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THE REALITY OF IMPLEMENTING ALTERNATIVE ASSESSMENT STRATEGIES FOR LEARNING OUTCOMES EVALUATION IN FIRST-YEAR UNDERGRADUATE

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ABSTRACT

The purpose of this study is to investigate the feasibility of employing artificial intelligence (AI) techniques to forecast the ultimate academic performance of college students by utilizing formative assessment data. The dataset consisted of 734 male students who were enrolled in an undergraduate psychological statistics course at Imam Mohammad ibn Saud Islamic University. The records were collected over the course of six consecutive semesters. Attendance, participation in in-class activities, homework assignments, and midterm examinations were all important aspects of the assessment process. The application of an ensemble learning technique known as Random Forest resulted in a high degree of prediction accuracy (R2 = 0.9132), which led to the determination that the midterm was the most influential predictor. In addition, a regularized regression model known as Ridge Regression was utilized in order to validate the accuracy of the prediction in comparison to the actual student results. This model achieved 96.2% alignment within the estimated prediction intervals, so proving a significant real-world applicability. Further investigation into the relationship between cumulative semester

data and prediction performance was carried out in this study, which revealed that the accuracy of the model improved as more longitudinal information was incorporated. It is because of this that the importance of data accumulation in improving the dependability of predictions over time is strengthened. In comparison to previous research, this study is distinguished by the incorporation of numerous modeling methodologies, the utilization of actual student performance data, and the conducting of analysis at the semester level. In addition to providing scalable and accurate tools for educational decision-making and early intervention frameworks, the findings offer empirical support for the adoption of AI-based predictive models in academic analytics.

KEYWORDS: Artificial Intelligence, Academic Performance Prediction, Formative Assessment, Random Forest, Ridge Regression, Educational Data Mining.

1. INTRODUCTION

University education is of great interest among developed countries and represents the real competitive point for other countries to advance society and keep pace with global scientific progress. Thus, many development and improvement programs are taking place. The quality of university education presents the most critical challenges facing education systems in all countries of the world, particularly as global organizations' reports emphasize the need to revisit the philosophy of university education, with emphasis on the importance of establishing better standards for the quality of education that is expected to lead to the development of the human personality of one's society and to support its national culture.

Examinations are of great importance in the evaluation process and are a good indicator that gives the teacher an idea of the student's abilities and possibilities, the level of his/her achievement, and his/her activity. Examinations are among the most important and even the most widely used measurement and evaluation tools. So, the word "exams" is a common word used in measurement and evaluation's scientific background (Al-Harabi, 2002).

Evaluation is one of the most important entry points for the development of the educational process and an essential component of it. It is the basic means by which success in achieving educational goals can be identified, and how to take advantage of the strengths and reinforcement of the educational process, and the shortcomings to avoid it. The evaluation results can be adopted in decision-making and the formulation of many educational policies.

The calendar in its modern sense goes beyond the traditional understanding of the process of evaluating student's differences or skills, measured by achievement grades that often do not reflect the reality of students' abilities associated with higher thinking and their ability to articulate judgments, make decisions and solve problems, as skills that enable students to cope with rapid changes. The educational calendar in its modern approach includes modern calendar strategies (Assessment Alternative Strategies) based on scientific and systematic foundations, based on the reality and realities of what students learn in a way that ensures the quality of the educational process and its outputs in terms of the learner's attainment of learning symptoms and outcomes, and enables and masters them (Hallam & Brooshire, 2006; Marzano,2002; Napoli&Raymond2004;)

To evaluate students' achievement of assigned tasks, the evaluation must be comprehensive and complete. Some assessment situations require the use of different evaluation strategies, such as interviews, observations, peer assessment, and other alternative assessment strategies. These approaches provide students with full opportunities to demonstrate their abilities and complete the activities and tasks assigned to them during the learning process (Bush & Greer, 1996).

Assessment is no longer limited to measuring students' academic achievement in various subjects but has expanded to measure the components of their personalities in all aspects. As a result, its domains have broadened, and its methods and techniques have diversified. Considering modern trends, educational experts and specialists have emphasized the importance of adopting alternative assessment.

Traditional assessment methods are often criticized for their narrow focus on memorization and regurgitation of information, which may not reflect a student's true understanding or ability to apply knowledge in real-world contexts (Boud & Falchikov, 2006). In the first year of university, where students are transitioning from high school to higher education, reliance on traditional exams can exacerbate stress and fail to support the development of essential skills such as critical thinking, collaboration, and creativity (Carless, 2015). Alternative evaluation methods address these limitations by providing diverse opportunities for students to demonstrate their learning.

Traditional assessments often favor students who excel in memorization and test-taking, potentially disadvantaging those with different learning styles or backgrounds. Alternative evaluation methods, such as portfolios and oral presentations, provide multiple avenues for students to demonstrate their knowledge and skills, thereby promoting inclusivity (Race, 2014). For first-year students, who may come from diverse educational and cultural backgrounds, alternative assessments can create a more equitable learning environment.

1.1. Statement of The Problem

The problem can be identified by the main question: What is the reality of implementing alternative assessment strategies for learning outcomes evaluation in first-year undergraduate?
This overall question can be divided into the following sub-research questions:

- What is the reality of the methods of evaluating learning outcomes used by faculty members in evaluating learning outputs for first-year university

students?

- Are there any statistical differences between the faculty in implementing alternative assessment strategies for learning outcomes evaluation in first-year undergraduate by academic discipline?

- What alternative assessment methods are employed to evaluate learning outcomes in accordance with both: the official course specifications and course syllabus?

1.2. The Objectives of The Study

The current study endeavors to identify the reality of implementing alternative assessment strategies for learning outcomes evaluation in first-year undergraduate.

1.3. The Importance of The Study

The importance of this study pertains to the compatibility with modern trends and the search for implementing alternative assessment strategies. The findings of this study may provide valuable insights for university educational administrators to enhance academic programs and curricula. The findings of this study may contribute to Developing training programs and workshops to enhance faculty members' skills in assessment techniques and alternative assessment strategies.

1.4. Definition of Basic Term

Evaluation: Al-Katheeri and Al-Nassar (2005, p. 273) defined it as: "The standardized methods and tools employed to assess teachers' personal, professional, cultural, and scientific dimensions, determining their success in attaining educational goals."

The present study defines evaluation as: All assessment methods used by first-year college instructors to assess learning outcomes and their attainment levels.

Alternative Assessment

Alternative assessment refers to: (Majeed, 2011, p.55) "A process that measures performance in authentic tasks using multiple tools and metrics such as observation, tests, self-assessment, peer assessment, learning portfolios, and work samples.

These are employed to gather data for diagnostic purposes, performance estimation, and judgment-making regarding:

- Students' acquisition of knowledge, skills, and attitudes
- The effectiveness of instructional processes
- Curriculum suitability
- Education policy efficacy"

The present study defines Alternative assessment as: the actual assessment of performance so that students can apply what they have learned through realistic interactive activities and be able to innovate , innovate in the attitudes and tasks that confront them so that students are Engage in realistic or simulated scenarios and Receive monitored feedback on their responses , This approach provides teachers and learners with formative feedback to verify competency in target activities or their equivalents.

2. LITERATURE REVIEW

Evaluation is an integral part of the learning process and an essential component of the learning process, accompanying it in all its steps. The evaluation is the process of judging the value of objects, subjects, attitudes, or persons, based on certain criteria or tests. The evaluation covers three aspects: "curriculum, teacher and learner" (Al-Harbi, 2002).

Evaluating learners is the process that uses information from multiple sources to reach a verification judgment on their learning outcomes and this information can be obtained using measurement methods and other methods that give us non-quantitative data such as anecdotal records, The teacher's notes to his students in the lecture, and the calendar can be based on quantitative or how-to data, However, the use of quantitative measurements gives us a sound basis on which to base the calendar's provisions. In the sense that we use different measurement methods to obtain data, these data per se are worthless if we do not properly employ them to make a sincere judgment on the achievement of learning outcomes (Qatami, 2003).

Like other scientific concepts, it is difficult to find a single definition that encompasses all different perspectives. The definition of evaluation as stated in Webster's Dictionary is to determine the value of the object or the examination process, conduct the test, and then render the judgment. Johnson (Johnson, 1981) defines it as the testing process for specific targets and incidents against specific criteria, with a view to flexible decision-making.

The evaluation is defined as the process of knowing the extent to which the curriculum's overall objectives are successful or failed, as well as its strengths and weaknesses so that the desired goals can be achieved in the best possible manner (Zeid, 1990).

However, Amani Abu Zeid defines the calendar as more pragmatic, writing that the calendar "is a preventive diagnostic process aimed at revealing the strengths and weaknesses of the learning program,

with a view to improving the teaching and learning process" (Abu Zeid, Amani, 2004, p. 37)

Helamy and al-Mufti define it as "The process by which an individual or group is engaged in to determine the success or failure to achieve the overall objectives of the curriculum as well as its strengths and weaknesses so that the desired goals can be achieved in the best possible manner" (Helamy al-wakeel, 1987, p. 86)

Nadia Sharif and Mahmoud Ibrahim believe that the evaluation is "a process through which we seek to use the information gathered on learning from multiple sources to reach a judgment on the level of the student and the number achievement of goals". (Nadia Al-Sharif, 2001, p. 23)

Amani Abu Zeid, Rothney said, "The evaluation helps us to assess the effectiveness and impact of teaching, and makes us question the value of educational curricula, materials, and means, which may prompt us to undertake to amend and revise them or reject them as futile." (Abu Zeid, Amani, 2004, p. 39)

The researchers, therefore, consider that the evaluation is "a process that encompasses all aspects of the curriculum and its related elements of courses, means, tests, teachers, students, buildings and management to identify strengths and weaknesses, which are then a step towards the development of the curriculum".

The concept of alternative assessment is grounded in the idea that students' learning and academic progress can be evaluated through tasks and activities that require active engagement, such as research, problem-solving, and practical or field-based experiments. These assessment methods represent a shift away from traditional approaches that primarily evaluate rote memorization and passive learning, toward a constructivist perspective that places the student at the center of the teaching and learning process. This approach emphasizes meaningful learning experiences (Keddi, Soumya ,2023).

Alternative evaluation methods can significantly enhance student engagement by making assessments more relevant and meaningful. For example, project-based assessments allow students to work on real-world problems, fostering a deeper connection between theory and practice (Thomas, 2000). In the first year, such methods can help students develop a sense of purpose and motivation, which are critical for academic success. According to Kuh et al. (2008), active and collaborative learning experiences, often facilitated by alternative assessments, are positively correlated with student retention and satisfaction.

Alternative evaluation methods encourage students to think critically and creatively by requiring them to analyze, synthesize, and evaluate information rather than simply recall it. Reflective journals, for instance, enable students to document their learning journey, identify areas for improvement, and develop metacognitive skills (Moon, 2006). Similarly, peer assessment promotes critical thinking by requiring students to evaluate the work of their peers and provide constructive feedback (Topping, 2009). These methods are particularly beneficial in the first year, as they help students transition from passive learners to active participants in their education.

Evaluation Strategies

Alternative assessment is grounded in a set of fundamental principles that must be carefully considered. Chief among these is the emphasis on evaluating both the content of the learning process and the extent to which students have acquired the necessary competencies, with the ultimate goal of supporting all learners in achieving the desired performance standards. Furthermore, alternative assessment addresses cognitive processes and skills related to inquiry and discovery, as it actively engages students in tasks that involve problem-solving and decision-making appropriate to their developmental level.

This approach necessitates the use of diverse strategies and tools that consider individual differences among learners in terms of abilities, learning styles, and backgrounds. By designing varied assessment activities, educators can more effectively identify each student's performance. In addition, alternative assessment promotes collaboration rather than competition among students. Several researchers have highlighted these strategies (Allam, 2004; Al-Harashah, 2016; Al-Ka'abneh, 2024; Al-Radhi et al., 2019; Zaytoun, 2008).

1. **Performance-Based Assessment:** Includes evaluation methods such as presentations, demonstrations, simulations, and debates.
2. **Traditional written tests and assignments**.
3. **Observation Strategy:**

- **Spontaneous Observation:** Monitoring student behavior in real-life situations.
- **Structured Observation:** Planned observation of student behavior under specific conditions, considering **time, location, and predefined criteria**.

4. **Communication-Based Assessment:** Involves interactive activities such as **conferences, interviews, and Q&A sessions**.

5. **Reflection Assessment Strategy:** Encourages students to connect prior learning to new knowledge by evaluating past experiences, identifying strengths and areas for improvement, and setting future learning goals. (Lanting, 2000)

Previous Research Studies

Researchers have extensively examined the role of assessment and testing in the educational process to explore the types of questions included in assessments, the cognitive levels they address, and the extent to which they effectively evaluate learning outcomes. Other studies have investigated assessment practices and the degree to which teachers implement them.

The following section presents a chronological review of relevant studies:

Amna Masarwa Study (2025) The study aimed to explore the extent to which teachers apply alternative assessment strategies in elementary schools. The descriptive analytical method was used in the study, and a questionnaire was applied to a simple random sample consisting of 163 male and female teachers from elementary schools. The results showed that the extent of teachers' application of alternative assessment strategies in elementary schools was moderate. The results also indicated significant statistical differences in the extent of application attributed to the gender variable, favoring females. The results showed differences attributed to the impact of the qualification in the fields of performance-based assessment and self-assessment, with the differences favoring the bachelor's degree.

Muhammad Malifi Study (2024) The study aimed at identifying the level of intermediate stage studies teachers' use of alternative assessment strategies from their viewpoint. The researcher utilized the descriptive survey research method. A questionnaire was administered as the tool of this study. The study population and sample comprised (80) teachers. Results concluded that the alternative assessment strategies were highly used in general (mean = 4.08- 3.84). The pen and paper strategy were ranked first. The performance -based assessment strategy was second in rank. The peer evaluation strategy was of the third rank. The self-assessment strategy was ranked fourth, followed by the portfolio that was ranked last. There were no statistically significant differences in teachers' responses attributed to teaching experiences. The study recommended the necessity of holding several training courses for social studies teachers in the area of alternative assessment.

Nayel ALkaabnh Study (2024). The study aimed to identify the extent to which mathematics teachers in the upper elementary stage apply alternative assessment strategies. The researcher utilized the descriptive survey research method. The study sample consisted of (124) teachers. A questionnaire was administered as the tool of this study. The results of the study showed that there are statistically significant differences at a significance level ($\alpha \leq 0.05$) in the extent of application of alternative assessment strategies by male and female mathematics teachers, attributed to the gender variable for the strategies of peer assessment and paper-and-pencil assessment, in favor of female teachers. There were no differences in the rest of the strategies attributed to gender. The results also showed no statistically significant differences in the extent of application of alternative assessment strategies by mathematics teachers, attributed to educational qualification and teaching experience.

Israa Hamouda Study (2023). The Study aimed to identify the reality of mathematics teachers use of alternative assessment tools. The study population consists of (387) male and female teachers, and it sample consisted of (219). The researcher developed a questionnaire consisting of (45) items. The results showed teachers use alternative assessment tools with moderate degree.

Al-Harbi Study (2021): The Study aimed to measure the effect of alternative assessment tools, such as hands-on activities and projects, on students' learning motivation in middle school. The results show a significant increase in students' learning motivation was observed when using alternative assessment tools compared to traditional tests.

Al-Otaibi Study (2020): The Study aimed to examine the effect of using alternative assessment tools, such as projects and portfolios, on developing critical thinking skills among secondary school students. The study revealed that students who underwent alternative assessment showed significant improvement in critical thinking skills compared to the control group. The study recommends integrating alternative assessment tools into curricula to enhance students' higher-order thinking skills.

Smith Study (2019): The Study aimed to compare the effectiveness of alternative assessment with traditional assessment in enhancing students' creative skills. The study found that alternative assessment contributed more to enhancing students' creative and analytical thinking skills compared to traditional assessment, which focused more on memorization and recall. The study suggests

integrating alternative assessment alongside traditional assessment to achieve comprehensive educational outcomes.

Abu Hamdan Study (2018): The Study aimed to identify the challenges facing the implementation of alternative assessment in public schools, focusing on administrative and technical aspects. The study used a descriptive approach, utilizing questionnaires and interviews with teachers and administrators. The study highlighted that lack of teacher training, poor infrastructure, and excessive administrative burdens were the primary obstacles limiting the use of alternative assessments. The study recommends organizing training workshops for teachers, improving infrastructure and providing necessary resources, and simplify administrative procedures to support teachers in using alternative assessments.

Al-Shammari Study (2017): The study aimed to analyze the impact of alternative assessment tools (such as group research and presentations) on the performance of higher education students. The study relied on analyzing student results and conducting interviews with faculty members. The study found that alternative assessment tools helped enhance students' teamwork and problem-solving skills.

McMillan Study (2013): The study aimed to know the impact of alternative assessment on student performance and the teacher's role in its implementation. The study found that students who underwent alternative assessments performed better in practical skills and problem-solving.

2.1. Comment on Previous Studies

1. Alternative assessment enhances higher-order skills, such as critical and creative thinking.
2. It contributes to improving students' motivation toward learning and their engagement with the educational process.
3. Obstacles to its implementation include lack of teacher training, administrative support, and infrastructure.
4. Alternative assessment requires more time and effort from teachers, which may limit its application in some schools.

3. METHODS

Researchers in this study have used the descriptive-analytical method to uncover the current state of learning outcome assessment methods among first-year students at Imam Abdulrahman bin Faisal University. It relies on this methodology not only to describe the reality of alternative assessment practices but also to go beyond mere description by interpreting and analyzing the data, extracting meaningful insights that highlight the alternative assessment methods used, as well as their consideration of diversity in proficiency levels.

Search Tool

A closed-ended survey was developed to achieve the objectives of the study and to determine its findings. This was accomplished through a comprehensive review of the educational literature related to methods of assessing learning outcomes and alternative assessment methods. Based on this review, the core elements associated with assessment strategies were identified. The survey items were then formulated, and the independent variables relevant to the study were defined.

The survey comprises four main dimensions, each addressing specific assessment methods and the patterns associated with each. The primary aim was to explore the extent to which these methods are utilized, from the perspective of faculty members.

The survey instrument includes 30 items distributed across several dimensions pertaining to various assessment strategies, as follows:

Always	often	sometimes	rarely	never
5	4	3	2	1
Domain			Number of Items	
Performance based Assessment			12	
Traditional written tests and assignments			8	
Communication based Assessment			5	
Reflection based assessment			5	

Validity And Stability of The Search Tool

Stability

The stability was calculated in three different ways: Cronbach Alpha, the halftime segmentation through "Spearman-Brown Coefficient", and the internal consistency of all the resolution phrases: the "alpha" constant coefficient was “0.8” and the halftime constant “0.82”.

The Validity of Internal Consistency

Validity was calculated to identify by establishing the correlation factor between each of the terms of the identification and the overall degree of the questionnaire, as shown in the following table:

Table 1: Internal Consistency of The Questionnaire.

Items	1	2	3	4	5	6	7	8	9
Correlation	**0.64****	**0.51****	**0.72****	**0.72****	**0.73****	**0.55****	**0.66****	**0.72****	**0.51****
Items	10	11	12	13	14	15	16	17	18
Correlation	**0.71****	**0.67****	**0.66****	**0.69****	**0.65****	**0.65****	**0.71****	**0.67****	**0.73****
Items	19	20	21	22	23	24	25	26	27
Correlation	**0.64****	**0.60****	**0.53****	**0.72****	**0.54****	**0.64****	**0.73****	**0.73****	**0.75****
Items	28	29	30						
Correlation	**0.70****	**0.74****	**0.66****						

From table (1), all items of the questionnaire are statistically significant to the overall degree of the questionnaire at an indicative level (0.01), indicating the instrument's sincerity.

The researcher has used the relatively gradual statistical model. With a view to judging the computational averages of implementing alternative assessment methods as follows:

Statistical Analysis and Processing

High	Moderate	Low
More 3.6	2.6-3.6	Below 2.6

The researcher used the statistical program (SPSS) to process the study's data and answer its questions.

4. RESULTS AND DISCUSSION

- What is the reality of the methods of evaluating learning outcomes used by faculty members in evaluating learning outputs for first-year university students?

To answer this question, averages and standard deviations of faculty responses were calculated on the identification paragraphs of the various evaluation methods and strategies for learning outcomes.

Table 2: Presents Average and Standard Deviations for Each Domain of The List as Well as The Overall Domain.

Evaluation Assessment	Types	Average	St.	Level
Performance based Assessment	Discussion and Dialogue	4.5	0.62	High
	Writing Individual Reports	4.4	0.89	High
	Assignments / Tasks	4.3	1.25	High
	Laboratory/Practical assignments	3.9	1.04	High
	Writing Group Reports	3.1	0.92	Moderate
	Presentations	3	1.0	Moderate
	Projects	2.9	1.26	Moderate
	Role Playing	2.8	0.94	Moderate
	Portfolio	2.6	1.24	Moderate
	Speaking tests	2.3	1.16	Low
	Record Presentation	2.2	0.95	Low
	Demonstrations	1.7	0.73	Low
	Mean	3.14	1.00	Moderate
Traditional written tests and assignments Assessment	Multiple Choice Questions	4.9	0.28	High
	Short Essay Questions	4.7	1.28	High
	Open-Ended Essay Questions	4.4	1.05	High
	Open-Book Tests	3.8	0.81	High
	Restricted-Answer Essay Questions	3.4	1.92	Moderate
	True/False Questions	2.5	1.26	Low
	Fill-in-the-Blank Questions	2.3	1.33	Low
	Matching Questions	2.2	1.25	Low
	Mean	3.53	1.15	Moderate
Communication based Assessment	Questions and responses	3.9	1.19	High
	Group discussions	3.6	1.32	High
	Interviews	2.5	1.21	Low
	Peer meeting	2.3	1.09	Low
	Conferences	2.25	1.18	Low
	Mean	2.91	1.198	Moderate
Reflection based assessment	Group Reflections	2.3	1.11	Low
	Peer Discussions	2.2	1.03	Low

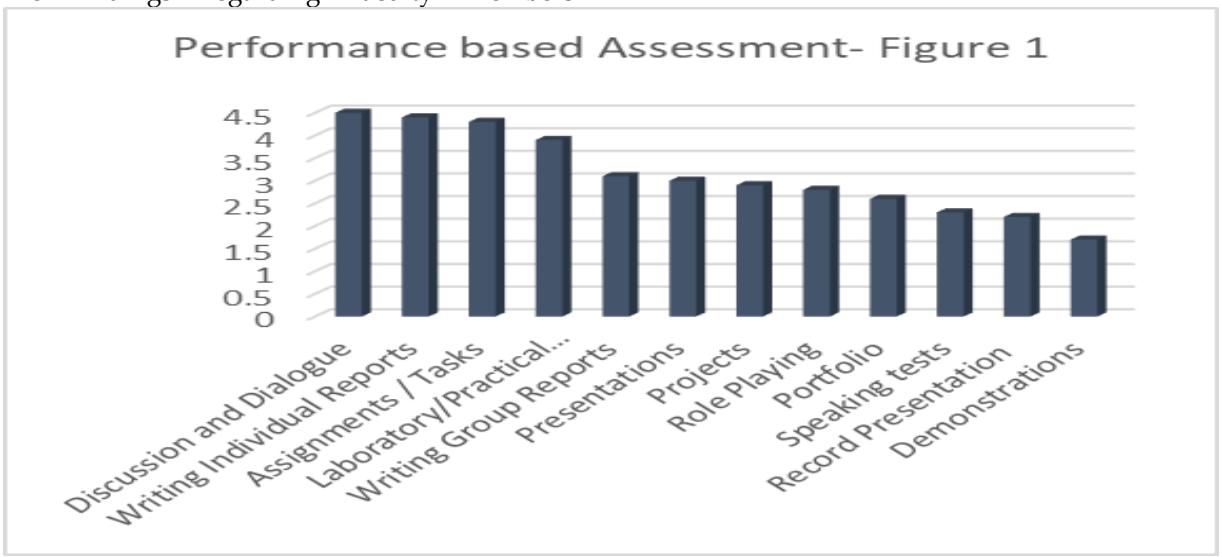
	Reflective Journals	1.8	0.91	Low
	Self-assessments	1.6	0.85	Low
	Peer assessments	1.5	0.93	Low
	Mean	1.88	0.966	Low
Mean all		2.86	1.08	Moderate

Table (2) indicates that the overall level of assessment practices employed by faculty members was moderate, with a mean score of (2.86). A more detailed analysis based on the assessment strategies used reveals that the highest mean score was for the use of traditional assessment methods, including conventional tests and the evaluation of learning outcomes, with a mean of (3.53). This was followed by performance-based assessment methods with a mean of (3.14), and communication-based assessment strategies with a mean of (2.91). The lowest usage was recorded for reflective assessment strategies, with a mean score of (1.9).

These findings differ from those of Al-Shar'ah (2013), which reported a generally low level of implementation of assessment practices. Furthermore, Al-Shar'ah's study indicated that performance-based assessment was used at a low level, in contrast to the current study where its usage was found to be moderate. However, the present study aligns with Al-Bashir (2010), which also found a moderate overall use of assessment practices. Moreover, the current study concurs with both Al-Shar'ah (2013) and Al-Bashir (2010) in reporting a low level of implementation of reflective assessment strategies.

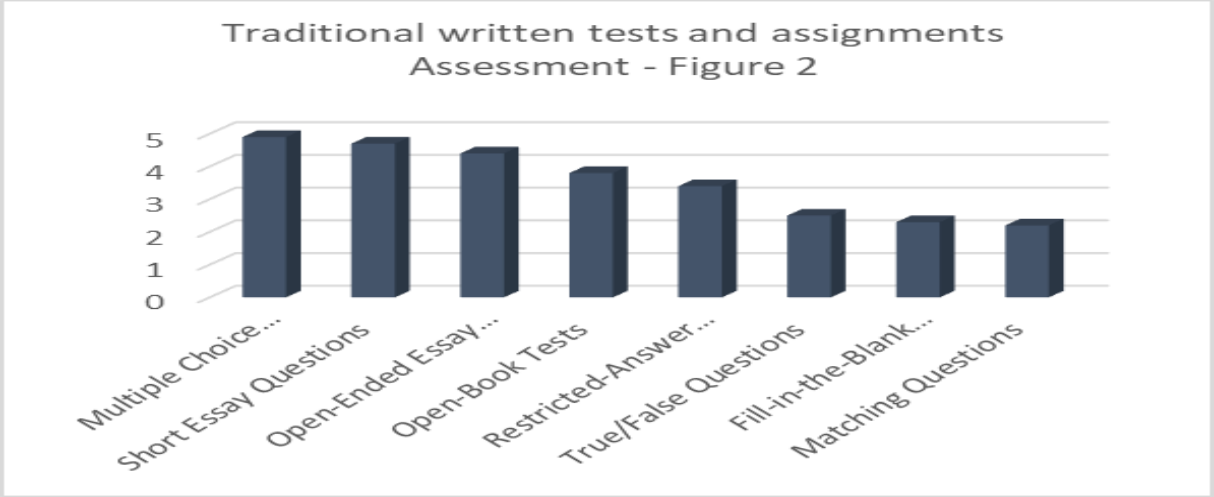
The findings regarding faculty members' assessment practices can be interpreted as indicating a moderate reliance on alternative assessment strategies—those that focus on students' performance and assess learning outcomes through various methods. Although traditional paper-and-pencil assessment was most widely used, possibly due to the prevailing perception of its credibility and its perceived appropriateness for first-year university students, the results also revealed a moderate use of performance-based assessment strategies. This may reflect a forward-looking perspective toward expanding the use of such methods, in line with contemporary research advocating for their integration.

At the level of individual performance-based practices (Figure 1), the degree of faculty members' usage varied across high, moderate, and low levels. Specifically, practices such as discussion and dialogue, assignments/tasks, and presentations were used at a high level. Practices such as practical performance, group projects, collaborative report writing, portfolios, debates, and individual projects were used at a moderate level. Meanwhile, practices such as individual report writing, demonstrations, and simulation/role-playing were used at a low level.

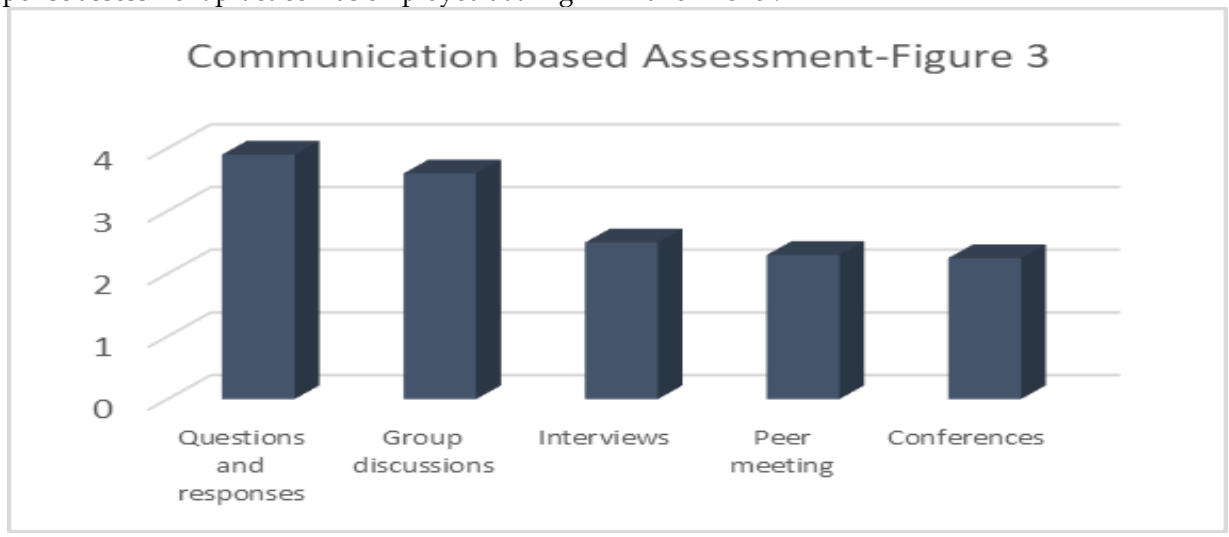


The utilization level of paper-and-pencil assessment practices (Figure 2) varied across high, medium, and low frequencies. The multiple-choice questions assessment practice was employed at a high level, whereas true/false questions were used at a medium level. Conversely, the following practices were implemented at a low level: (short-answer questions, fill-in-the-blank questions, restricted-response essay questions, take-home exams, matching questions, open-book tests, essay

questions). Regarding observation-based assessment practices, spontaneous observation was used at a medium level, while structured observation was applied at a low level.



The utilization level of communication-based assessment practices (Figure 3) varied across high, medium, and low frequencies. The question-and-response assessment practice was employed at a high level, while peer-group discussions and interviews were used at a medium level. In contrast, oral examinations and conferences were implemented at a low level.



Regarding the implementation level of reflective assessment practices (Figure 4), usage ranged between medium and low frequencies. The self-assessment practice was implemented at a medium level, while the following practices were used at a low level: (peer assessment, student journals, self-reflection sheets, and student portfolios)

The findings of the current study can be attributed to the orientation of first-year university departments toward student screening and classification processes, ensuring their successful transition into future specializations. These departments have attempted to implement modern alternative assessment models that contribute to enhancing students' skills and facilitating their integration into university life. However, the study results reveal that departments still predominantly rely on traditional paper-and-pencil assessment methods, while employing alternative assessment approaches - such as performance-based and observational assessment - to a lesser extent. Furthermore, the findings indicate that faculty members frequently utilize practices such as dialogic discussions, demonstrative presentations, and structured assignments at relatively high rates.

- Are there any statistical differences between the faculty in implementing alternative assessment strategies for learning outcomes evaluation in first-year undergraduate by academic discipline?

The study revealed significant variations in faculty members' implementation alternative assessments across different academic disciplines. To examine these differences, means and standard deviations were calculated for faculty responses in each assessment domain of the questionnaire.

A one-way analysis of variance (ANOVA) was then employed to determine the statistical significance of these disciplinary differences, as presented in the following table:

Table 3: The One-Way Analysis of Variance (ANOVA) Results Examining the Influence of Academic Discipline on Faculty Members' Implementation of Assessment Practices

Evaluation Assessment	Section	Sample	Mean	Std. Deviation	df	t	sig
Performance based Assessment	Math	12	2.8	0.66	42	3.7	0.01*
	Statistics	10	2.9	0.37			
	Physics	13	3.3	0.21			
	Chemistry	6	2.8	0.18			
	Biology	6	3.3	0.42			
Traditional written tests and assignments Assessment	Math	12	2.4	0.59	42	2.4	0.07
	Statistics	10	2.1	0.73			
	Physics	13	2.8	0.53			
	Chemistry	6	2.96	0.75			
	Biology	6	2.3	0.57			
Communication based Assessment	Math	12	2.3	0.61	42	5.7	0.001**
	Statistics	10	2.1	0.61			
	Physics	13	3.2	0.94			
	Chemistry	6	3.2	0.33			
	Biology	6	2.7	0.11			
Reflection based assessment	Math	12	1.5	0.65	42	4.7	0.003**
	Statistics	10	1.8	0.59			
	Physics	13	2.2	0.46			
	Chemistry	6	2.7	0.09			
	Biology	6	2.4	0.91			

As evidenced in Table 3, statistically significant differences were observed at the 0.01 level for both communication-based and reflective (self-) assessment practices. Furthermore, performance-based assessment practices demonstrated significant differences at the 0.05 level. In contrast, no statistically significant differences were found (α = 0.05) for traditional paper-and-pen assessment methods.

These variations can be attributed to fundamental differences in learning outcome evaluation approaches between courses (Biology, Chemistry, Physics) taught to students in health colleges, which emphasize using practical examinations, performance-based observational assessments, and self-assessment practices.

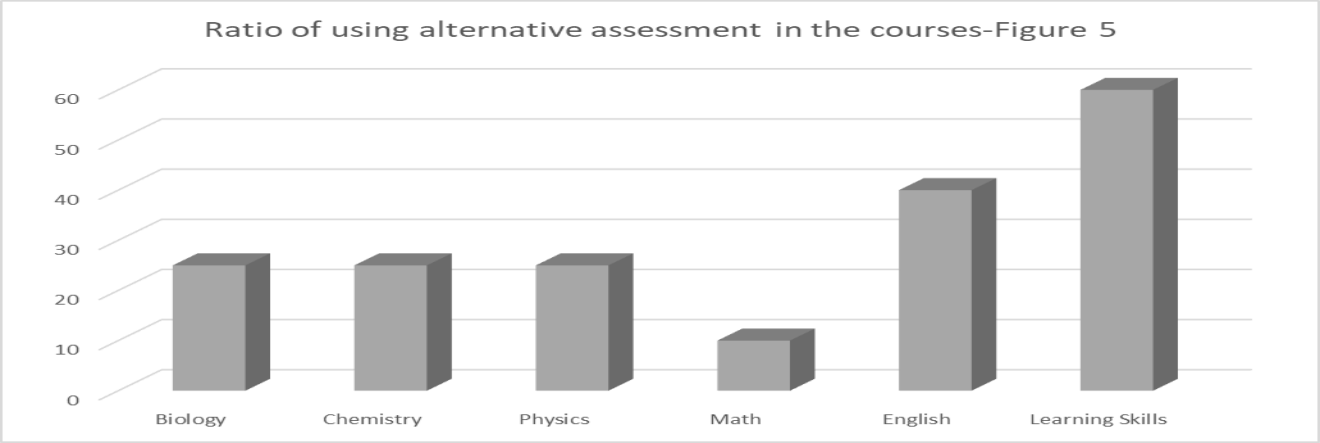
- What alternative assessment methods are employed to evaluate learning outcomes in accordance with both: the official course specifications and course syllabus? To response to this question, the researcher complete review course specifications and course syllabus.

The corresponding grade ratio for each type of alternative assessment used was reviewed as shown in the table (4):

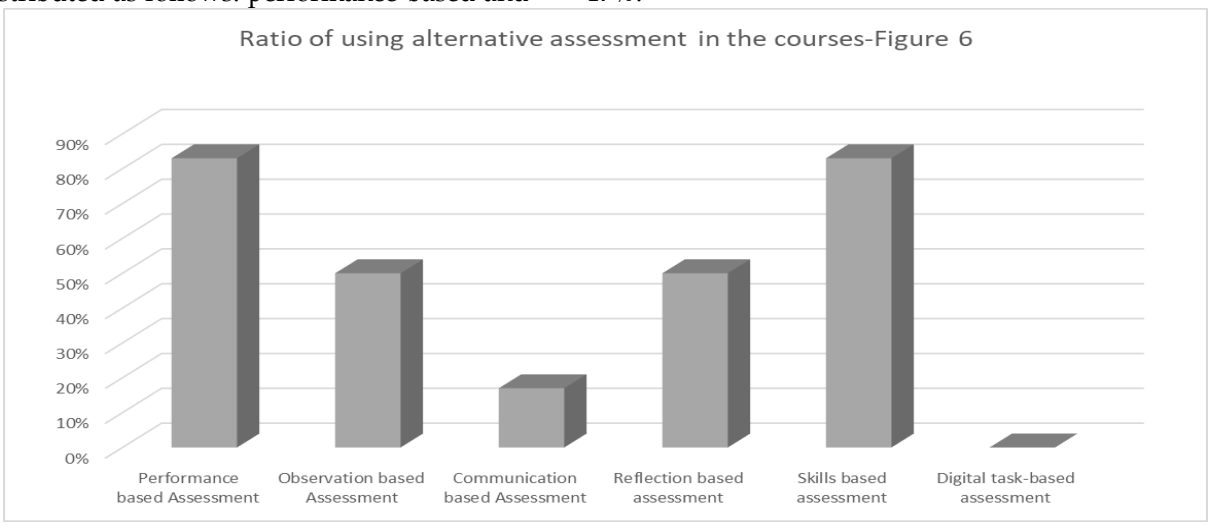
Alternative Assessment	Methods	Course											
		Biology		Chemistry		Physics		Math		English		Learning Skills	
		Yes/-	%	Yes/-	%	Yes/-	%	Yes/-	%	Yes/-	%	Yes/-	%
Performance based Assessment	Presentations	-	-	-	-	-	-	-	-	Yes	5	Yes	20
	Reports	Yes	7	Yes	7	Yes	7	-	-	-	-	-	-
	Laboratory/Practical assignments	Yes	7	Yes	7	Yes	7	-	-	-	-	-	-
	Demonstrations	-	-	-	-	-	-	-	-	-	-	-	-
	Simulations/Role-plays	-	-	-	-	-	-	-	-	-	-	-	-
	Debates	-	-	-	-	-	-	-	-	-	-	-	-
	Performance exams	-	-	-	-	-	-	-	-	-	-	-	-
	Speaking tests	-	-	-	-	-	-	-	-	Yes	15	-	-
	Exhibitions/Poster presentations	-	-	-	-	-	-	-	-	-	-	-	-
	Mind maps/ manual concepts maps	-	-	-	-	-	-	-	-	-	-	Yes	5
	Open-Book Assessment	-	-	-	-	-	-	-	-	-	-	-	-
Observation based Assessment	Practicum evaluations	Yes	6	Yes	6	Yes	6	-	-	-	-	-	-
	Skill observations	-	-	-	-	-	-	-	-	-	-	-	-
Communication based Assessment	Interviews	-	-	-	-	-	-	-	-	-	-	-	-
	Conferences/Group discussions	-	-	-	-	-	-	-	-	-	-	-	-
	Questions and responses	-	-	-	-	-	-	-	-	Yes	5	-	-
	Role-plays	-	-	-	-	-	-	-	-	-	-	-	-
Reflection based assessment	Self-assessments	-	-	-	-	-	-	Yes	2	-	-	-	-
	Peer assessments	-	-	-	-	-	-	Yes	2	-	-	-	-
	Journals	-	-	-	-	-	-	-	-	-	-	-	-
	Portfolios	-	-	-	-	-	-	-	-	Yes	15	Yes	10
Skills based assessment	Problem-solving skills	Yes	5	Yes	5	Yes	5	Yes	3	-	-	-	-
	Cooperative work skills (work groups)	-	-	-	-	-	-	Yes	3	-	-	Yes	20
	Educational projects work skills	-	-	-	-	-	-	-	-	-	-	-	-
	Case study skills	-	-	-	-	-	-	-	-	-	-	-	-
Digital task-based assessment	Digital storytelling	-	-	-	-	-	-	-	-	-	-	-	-
	Digital blogs/vlogs	-	-	-	-	-	-	-	-	-	-	-	-
	Infographics	-	-	-	-	-	-	-	-	-	-	-	-
	Podcasts	-	-	-	-	-	-	-	-	-	-	-	-
	Concept maps prepared through digital applications	-	-	-	-	-	-	-	-	-	-	-	-
Total		4	25	4	25	4	25	4	10	4	40	4	60
Average		31%											

The results presented in Table (4) indicate that the average use of alternative assessment practices in the studied courses, based on the course description analysis, reached only 31%. These findings suggest that the academic departments responsible for teaching these courses still place significant emphasis on traditional assessments, particularly those based on written exams (pen-and-paper), which account for approximately 40% to 75% of the total course grade.

The researchers believe that these percentages may be justified in certain cases, due to the scientific nature of the course content, as illustrated in Figure (5). For example, the use of alternative assessment strategies reached 60% in the Learning Skills course and 40% in the English Language course. However, this percentage decreased in science courses such as Biology, Chemistry, and Physics to 25%, and reached its lowest level in Mathematics, where alternative assessment represented only 10%.



The percentage of the use of alternative assessment practices also varied in the course descriptions, as shown in Figure (6). These practices were distributed as follows: performance-based and skill-based practices accounted for 83%, observation and self-assessment practices represented 50%, while communication-based practices accounted for only 17%.



5. RECOMMENDATIONS

In light of the findings of the current study, the researchers offer the following recommendations:

1. Diversify assessment practices to align with the National Qualifications Framework and the domains approved by the National Center for Academic Accreditation and Evaluation (NCAAA).
2. Emphasize the expansion of the use of alternative assessment strategies in a manner that aligns with the expected learning outcomes and supports the achievement of the graduate attributes required by the program.
3. Increase the number of specialized training programs for faculty members, focusing on assessment methods and practices that can be employed to evaluate learning outcomes, particularly those that support the development of critical thinking, creative thinking, and skill enhancement.

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