

Literature Review on Student-led Workshop titled
Enhancing Faculty Assessment Skills: Developing Quality MCQs and
SAQs

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Abstract

ABSTRACT:

Background: Assessment literacy is a critical yet underdeveloped competency among faculty in health professions education, directly shaping the quality, validity, and reliability of tools used to measure student learning, particularly Multiple-Choice Questions (MCQs) and Short-Answer Questions (SAQs).

Objective: To examine current evidence on faculty assessment practices, with particular focus on principles of high-quality MCQ and SAQ construction, to establish the rationale for a student-led faculty workshop.

Methodology: A narrative review of literature published between 2021 and 2026 was conducted across Google Scholar, PubMed, ScienceDirect, and ERIC databases, using keywords related to assessment literacy, faculty development, and student-led learning.

Findings: The review identifies a persistent gap in structured faculty training for assessment design, inconsistent application of principles such as outcome alignment, cognitive-level targeting, plausible distractors, and standardized marking criteria, and limited institutional support for ongoing professional development. Collaborative, reflective, and practice-based workshops are effective at strengthening faculty assessment skills, while student-led and student-centered approaches offer additional benefits for engagement, critical thinking, and leadership development. Notably, few studies—especially within Pakistan and other developing countries—combine student-led facilitation with faculty assessment training in nursing and health professions education.

Conclusion: This gap underscores the rationale for the present student-led workshop, which aims to build faculty competency in developing high-quality MCQs and SAQs through a collaborative, evidence-informed approach.

INTRODUCTION:

Assessment is essential in health professions education as it serves to measure the learning outcomes, clinical reasoning and use of knowledge acquired in the academic and clinical setting (Schneid et al, 2024; Singh et al, 2024). Multiple Choice Questions (MCQs) and Short Answer Questions (SAQs) are popular assessment techniques that can measure factual knowledge and higher-order cognitive skills (Singh et al., 2024). But, the feasibility of such assessment tools is contingent upon the quality, validity and connection to the desired learning outcomes (Schneid et al., 2024). According to the literature, teachers are not necessarily trained in assessment design, they do not create their own assessment items and often they do not write assessment items that focus on critical thinking and problem-solving skills, but on factual recall (Pastore, 2023; Schneid et al., 2024). Further studies indicate that high-quality MCQs and SAQs must be well-organized, cognitively aligned, have plausible distractors, and have uniform marking rules to ensure fairness, reliability, and meaningful assessment of student learning (Gottlieb et al., 2023; Ali & Zahra, 2024; Gjika et al., 2024). Although assessment literacy is known to be crucial, there is a lack of faculty professional learning opportunities and institutional support, and a reliance on traditional assessment practices (Inayat, 2022; Miller, 2025).

Faculty development workshops are also shown to be effective in developing instructional and assessment skills of teachers by adopting a collaborative, reflective, and practice-based approach (Ahmed et al., 2025; Saroyan & Amundsen, 2023). Training activities based on the workshops have been found to enhance teachers' capacity to create valid and reliable assessment tools, and foster active learning and

reflective educational practices (Miller et al., 2022). In addition, recent research data has shown that learning methods that focus on the students' learning process are effective in enhancing the students' engagement, critical thinking, leadership skills, and understanding of assessment processes (Jagzape & Jagzape, 2022; Shrivastava & Nurhidayati, 2024). Student-centered assessment processes also promote the interaction between the teaching and evaluation process and between learning and evaluation processes, which enhances the learning environment for students (Ross & Rajkoomar, 2024). There is however, limited research on student-led workshops that are targeted towards faculty assessment development in nursing and health professions education, especially in Pakistan and other developing countries (Parveen & Mughal, 2022). Hence, the current workshop was conceived to fill these gaps by enhancing the competencies of the faculty in creating good MCQs and SAQs using collaborative and evidence-based approach of learning.

SEARCH STRATEGY:-

A narrative literature review approach was implemented to understand the evidence about student-led workshops, faculty assessment literacy, faculty development practices in higher education and health professions education, and the development of multiple-choice questions and short answer questions (MCQ and SAQ). Electronic searches of literature were conducted through Google Scholar, PubMed, ScienceDirect, and ERIC databases.

"Students-led workshops", "assessment literacy", "faculty development", "MCQ development", "SAQ construction", "assessment practices", "higher education", "medical education", and "nursing education" were the keywords used during the search process. Articles were selected from the last four years (2021-2026) to capture current and relevant evidence. Literature on quantitative, qualitative, mixed-method, review and conceptual research on faculty assessment practices and student-centered learning approaches to these topics were reviewed. The articles that were not related to the assessment development or educational practice of faculty were excluded. Selected literature was critically analyzed and themed according to common themes, problems and evidence-based educational practices.

THEMATIC REVIEW OF LITERATURE:

THEME # 01: ASSESSMENT LITERACY IN FACULTY:-

Assessment literacy is seen as a key competency for teachers, since it helps them develop, carry out and evaluate assessment methods that are valid and reliable based on desired learning outcomes (Pastore, 2023). Pastore (2023) conducted a systematic review to pinpoint the components of teacher assessment literacy: an understanding of assessment principles, interpretation of student performance, and the creation of effective assessment tools that enhance student learning. The review also highlighted

that a lack of assessment literacy is frequently followed by poor assessment practices, poor alignment to curriculum objectives, and limited assessment of higher-order cognitive skills (Pastore, 2023). Likewise, Parveen and Mughal (2022) observed that the knowledge and skills of many teachers in Punjab regarding the planning, construction, and interpretation of assessment were found to be inadequate, which highlights the need of providing structured professional development programs to strengthen competencies related to assessment.

The study also revealed that the quality of assessments has a significant impact on educational outcomes, especially in countries implementing educational reform, as mentioned by Adeniyi et al. (2024). Adeniyi et al. (2024) noted that better student achievement resulted from reforms that emphasized teacher competency and assessment practices, provided teachers with training in assessment design and evaluation methods. Literature underscores the importance of assessment literacy to enhance the quality of education and student learning. The findings in this study justify the rationale of this student-led workshop in which faculty will learn how to create good quality MCQs and SAQs by collaborative and structured learning.

THEME # 02: PRINCIPLES OF HIGH-QUALITY MCQ DEVELOPMENT: -

Multiple Choice Questions (MCQs) have been shown to be effective assessment tools when well designed for the assessment of knowledge, application and critical thinking in health professions education (Gottlieb et al., 2023). There are several principles of good MCQs that have been emphasized in literature, namely, they should reflect intended learning outcomes, be with clear and focused stem, have one best answer and include plausible distractors to ensure validity and reliability (Ali & Zahra, 2024). In addition, it is noted that the quality and fairness of MCQs can be enhanced through blueprinting, avoiding item-writing mistakes, and routine review cycles (Gottlieb et al., 2023; Ali & Zahra, 2024).

Touissi et al. (2022) found that learners' learning is deepened through the creation of multiple-choice question, which also makes them work hard to learn and gain critical thinking. It was found that the cognitive processing by both educators and students during the construction of MCQs improves learning outcomes and enhances cognitive processing (Touissi et al., 2022). In general, the literature indicates that the key for creating a quality MCQ is to have some technical assessment knowledge and align with cognitive frameworks to evaluate the student's learning in a meaningful way. The results endorse the purpose of the present student led workshop, which is to enhance the skills of faculty to prepare high-quality MCQs by using collaborative and evidence-based training methods.

THEME # 03: SAQ DEVELOPMENT AND MARKING CHALLENGES:-

In health professions learning, short answer questions (SAQs) are widely employed to evaluate students' knowledge beyond simple memorization, including their conceptual knowledge, clinical reasoning, and ability to apply knowledge to practical scenarios (Singh et al., 2024). Miller's Pyramid of Clinical Competence is useful to use with SAQs for the "Knows" and "Knows How" sections because learners must structure and apply knowledge to the written answer. It is emphasized in literature that to be effective, SAQs need to be clear, focused, aligned to learning outcomes, and marked using standardized marking procedures to ensure fairness and reliability (Gjika et al., 2024). Furthermore, Singh et al. (2024) found faculty view scenario-based SAQs as useful tools for cultivating critical thinking and clinical reasoning, though there are concerns about cognitive alignment, the clarity of questions, and consistent scoring.

Abdulghani et al. (2021) proved the effectiveness of faculty development programs for improving the competence of the teachers to write good SAQs by strengthening their knowledge of the principles of item writing and marking criteria. For the same reason, Gjika et al. (2024) noted that the absence of the same criteria for marking SAQs and the absence of a uniform set of rubrics negatively impact the reliability of the assessment and the quality of education. While Bibi and Marwat (2026) centralised their training outcomes, their findings also confirmed the training goal of structured assessment and guided training approaches in enhancing performance outcomes. In general, the literature indicates that although SAQs hold educational potential, professors are faced with challenges in creating clear, cognitively aligned SAQs and objective scoring systems. The results are in line with the justification of the current student-led workshop to develop the faculty skills in the construction and scoring of SAQs using collaborative and evidence-based methods.

THEME # 4: GAPS IN FACULTY ASSESSMENT PRACTICES: -

The literature is consistently found to reveal that there are significant gaps in faculty assessment practices, such as assessment literacy, alignment with learning outcomes and implementation of effective classroom assessment strategies (Inayat, 2022; Mussawy et al., 2021). Inayat (2022) found that many teachers felt there was a lack of structured professional development focused on the design and evaluation of assessments. Faculty members also pointed out various shortcomings, including the lack of institutional support, inadequate training, and the use of traditional methods of assessment, that negatively impacted on the quality of student assessment (Inayat, 2022). Likewise, Mussawy et al. (2021) found disparities in the assessment practices of the classroom, limited feedback systems, and disparities between the assessment practices and student learning needs. The study also noted that students and faculty

have been concerned about classroom assessments in terms of fairness, transparency, and effectiveness (Mussawy et al., 2021).

Miller (2025) also strongly claimed that the assessment practices in the academic world often focus more on fulfilling institutional requirements than actual assessment of students' learning outcomes. Assessment processes can sometimes be seen as a burden by faculty because they lack clarity about the processes, have too many expectations on administrators, and lack practical training in assessment (Miller, 2025). The literature as a whole shows that faculty assessment problems are closely linked to the lack of professional development opportunities, a lack of institutional support and a lack of evidence-based assessment principles (Inayat, 2022; Miller, 2025). The present student-led workshop is justified by these findings as it aims to improve the faculty skills by providing collaborative and practice-centered training approaches for creating high-quality Multiple Choice Questions (MCQs) and Short Answered Questions (SAQs).

THEME # 05: EFFECTIVENESS OF FACULTY DEVELOPMENT WORKSHOPS: -

Faculty Development Workshops are well-known effective approaches in improving the quality of teaching and teaching and assessment skills in higher education. According to Ahmed et al. (2025), structured faculty development programs (FDP) are crucial for developing pedagogical skills, optimizing teaching practices, and enhancing the overall effectiveness of instruction in higher education institutions in Pakistan. The study also revealed that the continuous professional development opportunities play a significant role in enhancing the capacity of educators to design, implement and evaluate quality teaching and assessment experiences (Ahmed et al., 2025). This reinforces the need for continuing faculty development programs instead of point-in-time programs.

Likewise, Saroyan and Amundsen (2023) suggested that faculty development shouldn't be limited to single-shot events but should be part of a broader, long-term initiatives that incorporate reflective practice, co-learning, and continuous professional development. They also observed that interventions that are well suited to faculty needs and institutional goals are most effective when delivered in the workshop context, where they enable meaningful changes in the way faculty teach and assess (2023, Saroyan & Amundsen). Moreover, Miller et al. (2022) highlighted the importance of faculty-led professional development programs, especially when faculty are actively involved in designing, and facilitating, the workshop. Hands on, collaborative, practice based workshops were shown to have more lasting improvement in the teaching and assessment competencies (Miller et al., 2022). The literature indicates that faculty development workshops are best delivered in an interactive, context-relevant, collaborative and reflective manner, which justifies the

use of student-led workshops to upskill faculty on how to design high-quality MCQs and SAQs (Ahmed et al., 2025; Saroyan & Amundsen, 2023; Miller et al., 2022).

THEME # 06: STUDENT-LED WORKSHOPS IN ASSESSMENT DEVELOPMENT:-

In higher education, student-led workshops are becoming more prevalent as innovative tools that improve teaching, learning and assessment processes, supporting students' active involvement. Jagzape and Jagzape (2022) concluded that the student-led seminar strategies enhance the learning engagement of the students, their feeling of ownership of the learning and understanding of the assessment processes, as opposed to the teacher-led strategies. These also foster deeper learning and the capacity of students to critically approach learning content and learning activities that are connected to assessment. (Jagzape & Jagzape, 2022) The evidence indicates that increased student engagement in learning process can enhance the learning experience and assessment literacy.

Likewise, Shrivastava and Nurhidayati (2024) concluded that student-led facilitation in medical education can enhance student leadership ability, critical thinking, and active participation, which can make students not only a passive receiver of learning but also an active participant (Shrivastava & Nurhidayati, 2024). Furthermore, Ross and Rajkoomar (2024) highlighted that student-centered assessment methods create transparency and help students understand the criteria, and also foster links between teaching, learning and assessment (Ross & Rajkoomar, 2024). The literature shows that collectively, student-led approaches can help to increase engagement, collaboration and understanding of assessment in higher education (Jagzape & Jagzape, 2022; Shrivastava & Nurhidayati, 2024). The findings justify the present student-led workshop, which incorporates learner participation to build faculty capacity in the creation of high-quality MCQs and SAQs by using interactive, reflective and participative assessment development practices.

CRITICAL ANALYSIS:-

There is a strong emphasis on the need for assessment literacy and faculty development in the reviewed literature that would help enhance the quality of educational assessment practices (Pastore, 2023; Ahmed et al., 2025). Research has shown that many teachers are not taught how to create valid and reliable assessment tools, especially MCQs and SAQs, and often assessments do not adequately measure higher-order thinking skills and critical thinking (Schneid et al., 2024; Singh et al., 2024). Additional research also indicates that faculty development sessions work best when they are collaborative, reflective, and hands-on, and result in actual gains in assessment skills (Saroyan & Amundsen, 2023; Miller et al., 2022).

Although these are strong points, there are still some gaps to be filled in the literature. The majority of research is devoted to faculty-led interventions, while there

is little exploration for student-led models in the development of assessment (Jagzape & Jagzape, 2022). Moreover, there are some studies that have focused on theory over long-term adoption and sustainability of better assessment practices in institutions (Inayat, 2022). There are also contexts to consider, in that the application of assessment literacy (Miller, 2025) can vary due to the variability in institutional support and assessment policies. Further, there is very little regional evidence in Pakistan in the field of nursing and health professions education (HPE) on the involvement of students in the development of MCQ and SAQs. The present student-led workshop thus aims to bridge these gaps by combining collaborative, participatory and practice-oriented methods for the development of faculty assessment skills in the local context.

RESEARCH GAP:-

The literature reviewed revealed some critical areas of deficit in faculty assessment development and facets of student-led education. While some research has been conducted on faculty professional development, others have examined student-centered learning, rarely contributing to a combination of both (Jagzape & Jagzape, 2022; Ross & Rajkoomar, 2024), limited studies specifically focus on student-led workshops that aim to increase faculty assessment literacy and item construction in nursing education. Furthermore, due to limited studies on faculty development in Pakistan and other developing countries, there is a lack of evidence of structured and sustainable faculty development programs for designing high quality MCQs and SAQs, although the faculty knowledge gaps have been identified in the assessment skills (Parveen & Mughal, 2022; Inayat, 2022).

Additionally, there is limited research on the long-term effects of assessment workshops, with the majority of studies reporting on short-term post-workshop outcomes, not long-term outcomes of faculty improvement or assessment quality or student learning (Ahmed et al., 2025; Miller et al., 2022). While collaborative student-faculty partnerships are becoming common, there is a significant dearth of research in this area around assessment development. The present study aims to fill these gaps, with the implementation of a student-led workshop to help strengthen faculty's skills in developing MCQs and SAQs based on evidence, collaboration, and practice.

CONCLUSION:-

The reviewed literature highlights how important assessment literacy is for improving teaching and learning in higher education, especially in health professions education (Pastore, 2023; Parveen & Mughal, 2022). Evidence shows that when faculty lack skills in assessment design, their evaluation practices become poorly aligned and less effective. This points to the need for structured professional development (Adeniyi et al., 2024; Inayat, 2022). Studies on multiple-choice questions (MCQs) and short answer questions (SAQs) stress that high-quality assessment items should match learning

outcomes, cognitive levels, and standardized marking criteria to ensure validity, reliability, and fairness. However, issues like weak item construction and lack of rubric standardization are still common (Gottlieb et al., 2023; Ali & Zahra, 2024; Singh et al., 2024). Moreover, faculty development workshops have been shown to improve assessment skills when they focus on collaboration, reflection, and practice (Ahmed et al., 2025; Saroyan & Amundsen, 2023; Miller et al., 2022). New evidence on student-led approaches shows benefits in engagement, critical thinking, and participatory learning (Jagzape & Jagzape, 2022; Shrivastava & Nurhidayati, 2024; Ross & Rajkoomar, 2024). Together, this literature supports the need for innovative and interactive faculty development strategies. This forms the basis for the current student-led workshop designed to enhance faculty skills in developing high-quality MCQs and SAQs through collaborative and evidence-based practices.

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