difficulties and possibilities inside the classroom.

According to Liu J (2018) Incorporating critical thinking throughout the entire writing curriculum is crucial for fostering students' critical thinking skills. During the pre-writing phase, engaging in brainstorming and mind mapping exercises can effectively foster the students' critical thinking abilities. In the post-writing phase, self-revision, peer revision, and instructors' modifications can assist students in analysing their own and their peers' work from a reader's perspective. This process enables them to identify and resolve issues, thereby improving their viewers understanding.

In the words of Marin and de la Pava (2017) ^[14], critical thinking in English as a Foreign Language (EFL) is described as a combination of conceptual, methodological, criteriological, and contextual factors that incorporate thinking abilities, dispositions, attitudes, intellectual resources, and pedagogical support. It impacts the ability to communicate effectively, think creatively, construct arguments, solve problems, make decisions, engage in self-directed learning, reflect on one's own thinking, and experience emotions

Specifically, there is a dearth of research regarding teachers' conceptualization of critical thinking and their methods of fostering it within their classes. In a recent review conducted by Yuan *et al.* (2021) ^[27], a statement was put out. After conducting a comprehensive analysis of the area, a total of 25 empirical investigations on English as a Foreign Language (EFL) teachers' perspectives and involvement with Critical Thinking (CT) were identified. These investigations included various educational settings and were conducted between 2010 and 2020. Furthermore, the existing literature has a limited number of research that specifically focus on secondary school classrooms (Liang & Fung, 2021) ^[12].

Within the limited body of research, there is a general agreement on the topic of language teachers' knowledge and comprehension of critical thinking. Teachers typically have a favourable disposition towards fostering critical thinking (Asgharheidari & Tahri, 2015) ^[3]. Multiple conceptualizations of critical thinking are also existed. Wade and Tavis (1987) ^[24] define critical thinking as the capacity and readiness to evaluate assertions and form unbiased judgements using well-substantiated reasoning (p. 308-309).

In their study, Karagol and Bekmezci (2015) ^[11] examined 377 teacher applicants to explore potential variations in critical thinking dispositions and academic achievement scores based on gender, kind of high school attended, specialisation, and parents' financial level. The results indicated that factors such as gender, kind of high school, and financial level of parents did not exert a significant influence on critical thinking tendencies. However, there were notable correlations observed between the critical thinking tendencies and academic performance of prospective teachers.

The findings unveiled a comprehensive and intricate comprehension of this crucial aptitude. Although teachers widely acknowledged the need of cultivating critical thinking

skills in pupils, the issue of how to accurately evaluate it remains unresolved and filled with difficulties. The review highlighted the significant importance of teachers' voices. Their viewpoints shed light on the pragmatic challenges of incorporating critical thinking into the educational programme, managing the demands of assessments, and fostering students' intellectual inquisitiveness. Their observations highlight the necessity for evaluation methods that are genuine, in line with practical implementation, and conducive to the educational procedures that inherently foster critical thinking.

Methodology

This study utilised a mixed-methods technique to collect the viewpoints of educators regarding the evaluation of critical thinking. The current research utilised a dual strategy to enlist people for the two types of online and paper-based surveys: The objective of this integrated approach was to collect a wide range of perspectives from educators in Oman, while also recognizing the possible constraints and predispositions inherent in each methodology. The online survey specifically focused on more than 100 educators employed in both private and public educational institutions in Oman. A significant proportion (about 90%) of the participants were elementary educators who mostly taught English Language. There was also a lesser but noteworthy percentage (around 10%) of instructors from other areas such as science, social studies, and mathematics. Geographically, the participants originated from Muscat, Salalah, and Ibra, providing a certain level of regional variation. Significantly, the vast majority of teachers had plenty of expertise, with most having been employed in Oman for more than 10 years.

Data Collection - Online Survey: Accessing the Educator Network

By leveraging the professional network, the survey tactically contacted educators of Oman via pertinent social media groups. These groups, which are focused on instructive methodologies and career advancement, provided a conducive environment to identify teachers who are likely to be interested in participation. By employing Google Forms, a user-friendly survey is made available to members of these online groups. Teachers' responses to the questionnaire were scaled using a 5-point Likert-type scale. The survey's statements were initially created to assess the learning tactics and academic motivation employed by school teachers (Instruments, N.D.). The questions were designed to investigate the frequency of agreement or disagreement among educators in order to comprehend the overall perspective that instructors have on this activity. These questions were classified using Bloom's (1956) ^[29] and Fink's (2003a) ^[8] taxonomies of learning to account for both hierarchical (Bloom *et al.*, 1956) and interdependent (Fink, 2003a) ^[8] cognitive skills. This combination enabled the incorporation of abilities beyond Bloom's (1956) ^[29] cognitive domain, such as learning how to learn, leadership, interpersonal skills, ethics, communication skills, character, tolerance, and adaptability. (Fink, 2003b) ^[8].

To ensure data security and participant privacy in the online survey, multiple procedures were implemented. This approach provided a highly effective means of enlisting an initial group of individuals who were already actively

involved in conversations and materials pertaining to education.

Paper-Based Survey: Direct distribution in focused settings

To address the shortcomings of depending just on online platforms, physical surveys were disseminated through selected outlets in the framework. This enabled direct targeting for educators in environments favourable to engagement.

Professional workshops involved distributing questionnaires to primary school English Language teachers from the public as well as private sectors, in collaboration with institutions like the University of Technology and Applied Sciences in Oman. This allowed for access to a large number of educators in a concentrated environment pertinent to the study's subject.

By utilising a mixed approach that focused on both online and physical communities, useful insights were collected from a varied group of Omani educators and tutors of various nationalities, while recognising the constraints of convenience sampling. It is crucial to acknowledge that the sample could be influenced by the particular makeup of the selected online groups and workshop attendees, perhaps leading to bias towards certain demographics or viewpoints. By carefully diversifying the network and selecting appropriate distribution channels, the aim is to reduce these restrictions and provide a fairly representative sample using the chosen sampling method. Future research could improve by using more diverse sampling strategies to enhance overall generalizability.

Data Analysis: Unveiling teachers' perspectives on critical thinking assessment

The current investigation employed an amalgamated approach of content analysis and thematic analysis to explore teachers' viewpoints on critical thinking evaluation in depth.

Initial Content Analysis: Recording Predetermined Categories

Based on the research questions and existing literature, a specific set of categories for assessing critical thinking was created. These categories included various elements, such as:

- The perceived significance of evaluating critical thinking.
- The problems and rewards linked to various assessment methodologies.
- Desirable attributes for effective critical thinking assessments by teachers.
- The influence of evaluation upon teaching and learning practices.

The open-ended responses were carefully examined, and the appropriate areas were categorised according to predetermined criteria. This first step established a fundamental comprehension of the data, emphasising often discussed subjects and issues across instructors.

Thematic Analysis: Revealing Emerging Themes

After the initial coding, the data underwent further analysis employing thematic analysis methods. This included:

- Thoroughly reviewing all encoded data.

- Identifying common themes that appeared in many comments, possibly extending beyond the predetermined categories.
- Consolidating and categorising codes into overarching themes that encapsulate the fundamental viewpoints conveyed by teachers.

Deciphering the Mosaic: Themes and Context

The motifs that were identified were further examined and interpreted in connection to the study inquiries. This entailed:

- Investigating the interrelatedness and importance of the themes.
- Placing the results in the context of previous studies on evaluating critical thinking.

Justification for an Integrated Strategy

This versatile strategy provided numerous benefits

- The study achieved comprehensiveness by employing both content analysis and thematic analysis, capturing pre-existing categories and emergent themes to offer a more deTailed and nuanced insight into instructors' opinions.
- Flexibility: Thematic analysis facilitated the investigation of unforeseen yet possibly beneficial subjects outside the original framework.
- Rigor: The research was strengthened by combining methodologies, which provided a multidimensional perspective on the data and increased the credibility of the conclusions.

This comprehensive analytical method guaranteed that the study encompassed all aspects of teachers' viewpoints on critical thinking evaluation, providing significant understanding of their opinions on its significance, difficulties, and preferred attributes.

Data Analysis, Results and Discussion

This study examined how frequently teachers agree or differ on evaluating critical thinking in the educational setting. Data collection included online and print surveys to acquire a variety of opinions from instructors in elementary schools in Oman. A series of one-sample t-tests were conducted to analyse the responses to different statements related to critical thinking abilities. The tests were performed with a significance level of 0.05. The following details depict the data gathered from different sources as per the research plan

Q.1 Educators and Critical Thinking Assessment in ESL Classes: A Statistical Insight

$T(101) = -1.369, P=.174$

Mean Difference = -0.147, 95% CI [-0.36, 0.07]

The statistical analysis indicated that the t-statistic ($T(101) = -1.369$) and p-value ($P=.174$) were not statistically significant, since they did not meet the customary limits for statistical significance. The calculated mean difference of -0.147 signifies the average difference in replies between individuals who expressed agreement and those who expressed disagreement with the given statement. The range within which the true population mean difference is anticipated to fall is encompassed by the 95% confidence interval (-0.36, 0.07). The inclusion of zero within this

interval serves to strengthen the lack of a statistically significant consensus among educators.

In more accessible language, it appears that a lack of conclusive data to indicate a prevailing majority or minority viewpoint among educators concerning the necessity of enhancing critical thinking abilities in English as a Second Language (ESL) learners. Although the aforementioned findings offer a quantitative insight into the viewpoints of teachers, they underscore the potential significance of integrating qualitative data as well. An examination of the underlying reasoning behind teacher reactions, as well as the identification of potential obstacles or areas of assistance through focus groups or in-depth interviews, may provide a more comprehensive comprehension of their perspectives on the cultivation of critical thinking skills among English as a Second Language (ESL) learners.

Q.2 Educators' views on assessing critical thinking in ESL classes: A quantitative exploration

$T(101) = -5.768, P=.000$
Mean Difference = -0.480, 95% CI [-0.65, -0.32]

The statistical findings provide a distinct depiction. The t-statistic ($T(101) = -5.768$) and a p-value ($P=.000$) suggest a strong agreement among educators regarding the significance of evaluating critical thinking abilities in ESL programmes. The p-value, which is significantly lower than the standard threshold of 0.05, indicates that we may reject the null hypothesis, which states that there is no difference in agreement. Subsequent examination uncovers a mean disparity of -0.480. The 95% confidence interval (-0.65, -0.32) effectively eliminates the value of zero, so strengthening the statistical significance of the observed difference and establishing a range in which the actual difference in population means is expected to lie with a 95% level of confidence.

The present statistical investigation presents compelling evidence indicating a strong consensus among educators about the evaluation of critical thinking skills in English as a Second Language (ESL) classrooms. These results indicate a broad acknowledgment of the significance of critical thinking in the ESL learning setting. Nevertheless, additional investigation might delve into the precise evaluation techniques favoured by instructors and any possible obstacles linked to integrating critical thinking assessment into ESL education.

Q.3 Teachers' Perceptions: Critical Thinking and Language Competency

$T(101) = -2.649, P=.009$
Mean Difference = -0.255, 95% CI [-0.45, -0.06]

The statistical findings present a persuasive perspective. The obtained t-statistic ($T(101) = -2.649$) and the calculated p-value ($P=.009$) provide evidence of a statistically significant disparity in the responses provided by the teachers. Significantly, the p-value, which is significantly lower than 0.05, enables us to reject the null hypothesis, which states that there is no difference in opinion. Put simply, the data indicates that teachers, on average, possess a distinct perspective on this matter, and it is improbable that it is a result of random occurrence.

Subsequent examination uncovers a mean disparity of -0.255. Although the precise scale employed is not specified, a negative result implies that educators, on average, obtained lower scores on a scale that likely signifies disagreement with the statement (given that a higher score indicates greater agreement). The inclusion of the 95% confidence interval (-0.45, -0.06) provides additional support for the assertion of a statistically significant disparity. Given that the entire gap is situated below zero, it may be inferred that there exists a prevailing inclination towards concurrence with the statement, so indicating that educators hold the belief that critical thinking exerts a beneficial influence on language proficiency.

Q.4 Educators and Critical Thinking Tests: Fostering Autonomy and Self-Direction

$T(101) = -4.498, P=.000$
Mean Difference = -0.392, 95% CI [-0.57, -0.22]

The obtained t-statistic ($T(101)=-4.498$) and the corresponding p-value ($P=.000$) provide strong evidence for a statistically significant disparity in the responses provided by teachers. Significantly, the p-value, which is significantly lower than 0.05, enables us to reject the null hypothesis, which states that there is no difference in opinion. Upon further examination, it is evident that there exists a mean difference of -0.392. This negative figure indicates that educators, on average, obtained lower scores on a scale that is likely indicative of disagreement with the statement. It is important to note that a higher score on the scale suggests a stronger level of agreement. The inclusion of the 95% confidence interval (-0.57, -0.22) provides additional support for the assertion of a statistically significant disparity. Given that the entire interval is situated below zero, it can be inferred that there is a prevailing inclination towards concurrence with the given assertion.

The results obtained from this investigation indicate that educators hold a significant perception of the correlation between the assessment of critical thinking skills and the cultivation of student autonomy and self-direction. The observed alignment can be attributed to various sources. Students are empowered to take ownership of their learning process through the development of critical thinking abilities, including analysis, evaluation, and problem-solving. Through active participation in critical thinking exercises and thoughtful evaluation of their performance in assessments, students have the potential to cultivate a heightened feeling of autonomy and enhance their ability to effectively navigate obstacles and make well-informed choices regarding their learning.

Q.5 Educators' views on critical thinking assessment: Fostering autonomy and self-directed learning

$T(101) = -3.374, P=.001$
Mean Difference = -0.304, 95% CI [-0.48, -0.13]

The obtained t-statistic ($T(101)=-3.374$) and the corresponding p-value ($P=.001$) provide strong evidence of a statistically important disparity in the responses of educators. Given that the p-value is significantly lower than the conventional threshold of 0.05, we can confidently reject the null hypothesis, which posits that there is no disparity in

educator perspectives. A negative mean difference of -0.304 may first be perceived as a manifestation of disagreement, under the assumption that a higher score signifies a greater degree of agreement. Nevertheless, the crucial aspect to consider is the extent of the average disparity. The significance of a negative value might vary based on the range of the scale. The confidence interval (-0.48, -0.13) represents the range within which the actual difference in population means is expected to lie with a 95% level of confidence. The observation that the entire interval is below zero serves to strengthen the inference of a statistically significant disparity.

Depending on the conducted analysis, it might be inferred that educators have a notable perception regarding the correlation among the assessment of critical thinking skills and the cultivation of creativity. According to the statistics, a significant proportion of educators hold the belief that the evaluation of critical thinking abilities can provide favourable outcomes in terms of fostering student development in the domain of creativity.

Q.6 Educational professionals perceive critical thinking assessment as a means to enhance problem-solving abilities

$T(101) = -3.642, P=.000$
 Mean Difference = -0.294, 95% CI [-0.45, -0.13]

The obtained t-statistic ($T(101) = -3.642$) and the corresponding p-value ($P=.000$) provide strong evidence of a statistically significant disparity in the responses of educators. Educators, on average, possess a distinct perspective regarding the correlation between critical thinking assessment and problem-solving abilities, and it is improbable that this correlation is a result of mere coincidence. Educators prioritize the concept of positive impact. The mean difference (-0.294) and the 95% confidence interval (-0.45, -0.13) are important, albeit the precise scale employed is not specified. Despite being negative on a possibly contradictory scale, the main point to remember is the extent and the range of certainty. Given that the entirety of the assurance interval is situated below zero, it indicates a prevailing inclination towards concurrence with the given proposition. Put simply, educators generally concur that assessing critical thinking has a beneficial effect on students' problem-solving skills.

The results indicate that most instructors hold the belief that evaluating critical thinking abilities can positively impact students' progress in problem-solving. The examinations evaluate critical thinking skills, including analysis, assessment, and logical reasoning, which are essential elements of successful problem-solving. By participating in these procedures during evaluations, students may enhance their problem-solving repertoire and cultivate a more methodical approach to addressing difficulties.

| | Test Value | | | | | |
|---|------------|-----|-----------------|-----------------|---|-------|
| | T | DF | Sig. (2-Tailed) | Mean Difference | 95% Confidence interval of the difference | |
| | | | | | Lower | Upper |
| Do teachers agree that ESL (English as a second language) students need to strengthen their critical thinking abilities? | -1.369 | 101 | 0.174 | -0.147 | -0.36 | 0.07 |
| Do educators concur that tests of critical thinking abilities should be assessed in ESL classes? | -5.768 | 101 | 0 | -0.48 | -0.65 | -0.32 |
| Do teachers think critical thinking abilities can improve language competency among students? | -2.649 | 101 | 0.009 | -0.255 | -0.45 | -0.06 |
| Do educators believe that testing critical thinking abilities can aid students in developing greater autonomy and self-direction? | -4.498 | 101 | 0 | -0.392 | -0.57 | -0.22 |
| Do teachers think that evaluating students' critical thinking abilities can encourage their creativity? | -3.374 | 101 | 0.001 | -0.304 | -0.48 | -0.13 |
| Do teachers believe that testing students' critical thinking abilities can enhance their capacity for problem-solving? | -3.642 | 101 | 0 | -0.294 | -0.45 | -0.13 |

Q.7 Educators believe testing critical thinking skills benefits collaboration and teamwork (Among Students)

$T(101) = -3.313, P=.001$
 Mean Difference = -0.294, 95% CI [-0.47, -0.12]

The derived t-statistic ($T(101) = -3.313$) and the corresponding p-value ($P=.001$) provide evidence of a statistically significant disparity in the responses of educators. This implies that instructors, on average, possess a distinct perspective regarding this correlation, and it is improbable that it is a result of mere coincidence. The mean difference of -0.294 may first be perceived as a manifestation of disagreement, as it assumes that a higher score signifies a greater degree of agreement. Nevertheless, the crucial aspect to consider is the extent of the disparity in means and the associated confidence interval. The absolute

value of the 95% confidence interval (-0.47, -0.12) is completely negative. This observation indicates a prevailing inclination towards concurrence with the assertion. It is widely held among educators that the assessment of critical thinking abilities has a beneficial effect on fostering collaboration and teamwork among pupils.

The results indicate that a significant proportion of instructors hold the belief that evaluating critical thinking abilities might yield favourable outcomes in terms of fostering student growth in the domains of collaboration and teamwork. When engaging in collaborative critical thinking exams, students are required to engage in the analysis of material, evaluation of ideas, and collaborative problem-solving. This method promotes the exploration of diverse viewpoints, facilitates efficient communication, and fosters mutual learning, all of which are crucial for achieving successful collaboration.

Q.8 Educators see critical thinking assessment as a key to learner-centered ESL classrooms

$T(101) = -5.969, P=.000$

Mean Difference = -0.490, 95% CI [-0.65, -0.33]

The obtained t-statistic ($T(101) = -5.969$) and the corresponding p-value ($P=.000$) provide strong evidence of a statistically significant disparity in the responses of educators. The p-value, which is significantly lower than the conventional threshold of 0.05, enables us to reject the null hypothesis, which states that there is no difference in opinion. Put simply, the data indicates that educators, on average, possess a robust perspective on this matter, and it is improbable that this is a result of random occurrence. The presence of a negative mean difference (-0.490) shows that instructors, on average, obtained lower scores on a scale that is often indicative of disagreement with the statement, assuming that a higher score signifies stronger agreement. Nevertheless, the crucial point to consider is the extent of the average disparity. The significance of a negative value might vary based on the range of the scale. The inclusion of the 95% confidence interval (-0.65, -0.33) provides additional support for the assertion of a statistically significant disparity.

The results of this investigation indicate that a significant proportion of educators hold the belief that there exists a robust correlation between the assessment of critical thinking skills and the cultivation of a learner-centered atmosphere for English as a Second Language (ESL) learners. The observed alignment can be attributed to various sources. Students are empowered to take ownership of their learning process through the development of critical thinking abilities, including analysis, evaluation, and problem-solving. ESL learners can enhance their awareness of agency in acquiring a language by participating in critical thinking exercises and evaluating their performance in examinations.

Q.9 Educators believe critical thinking assessment offers valuable feedback for students

$T(101) = -3.494, P=.001$

Mean Difference = -0.324, 95% CI [-0.51, -0.14]

The calculated t-statistic ($T(101) = -3.494$) and the corresponding p-value ($P=.001$) provide strong evidence of a statistically significant disparity in the responses of educators. The p-value, which is significantly lower than the conventional threshold of 0.05, enables us to reject the null hypothesis, which states that there is no difference in opinion. A minuscule mean difference of -0.324 may first be perceived as a manifestation of disagreement, under the assumption that a higher score signifies a greater degree of agreement. The inclusion of the 95% confidence interval (-0.51, -0.14) provides additional support for the assertion of a statistically significant disparity. Given that the entire interval is situated below zero, it can be inferred that there is a prevailing inclination towards concurrence with the given assertion.

Through the assessment of critical thinking abilities, instructors can acquire valuable knowledge about a pupil's ability to scrutinise material, resolve issues, and construct logical justifications. Subsequently, this input can be

utilised to pinpoint students' strengths and areas in need of improvement, enabling instructors to customise their education effectively.

Q.10 Educators see potential in critical thinking assessment for social-emotional learning

$T(101) = -2.327, P=.022$

Mean Difference = -0.206, 95% CI [-0.38, -0.03]

The obtained t-statistic ($T(101) = -2.327$) and the corresponding p-value of .022 provide evidence of a highly significant disparity in the responses of educators. When the p-value surpasses the conventional threshold of 0.01, the mean difference of -0.206 is negative, indicating a lukewarm attitude on a scale that arguably represents disagreement (assuming higher scores imply stronger agreement). The inclusion of the 95% confidence interval (-0.38, -0.03) provides additional support for the hypothesis of a relationship. Given that the entire interval is situated below zero, it implies a little inclination towards concurrence with the assertion.

The evaluation of critical thinking skills, including analysis, evaluation, and problem-solving, can have implications for the development of social-emotional skills. Through active participation in these procedures, students can enhance their communication abilities by articulating their thinking, gaining the ability to contemplate diverse viewpoints, and adeptly manoeuvring through social circumstances.

Q.11 Educators view critical thinking assessment as a booster for academic performance and study skills

$T(101) = -3.974, P=.00$

Mean Difference = -0.392, 95% CI [-0.59, -0.20]

The data gathered t-statistic ($T(101) = -3.974$) and the corresponding p-value ($P=.000$) provide strong evidence of a statistically significant disparity in the responses of educators. A negative mean difference of -0.392 may first be perceived as a manifestation of disagreement, under the assumption that a higher score signifies a greater degree of agreement. The confidence interval (-0.59, -0.20) at a 95% level is completely below zero, indicating a prevailing inclination towards concurrence with the given statement. According to this analysis, instructors hold a firm belief that assessing critical thinking skills has a beneficial effect on students' academic performance and study habits.

Q.12 No clear consensus among educators on identifying strengths and weaknesses through critical thinking assessment

$T(92) = 0.204, P=.839$

Mean Difference = 0.043, 95% CI [-0.38, 0.46]

The obtained p-value of 0.839, which exceeds the conventional significance level of 0.05, indicates that the observed disparity in instructor responses is more likely attributable to random variation rather than a genuine pattern. The available information does not strongly support the notion that instructors tend to tilt favour agreement or disagreement. The average difference (0.043) is insignificant, irrespective of the particular scale employed.

The 95% confidence interval (-0.38, 0.46) includes both estimates that are positive and estimates that are negative. This suggests a significant level of ambiguity in the

perspectives of instructors. The utility of critical thinking examinations in identifying strengths and shortcomings may vary among educators.

| Test Value | | | | | | |
|--|--------|-----|-----------------|-----------------|--|--|
| | T | DF | Sig. (2-Tailed) | Mean Difference | 95% Confidence interval of the difference Lower | 95% Confidence interval of the difference Upper |
| Do educators believe that encouraging students to collaborate and work in teams by testing their critical thinking abilities? | -3.313 | 101 | 0.001 | -0.294 | -0.47 | -0.12 |
| Do educators believe that evaluating critical thinking abilities can help ESL teachers adopt a more learner-centered approach? | -5.969 | 101 | 0 | -0.49 | -0.65 | -0.33 |
| Do educators concur that evaluating students' critical thinking abilities may give them useful feedback? | -3.494 | 101 | 0.001 | -0.324 | -0.51 | -0.14 |
| Do teachers think that monitoring students' critical thinking abilities might help them develop socially and emotionally? | -2.327 | 101 | 0.022 | -0.206 | -0.38 | -0.03 |
| Do teachers believe that testing critical thinking abilities can enhance students' academic achievement and study habits? | -3.974 | 101 | 0 | -0.392 | -0.59 | -0.2 |

Q.13 Educators recognize language barrier as a challenge in assessing critical thinking

T(101) = 2.315, P=.023
Mean Difference = 0.304, 95% CI [0.04, 0.56]

The measured p-value of 0.023 falls below the conventional significance level of 0.05, suggesting a statistically significant disparity in the responses provided by educators. If the mean difference on an index is affirmative (0.304), it is likely that there is disagreement with the assertion. This assumption is based on the belief that higher scores imply stronger agreement with the challenge. All values within the 95% confidence interval (0.04, 0.56) are completely above zero. This further supports the idea that instructors typically perceive the language barrier as a difficulty in evaluating critical thinking skills.

Students who have a poor command of the language used for teaching may encounter difficulties in successfully expressing their thoughts and reasoning abilities during critical thinking evaluations. This might pose a significant challenge for educators in appropriately evaluating students' critical thinking skills.

Q.14 Evaluating Critical Thinking: A mixed bag for educators

T(101) = 0.305, P=.761
Mean Difference = 0.039, 95% CI [-0.22, 0.29]

The extracted p-value of 0.761 indicates that the observed disparity in teacher responses is likely attributable to random variation rather than a genuine trend. There is a lack of compelling data to support the notion that teachers universally perceive it as either time-consuming or non-time-consuming. The observed mean difference of 0.039 indicates a minimal level of diversity in the average instructor opinion, irrespective of the particular scale employed. Interval of confidence (-0.22, 0.29); demonstrating a lack of solid guidance in teacher opinion, the confidence interval encompasses both positive and negative values.

The investigation indicates that teachers have varying perspectives regarding the amount of time needed to assess critical thinking skills.

Certain educators may perceive the evaluation of critical thinking as a relatively uncomplicated task during instructional sessions and tasks, whilst others may perceive the development and evaluation of structured assessments as a more laborious endeavour.

Q.15 Educators see critical thinking assessment as a booster for global citizenship

T(101) = -4.441, P=.000
Mean Difference = -0.392, 95% CI [-0.57, -0.22]

The obtained t-statistic (T(101) = -4.441) and the corresponding p-value (P=.000) provide strong evidence of a statistically significant disparity in the responses of instructors. A mean difference of -0.392 indicates a statistically significant acceptance with the statement, implying that higher scores are indicative of stronger agreement. The 95% confidence interval (-0.57, -0.22) is completely negative. This finding supports the idea that instructors generally concur that assessing critical thinking skills plays a role in fostering a broader global perspective among pupils.

Recommendations for fostering critical thinking and student development

The present study investigated the viewpoints of instructors on different facets of assessing students' critical thinking skills. The results provide significant insights that could be effectively applied to generate practical recommendations. The significance of critical thinking tests in fostering student learning is widely acknowledged by educators. Through the integration of meticulously crafted evaluations, educators may motivate children to cultivate problem-solving abilities, augment teamwork, and potentially nurture social-emotional growth.

Addressing the Language Gap: The presence of a language barrier is a significant obstacle in the evaluation of critical thinking abilities. In order to guarantee equitable and precise assessment for every student, educators should investigate alternative evaluation techniques and contemplate adjustments that cater to language constraints in multilingual classrooms.

| | Test Value | | | | | |
|---|------------|-----|-----------------|-----------------|---|---|
| | T | DF | Sig. (2-Tailed) | Mean Difference | 95% Confidence interval of the difference | 95% Confidence interval of the difference |
| | | | | | Lower | Upper |
| Do educators concur that evaluating students' critical thinking abilities can help them determine their strengths and weaknesses? | 0.204 | 92 | 0.839 | 0.043 | -0.38 | 0.46 |
| Do educators believe that the language barrier makes it difficult to evaluate critical thinking abilities? | 2.315 | 101 | 0.023 | 0.304 | 0.04 | 0.56 |
| Do teachers believe that evaluating critical thinking abilities might take time? | 0.305 | 101 | 0.761 | 0.039 | -0.22 | 0.29 |
| Do educators think that testing students' critical thinking abilities can aid in the development of a more global outlook? | 4.441 | 101 | 0 | -0.392 | -0.57 | -0.22 |

Utilise time-saving strategies for investment: Although there is no definitive agreement on the amount of time needed, educators could still gain advantages by investigating methods to simplify the evaluation of critical thinking skills. Enrolling in educational programmes that specifically target effective assessment methods could be really beneficial.

Enhancing evaluation methods for identifying areas of proficiency and limitations: There exists a range of perspectives among educators regarding the efficacy of critical thinking assessments in identifying both the abilities and shortcomings of students. Additional investigation is required in order to formulate precise evaluation techniques that offer educators a more comprehensive understanding of individual students' aptitudes in critical thinking and areas that require enhancement.

The implementation of critical thinking assessment is widely regarded by educators as a valuable tool in cultivating a global perspective among students. Critical thinking assessments can be essential in equipping students with the skills to be well-informed and actively involved global citizens by promoting the analysis of information from various perspectives and the exploration of intricate problems.

By incorporating these suggestions, educators have the opportunity to harness the potential of critical thinking assessment in order to foster a comprehensive learning encounter that not merely enhances academic performance but also fosters critical thinking, collaboration, social-emotional growth, and a global outlook among students.

Limitations and nuances revealed in educator survey on critical thinking assessment

This research examined the viewpoints of instructors regarding the evaluation of critical thinking skills using a survey tool that included both closed-ended and open-ended questions. Although the closed-ended inquiries yielded significant statistical data from a varied sample of educators, it is necessary for additional investigate certain restrictions and areas for clarification.

Sample Size and Generalizability: The sample size of educators (N=101) provides a suitable initial reference. Nevertheless, an additional extensive sample that encompasses a wider range of geographic and demographic factors could offer a more universally applicable depiction of educator viewpoints in various educational settings.

Comparative analysis of closed-ended responses and open-ended nuances: The adoption of closed-ended

questions facilitated the subsequent statistical analysis, while the inclusion of open-ended questions offered a valuable insight into the intricate nature of educators' perspectives. Additional investigation employing comprehensively interviews or focus groups could further explore the underlying reasons for educators' reactions and reveal a more comprehensive comprehension of their viewpoints regarding the evaluation of critical thinking.

The poll did not explore the precise assessment procedures that educators presently employ. Further investigation into the efficacy of diverse assessment methodologies in attaining different objectives, such as fostering collaboration and identifying strengths and flaws, will yield significant contributions.

Significant Discoveries with Potential for Enhancement:

Notwithstanding these constraints, the research presents persuasive results, there is a widespread agreement among educators regarding the advantageous effects of critical thinking exams on student learning. These tests are commonly regarded as facilitating the acquisition of problem-solving abilities, fostering teamwork, and potentially enhancing social-emotional growth.

Uncertainties surrounding the identification of strengths and weaknesses:

Although educators acknowledge the significance of critical thinking examinations, there is ongoing debate regarding their efficacy in accurately identifying the strengths and weaknesses of students. Additional investigation is required in order to formulate precise evaluation techniques that offer educators a more comprehensive understanding of individual students' aptitudes in critical thinking and areas that require enhancement.

Challenge posed by the language barrier:

The language barrier has been regularly recognised by educators as a substantial obstacle in the assessment of critical thinking skills. It is imperative to devise solutions to tackle this difficulty and guarantee equitable and precise assessment for every student.

Promoting a global perspective: Educators assert that evaluating critical thinking skills might aid in cultivating a global perspective among students. These evaluations can have a positive impact on educating pupils to be well-informed and involved global citizens by promoting the analysis of multiple opinions and the exploration of complicated issues.

Expanding the scope of the study: The present study

establishes a foundation for a more comprehensive comprehension of critical thinking evaluation within the educational domain through the use of a varied educator survey and an open-ended investigation. Subsequent investigations may expand upon the aforementioned results by employing larger and more diverse samples of educators. In order to delve into the intricacies of educator experiences, qualitative research methodologies such as interviews and focus groups are adopted. This study aims to examine the efficacy of various evaluation strategies in attaining predetermined learning outcomes. Creating focused evaluation methods to more accurately identify the areas of proficiency and areas for improvement in students. Instructors can harness the potential of critical thinking assessment to foster a learning environment that promotes academic achievement, critical thinking, collaboration, social-emotional development, and a global perspective in students by implementing these recommendations and conducting additional research.

Conclusion

Incorporating critical thinking evaluation in ESL classrooms is essential. While defining it can be challenging, educators need methods to assess this crucial skill. This study lays the groundwork for further exploration through surveys and open-ended investigations. Future research can utilize larger samples and qualitative methods like interviews to delve deeper into educator experiences. Ultimately, the goal is to refine evaluation strategies and cultivate a learning environment that fosters not just language acquisition, but critical thinking, collaboration, and well-rounded student development.

References

- Al-Kindi NS, AL-Mekhlafi AM. The Practice and Challenges of Implementing Critical Thinking Skills in Omani Post-basic EFL Classrooms. *English Language Teaching*. 2017 Nov 7;10(12):116. Available from: <https://doi.org/10.5539/elt.v10n12p116>
- Alkharusi HA, Al Sulaimani H, Neisler O. Predicting Critical Thinking Ability of Sultan Qaboos University Students. *International Journal of Instruction*. 2019;12(2):491-504.
- Asgharheidari F, Tahriri A. A survey of EFL teachers' attitudes towards critical thinking instruction. *Journal of Language Teaching and Research*. 2015;6(2):388.
- Bloom BS, Engelhart MD, Furst EJ, Hill WH, Krathwohl DR. Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain. New York: David McKay Company; c1956.
- Brookfield S. *Teaching for critical thinking: Tools and techniques to help students question their assumptions*. San Francisco: Jossey-Bass; c2012.
- Browne M, Keeley S. *Asking the right questions: a guide to critical thinking (9th Ed.)*. Upper Saddle River, New Jersey: Pearson Education, Inc.; c2010.
- Davies M. Critical thinking and the disciplines reconsidered. *Higher Education Research & Development*. 2013;32:529-544.
- Fink DL. *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses*. San Francisco: Jossey-Bass; c2003.
- Hohmann JW, Grillo MC. Using critical thinking rubrics to increase academic performance. *Journal of College Reading and Learning*. 2014;45(1):35-51. DOI: 10.1080/10790195.2014.94955
- Lee IPL, Chau Wootton Chang. Disposition towards critical thinking: a study of Chinese undergraduate nursing students. *Journal of Advanced Nursing*. 2000;32(1):84-90. DOI: 10.1046/j.1365-2648.2000.01417.x
- Karagol I, Bekmezci S. Investigating academic achievements and critical thinking dispositions of teacher candidates. *Journal of Education and Training Studies*. 2015;3(4):86-92. DOI: 10.11114/jets.v3i4.834
- Liang W, Fung D. Fostering critical thinking in English-as-a-second-language classrooms: Challenges and opportunities. *Thinking Skills and Creativity*. 2021;39:100769.
- Li L. Critical thinking from the ground up: teachers' conceptions and practice in EFL classrooms. *Teachers and Teaching*; c2023, p. 1-23.
- Marin MA, Pava DLL. Conceptions of critical thinking from university EFL teachers. *English Language Teaching*. 2017;10(7):78-88.
- Mehta SR, Al-Mahrooqi R. Can Thinking be Taught? Linking Critical Thinking and Writing in an EFL Context. *RELC Journal*. 2014 Dec 4;46(1):23-36. Available from: <https://doi.org/10.1177/0033688214555356>
- Ministry of Education and the World Bank. *Education in Oman: The drive for quality*. Oman: Author; 2012.
- Phan H. Multiple regression analysis of epistemological beliefs learning approaches and self-regulated learning. *Electronic Journal of Research in Educational Psychology*. 2008;6(1):157-184.
- Quirk TJ. Book Reviews: Organisation for Economic Co-operation and Development. *Long-Range Policy Planning in Education*. Paris, France: Author 1973. 391 pp. \$7.75. *American Educational Research Journal*. 1975;12:97-99.
- Slavin RE. Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychology*. 1996;21:43-69. doi:10.1006/ceps.1996.0004
- Sodoma B, Else D. Job satisfaction of Iowa public school principals, *The Rural Educator*. 2009.
- Times News Service. Oman's population passes landmark figure. *Times of Oman*; c2014 Apr 23. Available from: <http://www.timesofoman.com/News/32830/Article-Oman%E2%80%99s-population-passes-landmark-figure>
- University of Massachusetts, Boston.
- Van Meter P, Stevens RJ. The role of theory in the study of peer collaboration. *Journal of Experimental Education*. 2000;69(1):113-127. DOI: 10.1080/00220970009600652
- Wade C, Tavis C. *Psychology*. New York: Harper & Row; c1987.
- Wass R, Harland T, Mercer A. Scaffolding critical thinking in the zone of proximal development. *Higher Education Research & Development*. 2011;30(3):317-328. DOI: 10.1080/07294360.2010.489237
- Williams RL, Worth SL. The relationship of critical thinking to success in college. *Inquiry: Critical*

- Thinking across the Disciplines. 2001;21(1):5-16. DOI: 10.5840/inquiryctnews200121123
27. Yuan R, Yang M, Lee I. Preparing pre-service language teachers to teach critical thinking: Can overseas field school experience make a difference? *Thinking Skills and Creativity*. 2021 Jun;40:100832. Available from: <https://doi.org/10.1016/j.tsc.2021.100832>
 28. Zou'bi RA. The impact of media and information literacy on acquiring the critical thinking skill by the educational faculty's students. *Thinking Skills and Creativity*. 2021;39:100782.
 29. Bloom BS, Engelhart MD, Furst EJ, Hill WH, Krathwohl DR. *Handbook I: cognitive domain*. New York: David McKay; c1956.