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Does Progressive Assessment Improve Students' Academic Performance?

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Abstract:

The present study draws on progressive theory to examine the impact of implementing progressive assessment on students' final academic performance in Libya. A quantitative approach was employed, using data collected from 38 students enrolled in a listening and speaking course at the Faculty of Education, Misurata University. Several types of formative assessment activities were incorporated into the educational program, including peer assessments, quizzes, discussions, presentations, debates and think-pair-share. The data were analyzed using a paired t-test and a two-way (factorial) ANOVA. The results showed a statistically significant improvement from pre-test to post-test scores. Moreover, the ANOVA results indicated that using progressive assessment as a teaching method had a meaningful impact on the progress of the experimental group compared to the control group. Importantly, the findings support the Constructivist Learning Theory, which prioritizes student autonomous learning.

Keywords: progressive assessment, final outcomes, and performance.

ملخص:

الدراسة الحالية قائمة على النظرية التقدمية لفحص أثر تضمين التقييم المستمر على التحصيل الأكاديمي النهائي للطلبة في ليبيا. تم تطبيق طريقة بحث كمية على بيانات تم تجميعها من 38 طالبا منضمين إلى مقرر استماع ومحادثة بكلية التربية بجامعة مصراتة. العديد من أنشطة التقييمات المستمرة تم تضمينها في البرنامج التعليمي مثل: تقييم زملاء، اختبارات، نقاشات، عروض، حواريات ونشاط فكر-شارك-تبادل. البيانات تم تحليلها بواسطة تقنيات تحليل اختبار (t) للعينات الزوجية وتحليل التباين العاملي. أظهرت النتائج وجود علاقة إيجابية ذات دلالة إحصائية بين درجات الأداء في اختبارات (t) للعينات الزوجية وعلاوة على ذلك، أظهرت نتائج تحليل التباين العاملي أن استخدام التقييم المستمر كطريقة تدريس لها تأثير ذو معنى على نتائج المجموعة التجريبية مقارنة بنتائج مجموعة التحكم. والأهم، نتائج الدراسة تدعم نظرية التعلم البنائي التي بدورها تعطي الأولوية للتعلم الذاتي للطلاب.

الكلمات المفتاحية: التقييم المستمر، التحصيل النهائي، الأداء.

1. Introduction:

The emergence of progressive assessment as a teaching and learning approach was a result of the deficiency in traditional instruction, which failed to provide a thorough overview of learners' progress over time. Progressive assessment offers a coherent integration of teaching and testing methodologies, which value learners' individual differences, and critical thinking. A body of research emphasizes the efficacy of implementing progressive assessment in improving students' final scores in various educational contexts. Similarly, this study is an attempt to extend the understanding of this topic within the Libyan context, which has not been thoroughly investigated.

In higher education in Libya, continuous evaluations are widely implemented in academic programs to evaluate students' performance, yet limited research has been conducted in the Libyan context to examine the extent to which these evaluations enhance students' learning and prepare them for final exams. The purpose of this study is to shed light on the efficacy of progressive assessment in improving students' scores in English learning.

This study is significant because it adds a novel contribution to the domain of education in Libya. Its findings can guide decision-makers at the Faculty of Education in implementing progressive assessment as a teaching technique that may lead to better educational achievements. Additionally, it presents the topic in an under-researched context, which encourages further research among Libyan scholars.

2. Hypothesis:

To achieve the objective of the study and to examine the effect of progressive assessment as a teaching methodology on students' performance, the following hypotheses were formulated:

- Null hypothesis

There is no statistically significant difference in students' performance before and after applying progressive assessment as a teaching methodology.

- Alternative hypothesis

There is a statistically significant difference in students' performance before and after applying progressive assessment as a teaching methodology.

3. Progressive education:

According to Williams (2017), progressive education represents the New Education Movement that emerged in the late 19th century in Europe and America. It adopted the philosophy of progressivism as a foundation to move away from traditional and teacher-centered instruction and emphasize student-centered class, experiential learning, collaboration, critical thinking, integrated curriculum, and autonomous learning. Its principles were developed by John Dewey- the founder of the progressive education- in the 20th century.

Principles:

- Student centered learning: focuses on student's needs and interests.
- Experiential learning: students investigate and learn knowledge by doing.
- Critical thinking: students learn how to solve problems.
- Self-development: knowledge that leads to develop students' personal traits, intellectual abilities and social growth.
- Group-work: students cooperate together and do not rely on what they receive from their teachers.
- Student feedback: develop understanding and reflection.

4. Progressive assessment:

Progressive assessment- also called formative assessment- is a continuous teaching-learning approach that evaluates students' progress throughout the instructional process. It offers a range of techniques designed to provide immediate feedback to track student's learning over time (Mataka, 2022).

Types of progressive assessment

The following activities were used in this study as a part of the teaching process using progressive assessment.

- Peer assessment

Students assess one another's performance using clear assessment criteria. This kind of evaluation promotes cooperative learning among students and provides corrective feedback.

- Quizzes

A quiz is a short set of items to test students' knowledge, or skills. Its questions can be varied such as: true and false, multiple choice or short answers.

- Discussion

Discussion is the act of talking about a specific topic in order to exchange ideas, opinions or find solutions. Discussions are important in the field of education because they can lead to a deeper understanding of learning issues.

- Presentation

A presentation is the act of showing or explaining information by a speaker who delivers the content to an audience. The presenter uses a variety of speaking and body language skills to convey a message.

- Debate

A debate is a formal discussion on a particular issue often with a moderator and an audience. It is usually between two individuals, teams or groups who have opposing views of a question.

- Think-pair-share

The instructor poses a question and the students take few minutes to think about it on their own and then all of them share their answers and build on each other's understanding. This activity offers a safe space to test students' knowledge and makes refinement of their ideas.

5. Related studies:

Recently, progressive assessment has been recognized as one of the most important strategies for enhancing learning. The shift towards progressive assessment as a teaching method emerged in the late 19th century and the early 20th century. A body of research shows the effectiveness of implementing progressive assessment in classroom practice, as it helped identify students' strengths and weaknesses. From here teachers can track students' learning by introducing curriculum improvements that take students' needs into account. On the other hand, there are many criticisms of the progressive education such as the fact that many teachers do not have the opportunity to be trained in how to apply this method in their classrooms. Thus, failure to implement progressive assessment properly in classroom will definitely result in learners missing learning opportunities (Sotardi & Dutton, 2022).

Progressive goals comprise principles from the modern teaching and learning tool "Flipped Classrooms". Accordingly, Flipping from a traditional classroom to progressive education encompasses a shift in teaching approach, and classroom dynamics. Teaching style shifts from teacher-centered to students-centered, teacher's role changes from being a source of knowledge to a learning guide, and relying on study materials that are relevant to social environment. Progressive assessment also incorporates principles of the Project-Based-Learning approach (PBL) which provides the framework for the Constructivist Learning Theory principles to take place in a classroom (Wiyono, 2025; Wang et al., 2023).

Progressive education focuses on student's active role that can be enhanced through the effective implementation of technology such as mobile devices (Guerrero et al., 2016). Similarly, online platforms, AI tools and digital media allow students to work together and encourage their critical thinking, enable frequent, and data-driven progressive assessments (Gür & Eriçok, 2020; Arriaga, et al., 2025).

Progressive education emphasizes skills that go beyond rote learning or measuring knowledge. It builds student competence through project-based-learning, reflective questioning and interaction in a democratic environment. Importantly, these elements are reinforced through the frequent feedback, which in turn improves both student learning and satisfaction (Saint et al., 2015; Canadas, 2023). However, (Sugiono, 2022; Barua, 2025) emphasized that progressive education is exclusively limited to

implementing flexible and multiple assessment techniques rather than relying solely on one type of progressive assessment. Additionally, the immediate and personalized feedback ensures that all students get equal learning opportunities (Solis et al., 2025).

Recent studies provide growing evidence for the effectiveness of progressive assessment in enhancing the three fundamental pillars of education: learners' growth, education quality and teacher development. At the level of learner characteristics, progressive assessment supports promoting learner's personal traits and competences such as confidence, independence, self-motivation, self-assessment, self-esteem, self-awareness and autonomous learning (Korneva & Kuzmishina, 2020). Concerning the aspect of advancing education and teacher development, progressive education encourages students' lifelong learning and teachers' professional growth and reflective practice (Tigelaar & Sins, 2021).

6. Methodology:

6.1 Participants:

The participants were (38) female students from English department at the Faculty of Education, Misurata University in Libya. They enrolled on listening and speaking course of the first semester. The sample of the study consisted of two groups: 1(experimental) and 2 (control).

6.2 Methodology and data analysis:

A regression model was run to test if the DM was significantly effective on the experimental group .
Model formula :

Post-test ~ pre-test + group

This means that the post-test score was used as a dependent variable and tested as to whether or not it was affected by the independent (predictor) variables, i.e., post-test and group. The group variable levels, control vs experimental, were coded as 0 and 1, respectively. This is equivalent to saying no-DM vs yes-DM ".

Note:

- R statistical software was used for data analysis.
- The study took into account consultations with an expert in the field of research.

6.3 Ethics:

The participants' names were anonymized and coded to prevent identification. Only the researcher had access to the collected data.

7.Results and interpretation:

Figure 1. The output of a linear regression model from the statistical software R.

```
Call:
lm(formula = Post.test ~ Group + Pre.test, data = data)

Residuals:
    Min       1Q   Median       3Q      Max
-4.9241 -1.5326 -0.1851  1.6954  6.5179

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)    1.1901     1.2129   0.981  0.33319
Group           3.7340     1.0829   3.448  0.00149 **
Pre.test        0.6460     0.2584   2.500  0.01725 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.563 on 35 degrees of freedom
Multiple R-squared:  0.2559,    Adjusted R-squared:  0.2133
F-statistic: 6.017 on 2 and 35 DF,  p-value: 0.005676
```

Figure 2. An ANCOVA visualization (regression lines by group) that illustrates the relationship between pre-test scores and post-test scores for two groups.

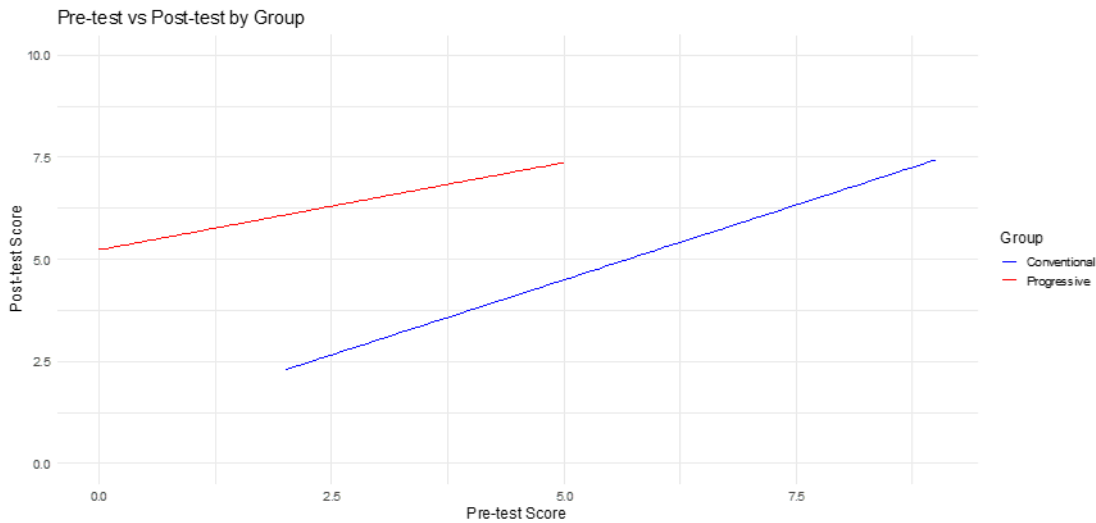
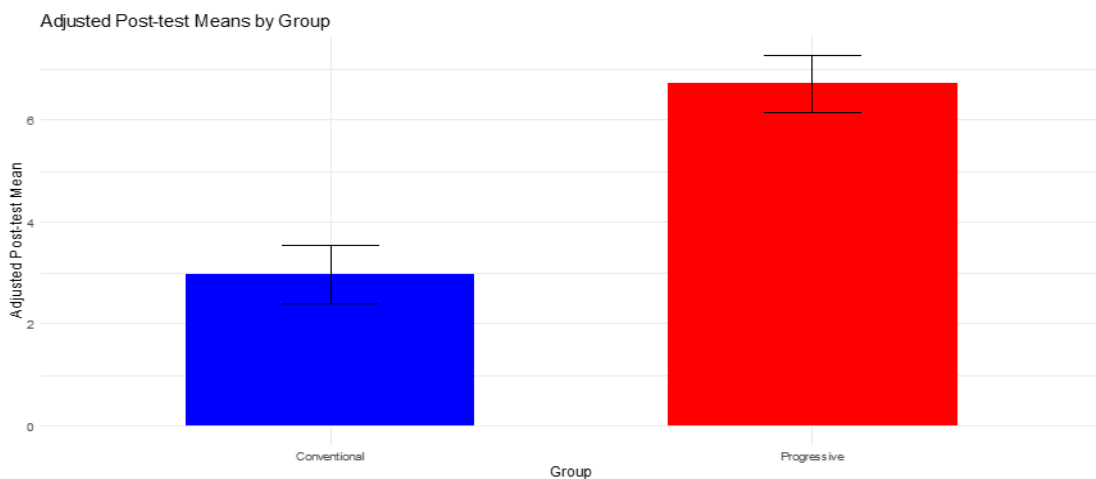


Figure 3. Scatterplot with regression lines, equations, and R².



This way, we can see two regression lines (one per group) and two equations with R^2 , each placed near its respective line.

Figure 4. Adjusted post-test means by group



In figure 2. an ANCOVA was conducted to examine the effect of Progressive Education pedagogy on English post-test scores, controlling for baseline proficiency. The model revealed a significant main effect of Group, $b = 3.73$, $SE = 1.08$, $t(df) = 3.45$, $p = .0015$, indicating that students taught with Progressive methods scored nearly four points higher on the post-test compared to those taught conventionally. Pre-test scores were also a significant predictor, $b = 0.65$, $SE = 0.26$, $t = 2.50$, $p = .017$, showing that higher baseline proficiency was associated with higher post-test performance. These results support the hypothesis that Progressive assessment enhances EFL learning outcomes beyond baseline ability.

In figure 4. adjusted post-test means at the average pre-test score were 2.98 for the Conventional group and 6.71 for the Progressive group, yielding an adjusted mean difference of 3.73 points. This difference was statistically significant, $b = 3.73$, $SE = 1.08$, $t = 3.45$, $p = .0015$. The effect size was Hedges' $g = 2.45$, indicating a very large practical impact of Progressive assessment on EFL learning outcomes.

8. Discussion:

This study implemented progressive assessment to examine its influence on English learners at the Faculty of Education in Misurata University. The findings support the hypothesis that progressive assessment enhances EFL learning outcomes. These results are in agreement with earlier studies, such as Sugiono (2022) highlighted the importance of using multiple progressive assessment techniques in English instruction. The study findings were supported by the claim that employing a variety of assessments allows their mutual support. Moreover, the frequency of progressive assessment develops regular study routines that can significantly improve students' performance (Saint et al., 2015). According to Korneva & Kuzmishina (2020), significant learning growth was observed in the performance of first-year students at the Faculty of Pedagogy and Psychology following the application of progressive assessment method. A systematic literature review of studies published between 2014-2024 by Solis et al. (2025) emphasized the importance of implementing specific feedback strategies that consider individual differences, in enhancing learning. Conclusions of this study should be reviewed in light of two limitations: The lack of prior studies on this topic within the Libyan context and the small sample size may affect the reliability of the findings. Based on the discussion above, the study highlights the need to train educators in various formative assessment techniques to promote education in Libya. Importantly, progressive assessment aligns with the two teaching approaches- flipped classrooms and the project-based learning- in emphasizing the importance of constructivist learning theory. Further studies could explore the impact of task type of progressive assessment on final scores.

9. Conclusion:

Applying progressive assessment in classroom pedagogy has a notable influence on EFL learning. The findings provide strong evidence against the null hypothesis (that there is not a meaningful difference in students' performance before and after applying progressive assessment) and in favor of the alternative hypothesis (that there is a meaningful difference in students' performance before and after applying progressive assessment).

In conclusion, this study is an important contribution to scientific research because it builds on prior studies by conducting the topic in a still unexplored context and supports the view that progressive assessment leads to improved final outcomes. Furthermore, it functions not only as an evaluation tool but also as a pedagogical strategy that can enhance learning.

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