

# The Effectiveness of Using Student-Created Questions for Assessing Their Performance in English Grammar/ Case Study of “King Abdullah II Schools for Excellence” In Jordan

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## Abstract

Learning a foreign language may create issues among students, as they may perceive it as complex, difficult, or alien. These feelings are harmful to forming a positive perception among students, regarded as one of the essential aspects of learning. This study aims to identify the effectiveness of using student-created questions for assessing students' performance in English grammar. The sample included 79 tenth-grade students in King Abdullah Schools of Excellence in Jordan. The study revealed that the student-centered approach is crucial in today's classrooms because it fosters students' feeling of self-efficacy and helps them see their potential. Particularly in the secondary and college levels, the active involvement of students is emphasised as bringing openness and creativity to a more conventional classroom. Students who are consistently engaged in the development of questions and self-evaluation are better able to recognize their areas of strength and weakness and are further motivated to engage in self-repair. Students perform better when assessments are used in the classroom that are focused on them as individuals. Since it promotes self-actualization, intrinsic motivation is more effective than extrinsic motivation. By taking into account, this component of education and student performance create a learning environment that can inspire students to learn on their own can help them build the mindset for lifelong learning. It gives students a sense of control in the classroom by using questions they have written as part of the evaluation process. As a result of these elements, students become more motivated as they actively participate in the teaching-learning process. The study recommends using the student-generated questions in the classroom as it leads to effective teaching as they help the students practice various writing and reading skills. In many instances, evaluation in the classroom utilizing student-created questions reveals a significant increase in writing and reading abilities. Using this kind of evaluation, students may also engage in healthy competition.

**Keywords:** student-created questions, assessing students' performance, English grammar, tenth-grade students, Jordanian students

## 1. Introduction

Evaluating student learning is one of the most important stages of the educational process, as it is the most related element to educational development following various philosophies. It is how those in authority over the "learning" and education processes can judge their effectiveness in terms of the required outcomes, their suitability to the level of students, growth, capabilities, and skills. This paper goes beyond the traditional understanding of the process of assessing student learning, which is based on showing students' "individual differences or skills, measured by arbitrary degrees that do not often reflect the reality of students' capabilities related to higher thinking processes, and their ability to formulate judgments, make decisions, and solve problems as skills enabling students to deal with rapid changes at a time when information technology and its developments have become a feature of this era and its gift."

Intrinsically, the new approach to evaluating education includes modern evaluation strategies based on methodological and scientific foundations, based on the reality of what students have learned, in a way that guarantees the quality of the process and outputs in terms of the extent of achievement for learning and its results, and his mastery of it (Grisham-Brown et al., 2006; Marzano, 2002; Napoli & Raymond, 2004; Tomlinson, 2001).

Self-evaluation, such as student-created questions, is a form of student participation in the structural evaluation of learning. It is considered an essential component of the student's independent learning, increasing his motivation and self-esteem, directing his view toward what he does and how he does it, and thus developing a critical and constructive mindset (Salahuddin, 2007). In addition to specifying the performance or achievement that will be evaluated as an indicator for the learner, including the activities and training, it contains elements to stimulate performance, such as class questions, discussions, and projects that students will be assigned to determine

the progression of their work and assess their levels (Al-Khalili, 1998).

Due to these developments and rapid changes, it was necessary to use new evaluation methods in which the student plays an active role, such as self-evaluation assessment, self-created questions, peer assessment, etc. These methods are used in an online learning environment. Through self-assessment and peer evaluation, students are responsible for evaluating learning outcomes, either for themselves or for their peers, in contrast to traditional semesters. From an educational perspective, the evaluation method is distinguished in that it allows students to become active participants in the evaluation process and notes their work and the work of their peers (Boud & Falchikov, 1998; Topping, 1989).

The emergence of peer and self-evaluation activities in e-learning environments is significant at the level of development of e-learning systems, as the trend of electronic self-evaluation and peer evaluation of the electronic form via the web has facilitated many of their procedures by overcoming time and place barriers, making time and space barriers more controlled, and making the regulations have a lot of flexibility, fairness, and transparency.

Walser's (2009) study focused on checking the effectiveness of self-evaluation from the viewpoints of students and teachers. The results concluded that the self-evaluation allowed students to rethink the course and their performance, helped them track their level, motivated them to work well in the course, and provided feedback to the teacher. From the viewpoint of teachers, the exercises provided helpful feedback that contributed to improving the understanding of the course, as well as facilitating interaction with students and establishing good relations between them. Schuessler's (2010) study aimed to find the motives and barriers to adopting teaching directed by self-evaluation in educational design for students. It found that the motives in the research sample for the use of self-evaluation through various means, such as student-created questions and other means, exceeded the obstacles that prevent its use. It revealed that the use of technology was not an obstacle in the application of self-evaluation, but rather it increased the ability of students to research.

### 1.1 Importance of the Study

The study highlights the significance of student-created questions as modern strategies followed for evaluating English language teachers working in King Abdullah Schools of Excellence in Irbid Governorate. Therefore, this study contributes to showing the impact of self-evaluation on the academic achievement of tenth-grade students, which contributes to providing a scientific research environment for those interested in self-evaluation and academic achievement.

### 1.2 The Problem of the Study

The world around us is witnessing a comprehensive development in the concept of evaluating student learning, its tools, and strategies, requiring teachers of different disciplines to use various modern evaluation strategies other than written tests, such as self-created questions, which they use to practice evaluating students' achievement or measuring learning outcomes. Therefore, recent trends show that the tests are only one of several other forms of evaluation (Abu Zainah, 2003). It is also clear from previous studies that there is a discrepancy in the evaluation strategies used within the classroom and that there are some other evaluation strategies that were not addressed by research or a study that measured the degree of their use in evaluating students' learning, such as a communication-based evaluation strategy and a self-review evaluation strategy through student-created questions. The paper aims to reveal the degree of English teachers' usage of self-evaluation strategies for students and train them to create questions about the material. Therefore, the problem of the study revolves around the effect of student-created questions regarding the achievement of students in 10th grade in English grammar through answering these questions:

1. Are there differences in the achievement of tenth-grade students in English grammar due to using the student-created question strategy compared to the traditional strategy?
2. Are there differences in the achievement of tenth-grade students in English grammar due to their gender?
3. Are there differences in tenth-grade students' knowledge of English grammar due to their GPA?

### 1.3 Definition of Terms

- *Evaluation* is a preventive, diagnostic, and therapeutic diagnostic process that aims to identify students' strengths and weaknesses and assess the extent to which educational goals are met and the effectiveness of the educational program (Shumway & Harden, 2003).
- *Self-assessment* is a process in which students conduct a self-review, assess the quality of their work and learning, assess the degree to which their work reflects goals based on performance indicators, identify their weaknesses and strengths, review themselves, and then develop their performance (Andrade & Du, 2007).
- *Peer assessment* is an "educational strategy" in which students provide each other with feedback or value each other's tasks (Topping, 1998).
- *Teacher-assessment*, procedurally, is a process through which the teacher evaluates the work submitted by students through an evaluation model in an electronic learning environment according to specific evaluation criteria and provides appropriate feedback to them to help students identify strengths and weaknesses, which helps to develop their performance.
- *Self-created Questions* are the questions that students raise as a means of self-evaluation.

## 2. Literature Review

The student-centred approach in modern-day classrooms is of great importance, as it helps portray students' capacity and develops a sense of self-efficacy within them. According to Bindelli et al. (2021), the active participation of students is highlighted, especially at the secondary and undergraduate levels, providing openness and innovation in an otherwise traditional classroom. Consistently active student participation in the creation of questions and self-assessment helps them identify their areas of strengths and weaknesses and further encourages self-repair. Implementing a student-centric approach to assessment in the classroom for education ensures that students perform more successfully.

Al-Azizi (2018) studied the influence of formative evaluation in enhancing the achievement level of a scientific research skills course for students at the "Faculty of Business Administration at Shaqra University." To achieve the goal of the study, the units of the headquarters of scientific research skills units were designed according to the strategy of formative evaluation. The researcher prepared an achievement test in the course of thought and research. The study used a semi-experimental approach by applying the study experience to determine the effect of formative evaluation on the academic achievement of third-year students. It revealed the superiority of the study sample student participants after using formative evaluation to assess academic achievement.

Khair (2015) studied the positive role of alternative educational evaluation in measuring students' achievement and evaluating their performance at different educational stages. The paper employs a descriptive-analytical data analysis approach to suit the study. According to the study, self- or alternative evaluation gives students and teachers the necessary feedback to review their performance and work. In addition, self-evaluation provides teachers with the necessary information about students, their abilities, and attitudes, positively affecting the learning process and curriculum development. The study provided specific recommendations, including persuading teachers to use the alternative calendar and hold teacher training courses related to alternative evaluation methods, tools, and strategies.

Khaji (2013) aimed to investigate the contributions of self-evaluation strategies to improving the quality of education. The researcher used a questionnaire containing several paragraphs to collect data for each of the parties involved in the educational process, whether the student or the teacher. The study has used the descriptive-analytic approach in data analysis. The sample was randomly selected from the Teacher Education Institute in Baquba in Iraq. The study's results indicated that using alternative evaluation strategies significantly improves the quality of education due to the teacher's self-development resulting from improving his skills and knowledge of all the elements that improve the student's skills and raise his skills. The study recommended that training programs be developed to train teachers in all specializations on using alternative strategies and tools for evaluation and incorporating them into decisions, as well as to educate students' families on the extent of the addition of alternative evaluation to improve their skills and raise their scientific competence, as well as the improvement it provides in the teacher's style.

Al-Zoubi's (2013) study sought to identify the degree to which mathematics teachers practice realistic evaluation strategies. It was conducted on a sample of 91 teachers in the district of Irbid Governorate in Jordan. The researcher developed a questionnaire consisting of three domains. The study found differences at the level of significance ( $= 05.0$ ) among mathematics teachers who use realistic evaluation strategies based on the gender variable to benefit female teachers but there were no differences in variables related to years of experience. The results of the study showed that several teachers practice realistic evaluation as it significantly impacts students, leading to an improvement in the level of education. Furthermore, it provided the teacher with more opportunities for self-development. The study recommended paying attention to the training of teachers and using strategies and tools for realistic evaluation, in addition to increasing interest in applying this type of evaluation in schools. The study recommends sensitizing students to the extent of the benefit that this type of evaluation and raising the level of skills and abilities they possess.

Instructional methods used for student-centred assessment further assist in building an interactive and collaborative environment within the classroom that encourages students to pursue further learning. Advancement in educational level entails the advancement of materials required to be studied. Students learning English may need help keeping up with the pace set by the instructors. Hence, with the student's involvement in question-making, assessment, and evaluation, the non-English-speaking students can demonstrate control over their pace of learning. According to Katawazai and Saidalvi (2020), a student-centric collaborative approach in a language learning classroom ensures that the students are allowed access to various resources. These resources are studied by the students and used further to form questions that have two-fold benefits in the learning process. Firstly, a student-centric and collaborative approach helps students gain more control over their learning process and enhances their motivation for learning. Secondly, the teacher can assess the rate of progress among the students and identify the overall learning dynamic in the classroom. Active student participation and forming a positive perception of the teaching-learning process are inextricably linked with academic excellence. According to Asmus (2021), educational psychology demonstrates the importance of forming a positive psychological framework for successful learning. It explains the importance of students' motivation and its relation to their ability to learn successfully.

As Vlachopoulos and Makri (2019) demonstrated, encouraging student participation is a part of student empowerment that ensures positive intrinsic motivation enhancement. Hence, for the sake of deepening logical and cognitive thinking abilities among the students, this approach is necessary. Various psychological benefits are thus attributed to student-centric activities, such as using student-created questions for assessment and evaluation. As per the statement of Hsu and Wang (2018), student-generated questions used in the classroom enhance comprehension skills among students regarding the given materials. Proper encouragement and guided instruction from the teachers in a language classroom effectively ensure that the students can develop individual comprehension regarding the same materials.

It can also create diversity within the classroom, and with proper nurturing from the teachers, a communal classroom environment is established that further encourages classroom diversity allowing students to form their understanding of the materials in the language classroom requires flexibility, which directs their analytical abilities toward learning. The role of motivation in foreign language can be illustrated in Figure 1.

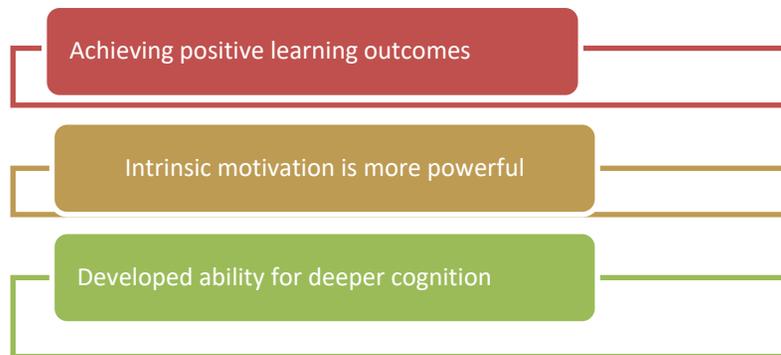


Figure 1. Role of Motivation in Foreign Language (Source: Self-created)

As stated above, motivation among students is essential for achieving positive learning outcomes. In many cases, learning English may decrease the motivation level among students due to a lack of understanding. As per the explanation of Howard et al. (2021), two types of motivations are experienced by individuals, namely intrinsic motivation and extrinsic motivation. Comprehensive studies on motivation have revealed that intrinsic motivation is more powerful than extrinsic motivation because it allows for self-actualization. Considering this aspect of education and student performance, developing a learning environment that can create intrinsic motivation among students can develop the mentality for life-long learning. Furthermore, using student-created questions for assessment helps to develop a sense of control within the classroom among the students. These factors increase motivation among students as they become active participants in the teaching-learning process.

Learning a foreign language may create issues among students, as they may perceive it as complex, difficult, or alien. These feelings are harmful to forming a positive perception among students, regarded as one of the essential aspects of learning. As per Vanov ás (2019) view, acquiring a new language may create problems among students due to their lack of familiarity with the foreign language and its culture. Students actively participating in the learning and assessment processes for language learning help to develop a positive perception of the language. It also encourages students to engage in active learning. Students learn the importance of developing an innovative and participatory mindset due to their developed ability for deeper cognition for analyzing the questions that can be assessed.

On the other hand, as Arruabarrena et al. (2019) explained, student-generated questions used in the classroom lead to effective teaching as they help the students practice various writing and reading skills. Tremendous improvement in writing skills is witnessed in many cases through assessment using student-created questions in the classroom. Additionally, healthy competition among students is also achieved through this approach to assessment.

The cooperative learning strategies are implemented for a student-centric approach to learning that increases student engagement are displayed in Figure 2.

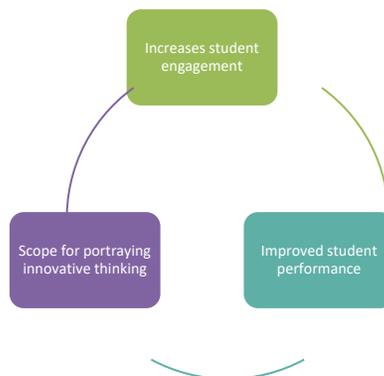


Figure 2. Cooperative Learning Benefits (Source: Self-created)

Cooperative learning strategies are implemented for a student-centric approach to learning increase student engagement. Increased student engagement is essential for improving student performance. However, certain limitations of this approach are also highlighted that may create barriers to positive learning and assessment. Aflalo (2021) argued that students must be appropriately guided to form questions that can be used for assessment. This student-centric approach to assessment is relatively new in teaching. Hence, a lack of experience and the unguided creation of questions by students may create barriers to proper assessment.

Curto Prieto et al. (2019) stated that assessment-type questions may be closed-ended or open-ended, depending on the evolution agenda. Open-ended questions can provide more scope for portraying innovative thinking and independent knowledge synthesis. In contrast, closed-ended questions are highly effective for evaluating acquired knowledge in a controlled manner. Additionally, students may find it challenging to comprehend the questions used for assessment and find themselves in an anxious spot. Some students may develop a dislike for this type of assessment method because they may need to express themselves during the question-creation process. Thus, these factors must be observed correctly, and proper strategies for positive outcomes must be implemented in the classroom. The benefits of coordination between the teacher and the students are illustrated in figure 3.

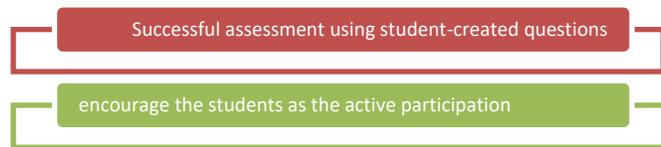


Figure 3. Benefits of Coordination Between the Teacher and the Students (Source: Self-created)

Coordination between the teacher and the students is critical for successful assessment using student-created questions, especially in a language learning class. However, the performance and achievement aspects are more likely to encourage the students, as their active participation is ensured. In contemporary teaching, student-centric activities are afforded great significance due to the positive response among students. According to Yang and Tan (2019), student-centric activities help to stimulate students positively, ensuring that their performance progresses gradually. It also helps create a dynamic learning space that allows the students to exercise control over their learning process. It is an undeniably effective method for increasing student participation and motivation, leading to successful outcomes.

In recent years, with the progression of technology, students have had access to a broader range of materials. It can be verified that students take individual responsibility to access the materials eagerly and learn by their strengths through student empowerment exploiting student-created question assessment. According to Qutieshat et al. (2020), the assessment and evaluation process helps teachers monitor students' progress. The involvement of students in this matter creates scope for rapid development among students as they can participate in the assessment process as well. According to Irsheid (2018), the student assessment process helps the teacher identify areas of development among students allowing students to participate in this process increases their sense of responsibility for learning and resolving issues in the learning process for future academic success.

### 3. Methodology

#### 3.1 Research Philosophy

The study adopted an ethical research philosophy that aligns with the research questions. The research, which aims to analyze differences in student achievement regarding using student-created questions for assessing English grammar among students, exhibits some dynamism. As per the words of Feenstra et al. (2021), adopting a specific research philosophy aids the researcher in following specific sets of principles in acquiring truth. Hence, the role of research philosophy is essential for deciding the principles upon which knowledge is attained objectively.

The positivist research philosophy is being selected for this paper for various reasons. As per the statement of Alharahsheh and Pius (2020), positivism helps gain insight into the patterns of the social world. The truth of knowledge is attained through objective observations of specific patterns seen in the world or society. Hence, this philosophy can achieve pattern recognition, which helps the paper fulfil its aim and objectives. According to Al-Ababneh (2020), positivist research philosophy ensures that the attainment of truth is conducted logically and objectively. Hence, as certain variables are involved in the research, this helps recognize a pattern, leading to objective conclusions.

The main reason for selecting positivism as a philosophy is its inherent principles, which enable researchers to analyze various aspects of a phenomenon. As per the statement of Chirkov and Anderson (2018), the core of scientific research should be rooted in discovering truth through analysis and evaluation. Selecting a specific research philosophy can provide the principles through which scientific values and patterns are observed objectively. As a result, to obtain scientific and conclusive results, this paper will draw on the principles defined in positivist philosophy.

### 3.2 The Study Population and Sampling Technique

All tenth-grade students from the selected school in Irbid, Jordan during the first semester of 2020/2021 (the academic year) were the population of the study. The study sample consists of 79 students in the tenth grade from the chosen Irbid school. The sample consists of two groups: an "experimental" group of 40 students and a "control group" of 39 students.

### 3.3 Research Approach

A deductive approach is appropriate for this study as it helps the data analysis process towards a comparative study of all the related variables. The variables concerned with the study are catalogued systematically, and proper analytical tools are adopted for gaining proper insight into the advantages obtained by using student-created questions for assessment among students.

As per the views of Benitez-Correa et al. (2019), the deductive approach to reasoning has been used for centuries for arriving at conclusions based strictly on the gathered information. This approach is beneficial for deriving the truth or forming a theory based on practical analysis and concrete evidence. It is further beneficial to analyze the differences in success between two different types of evaluation and teaching techniques concerning the paper's topic. The analysis process can logically demonstrate a string of connected yet contrastive data that are analyzed to reach the desired conclusion.

### 3.4 Research Design

A correlational research design ensures that the variables are observed scientifically to form a new theory or prove a hypothesis. Correlational research design is a scientific approach to observing independent and dependent variables. A correlational interpretation of various variables enables the researcher to conduct a formal comparative and contrastive study. Dearing and Zachrisson (2019) stated that correlational research design helps assume a pattern and recognize its authenticity. In essence, this research design helps analyze the relationship between the variables and define the common trends concerning the variables involved in the research. As the study focuses on examining the relationship between student achievement and student-created questions for assessment, it helps to define a proper relationship between these two. Furthermore, it helps to develop theories based on research objectives.

The interpretation process followed in this research design allows the researchers to acknowledge the patterns without manipulation or external control. According to Taskiran and Baykal (2019), correlational research design enables the researcher to interpret the strength of the relationship between the two variables. As a result, it is beneficial to define the constructed complexities and the impact of one variable on another to benefit the overall paper.

### 3.5 Data Collection Method

As mentioned above, the data collection process was conducted strictly through the application of tests in a controlled classroom, observing the performance of tenth-grade students. The data collection method, being primarily quantitative, helped to define the patterns and relations between the variables. Data collection from secondary sources was also included to build a foundation of knowledge on which further hypotheses could be proven. As per the discussions of Facca et al. (2020), the data collection method from various primary and secondary sources ensures that a multidimensional approach is being taken for thorough research. The main themes of the research were acknowledged during the data collection methods, both primary and secondary. Both primary and secondary resources were used for the development of knowledge that is based on existing and prominent patterns among the students. Secondary sources for the literature review were carefully evaluated for specific markers that ensure the inclusion of relevant and authentic sources.

#### 3.5.1 Research Instruments

To collect data, quantitative research employs tests and qualitative tools such as journal articles. A test was arranged for the tenth-grade students to evaluate their success rate and overall GPA. The test consisted of questions for English grammar achievement, and an assessment was conducted based on the test results. According to Sánchez-Alvarez et al. (2020), research tests are controlled to support a hypothesis. In doing so, the paper was able to construct questions that analyzed the achievement of each student and remove the scope for any ambiguity. As the group of students was divided into two groups of 40 and 39 students, the tests successfully demonstrated the scope of using student-created questions for assessment. The test questions were constructed for maximum insight into the topic and the experiment, thus demonstrating the correlation between the two variables. Therefore, tests, as this research's primary instrument, help gather adequate information for further analysis and interpretation.

##### 3.5.1.1 English Grammar Achievement Test

The "English Grammar Achievement Test" was created based on the factors identified while preparing the materials. It consists of 20 items of the "MCQ type," covering concepts. When preparing the items, the included hints for the correct answer which are necessary to remain free of ambiguity. On the other hand, one point was assigned to the correct answer whereas 0 was assigned to the wrong answer. Thus, the total score for the test was 20.

### 3.6 Validity and Reliability

Validity and reliability are specific concepts for determining the quality of research which are measured by analyzing the tests and analysis methods used for the research. As per the words of Amaratunga (2002), based on the validity and reliability of the paper, its importance in a particular field of the academic sphere is demonstrated. Additionally, the reliability of a research work means using good sources that have helped the paper make logical conclusions. Proper data collection and sampling techniques ensured the paper's validity,

followed by scientific and quantitative research approaches. This ensures that the study can provide accurate information and is not based on the imagination or pure assumptions of the researcher. Reliability ensures that the information provided in the paper is accurate and can later be used as a reliable source of reference for future studies in the field.

3.6.1 Validity of the Tool

Verifying the validity of the test, an arbitrator group from the faculty members at "Al-Balqa Applied University" and a group of English teachers were requested to judge on the following points: degree of matching the test paragraphs with objectives, the accuracy of the wording of the vocabulary, and offer necessary suggestions. Some adjustments were made based on the arbitrators' opinions, and the document was adjusted to its final form.

3.6.2 Reliability of the Tool

To calculate the reliability of the test, a sample of 25 students from the tenth grade who were not participants in the real study was selected. When evaluating the answers, the Koder-Richardson equation (20-KR) was used for measuring reliability.

3.7 Ethical Considerations

Ethical considerations were followed to ensure the research work's reliability and authenticity. They were maintained by adhering to the code of ethical conduct for academic research. As per the statement of Brittain et al. (2020), ethical considerations are observed in academic research to provide due respect and recognition for all the work used in a paper. Hence, a detailed bibliography was constructed, enumerating all the works used for the paper. Ethical considerations also ensure that accusations of plagiarism are avoided and that original ideas and theories are mentioned with honour before use in the paper.

Ethical considerations for primary sources, such as test participation, were also carried out. A participation form and a consent form were provided to the school authority and the parents of the students. The students were able to withdraw from the tests at any moment if faced with uncomfortable or stressful situations. Anonymity was maintained in the publication of the results. Participant's personal information was not used to maintain confidentiality. Hence, these measures help in maintaining the ethical considerations of the paper.

4. Findings

4.1 Control Group

The descriptive Statistics is presented in Table 1.

Table 1. The Descriptive Statistics

| <i>I</i>                |              | <i>I</i>                |              |
|-------------------------|--------------|-------------------------|--------------|
| Mean                    | 0.684210526  | Mean                    | 0.710526316  |
| Standard Error          | 0.076417502  | Standard Error          | 0.074557917  |
| Median                  | 1            | Median                  | 1            |
| Mode                    | 1            | Mode                    | 1            |
| Standard Deviation      | 0.471069121  | Standard Deviation      | 0.459605867  |
| Sample Variance         | 0.221906117  | Sample Variance         | 0.211237553  |
| Kurtosis                | -1.39484127  | Kurtosis                | -1.12714446  |
| Skewness                | -0.825545279 | Skewness                | -0.967012121 |
| Range                   | 1            | Range                   | 1            |
| Minimum                 | 0            | Minimum                 | 0            |
| Maximum                 | 1            | Maximum                 | 1            |
| Sum                     | 26           | Sum                     | 27           |
| Count                   | 38           | Count                   | 38           |
| Confidence Level(95.0%) | 0.154836567  | Confidence Level(95.0%) | 0.151068689  |

The control group is stated not to receive any specific treatment or rather have been inclined to receive only standard treatment (Wichadee & Pattanapichet, 2018). The independent variable remained the same in the control group, while the researcher for the experimental group transformed the independent variable. For the control group, two variables have been considered: statements containing questions on "student-created questions" and statements possessing "student's achievements" to perform descriptive statistics, ANOVA, correlation, and other statistical tests. The descriptive results show mean values as 0.68421 and 0.71052, while standard errors are 0.07641 and 0.07455. The median and mode values are displayed in Table 2.

Table 2. Correlation

| <i>I</i> |         | <i>I</i> |   |
|----------|---------|----------|---|
| 1        |         | 1        |   |
| 1        | 0.93953 | 1        | 1 |

The correlation test shows 1 as the result, which indicates the positive correlation between the chosen variables; however, the other values have been around 0.93953. Regression is presented in Table 3.

Table 3. Regression

| <i>Regression Statistics</i> |             |
|------------------------------|-------------|
| Multiple R                   | 0.939529696 |
| R Square                     | 0.882716049 |
| Adjusted R Square            | 0.879458162 |
| Standard Error               | 0.163551127 |
| Observations                 | 38          |

The regression results require the identification of the dependent (y) and independent variables (x) for performing the regression test (Zarinfard et al., 2021). The multiple R-value has been seen to be 0.939529 while the values obtained for the R square are 0.8827. The values for the adjusted R square are 0.87945, whereas the standard error value has been 0.16355. ANOVA is presented in Table 4.

Table 4. ANOVA

|            | <i>df</i> | <i>SS</i> | <i>MS</i> | <i>F</i> | <i>Significance F</i> |
|------------|-----------|-----------|-----------|----------|-----------------------|
| Regression | 1         | 7.247563  | 7.247563  | 270.9474 | 2.46974E-18           |
| Residual   | 36        | 0.962963  | 0.026749  |          |                       |
| Total      | 37        | 8.210526  |           |          |                       |

The ANOVA shows the significance of F value as 2.46974E-18, while the df values have been around 1, 36, and 37. The SS values are 7.247563, while the others are 0.962963 and 8.210526.

4.2 Experimental Group

The experimental group has been assumed to be the treatment group, where the researchers can change the respective independent variable. In this aspect, the researchers also conducted various statistical tests similar to what has been performed in terms of the control group to compare the results. The other independent variable is utilized to fetch the results, which is a "normal assessment method," as pointed out in the study. The experimental group is more inclined towards ascertaining the effect the researcher seems more interested in deriving for the study (Yavuz & Arslan, 2018). The descriptive statistics are presented in Table 5.

Table 5. Descriptive Statistics

| <i>I</i>                |          | <i>I</i>                |          |
|-------------------------|----------|-------------------------|----------|
| Mean                    | 0.692308 | Mean                    | 0.589744 |
| Standard Error          | 0.074871 | Standard Error          | 0.079793 |
| Median                  | 1        | Median                  | 1        |
| Mode                    | 1        | Mode                    | 1        |
| Standard Deviation      | 0.467572 | Standard Deviation      | 0.49831  |
| Sample Variance         | 0.218623 | Sample Variance         | 0.248313 |
| Kurtosis                | -1.31865 | Kurtosis                | -1.95917 |
| Skewness                | -0.86704 | Skewness                | -0.37966 |
| Range                   | 1        | Range                   | 1        |
| Minimum                 | 0        | Minimum                 | 0        |
| Maximum                 | 1        | Maximum                 | 1        |
| Sum                     | 27       | Sum                     | 23       |
| Count                   | 39       | Count                   | 39       |
| Confidence Level(95.0%) | 0.151569 | Confidence Level(95.0%) | 0.161533 |

The mean values were 0-692308 and 0.589744, while standard errors were 0.074871 and 0.079793. The median values have been around 1, along with the mode values. The standard deviations have been around 0.467572 and 0.49831. The correlation between the two variables is shown in Table 5.

Table 5. Correlation

| <i>I</i> |          | <i>I</i> |  |
|----------|----------|----------|--|
| 1        |          | 1        |  |
| 1        | 0.799305 | 1        |  |

The two variables have been correlated with each where the values have been obtained as 1 and 0.799305. the regression scale is displayed in figure 10.

Table 10. Regression

| <i>Regression Statistics</i> |          |
|------------------------------|----------|
| Multiple R                   | 0.799305 |
| R Square                     | 0.638889 |
| Adjusted R Square            | 0.629129 |
| Standard Error               | 0.303467 |
| Observations                 | 39       |

The multiple R-value is 0.799305, while the R square values are 0.638889 and 0.629129, respectively. The standard error value was found to be 0.303467. The ANOVA, part of the regression test, is shown in Table 11.

Table 11. ANOVA

|            | <i>df</i> | <i>SS</i> | <i>MS</i> | <i>F</i> | <i>Significance F</i> |
|------------|-----------|-----------|-----------|----------|-----------------------|
| Regression | 1         | 6.02849   | 6.02849   | 65.46154 | 1.05E-09              |
| Residual   | 37        | 3.407407  | 0.092092  |          |                       |
| Total      | 38        | 9.435897  |           |          |                       |

The ANOVA is part of the regression test, where the *df* values have been around 1 and 37 while the *SS* values are 6.02849 and 3.407407. The *MS* values have been 6.02849 and 0.092092.

## 5. Discussion

Results of the study indicate that the control group reflects the students' results and does not show significant changes. On the other hand, students in the experimentation group revealed that they are more inclined to receive adequate knowledge due to active participation in the process of evaluation and questioning. The experimental group students show that the *SS* values are 6.02849 and 3.407407. The *MS* values were 6.02849 and 0.092092 during the ANOVA test, indicating that most values are reliable and aligned with a greater population of students. In both cases, the students of two different groups benefit from the questionnaire provided to them.

The study shows that the students who created the questionnaires themselves for performance evaluation feel confident about their performances. This can be due to the spectrum of control provided to them. The confidence level in both groups is 95%, which indicates that the results are reliable among a broader population of students. The students in the control group are mostly habituated to the questions formulated by the teachers. On the other hand, recognizing the positive impact of self-made questions among the experimental group indicates that these teaching and performance evaluation methods can be beneficial in real time for schools as a student-centered and activity-oriented approach for teaching English grammar.

The study showed that employing alternative evaluation methodologies considerably raises educational quality. It allows teachers to grow personally by learning and mastering all the components that enhance student learning. According to the study, alternative or self-evaluation provides teachers and students the critical feedback they need to assess their work and performance. Also, self-evaluation gives teachers the required knowledge about students, their skills, and attitudes which favours the educational process and curriculum design. The teachers may utilize the alternate calendar and hold teacher-training sessions on different evaluation tools, methodologies, and tactics.

Also, the study's findings demonstrated that many teachers employ realistic evaluation because it positively influences students and raises educational standards. It gave the teacher greater chances for personal growth. The study advocates raising interest in adopting this kind of assessment in schools, paying attention to teacher training, and employing realistic evaluation methodologies and instruments (Al-Zoubi, 2013)

Using questions created by students in the classroom helps pupils understand the subject more fully. The teachers in a language classroom can successfully ensure that the students can acquire individual comprehension of the same contents by providing appropriate encouragement and guided teaching. It also fosters variety inside the classroom, and with the proper support from the teachers, a welcoming classroom atmosphere is formed that further promotes diversity. It takes flexibility to allow students to build their interpretation of the subject in the language classroom, directing their analytical skills toward learning (Hsu & Wang, 2018).

The motivation, intrinsic motivation and extrinsic motivation, that students feel promotes self-actualization. Considering this component of education and student performance, creating a learning environment that may inspire students to learn for themselves can help them build the mindset for lifelong learning. Also, it gives students a sense of power in the classroom by incorporating their questions as part of the evaluation process. As a result of these elements, students become more motivated as they take an active role in the teaching-learning process (Hsu & Wang, 2018).

Effective teaching is made possible in the classroom by using student-generated questions that allow students to practice various reading and writing abilities. By testing in the classroom utilizing questions developed by students, significant improvements in writing abilities are frequently observed. Using this kind of evaluation, students may also engage in healthy competition (Arruabarrena et al., 2019).

Due to the development of technology, students now have access to a wider variety of resources. It is demonstrable that students take personal responsibility for excitedly accessing the resources and developing their learning strategies through student empowerment and evaluation using questions they have generated themselves. The assessment and evaluation procedure aids teachers in keeping track of their students' advancement (Qutieshat, 2020). Students can improve quickly due to this participation since they can also participate in the evaluation process. Allowing students to participate in the student assessment process increases their sense of responsibility for learning and resolving issues in the learning process for future academic success (Irsheid, 2018). The student assessment process aids the teacher in identifying areas of development among students.

## 6. Conclusion and Recommendations

The research has been critical in identifying a unique way of making students study for the tenth-grade students with the assistance of student-created questions, where the students would get the opportunity to nudge themselves towards studying in a better way. The strengths and weaknesses of the students have been identified within the study. However, the researchers have successfully identified other strategies to make the students study even more instead of opting for this specific study technique.

The study recommends raising interest in adopting this kind of assessment in schools, paying attention to teacher training, employing techniques and instruments for realistic evaluation, and implementing these tools and strategies. The study suggests boosting students' skill and ability levels and making them more aware of how beneficial this kind of evaluation can be. The instructional strategies utilized for student-centered assessment are furthered by a collaborative and participatory learning environment in the classroom that motivates students to continue their education. The study suggests boosting students' skill and ability levels and educating them about the advantages of this kind of evaluation. The instructional strategies employed for student-centered assessment also contribute to creating a collaborative and engaging learning environment in the classroom that motivates students to continue their education.

The study recommends offering training programs created to educate parents of students about the extent to which alternative evaluation is added to improve their skills and raise their scientific competence, as well as the improvement it provides in the teacher's style. Teachers in all specialties should be trained on using alternative strategies and tools for evaluation and incorporating them into their decisions.

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## Appendices

### Appendix 1: Survey questionnaire for the control group

Sample size in control group= 39

Please rate the following responses:

1=yes and 0=no

20-item multiple-choice questions

### Demographic Questions

#### 1. Age

a) 15-16 years

b) 16-17 years

#### 2. Gender

a) Male

b) Female

### Survey Questions:

Table 1. Control group

| Statements  | 1 | 0 |
|---|---|---|
| 3. Student-created questions contain questions on a noun that is required to be incorporated within a sentence.   |   |   |
| 4. Student-created questions Possess questions on verbs that add meaning to a sentence.   |   |   |
| 5. The assessment method through the use of student-created questions has questions on adverbs that ensure modification of the verbs in a sentence.   |   |   |
| 6. The student’s achievement is understandable through the understanding of the adjectives that are important to describe a thing in a specific sentence.   |   |   |
| 7. Student-created questions help in understanding the subject within a sentence.   |   |   |
| 8. The predicate states something about a specific subject that is also understandable in a student-created question.   |   |   |
| 9. The student’s achievement is understandable through understanding of the pronoun.  |   |   |
| 10. Singular and plural pronouns are used to enhance a sentence and specify the student’s understanding, achievement, and grasp of English grammar.   |   |   |
| 11. There are different varieties of pronouns used in sentences that can enhance a student’s achievement.   |   |   |
| 12. Relative pronouns establish relations between two different sentences and need to be part of the student-created question.  |   |   |
| 13. Demonstrative pronouns signify specific objects in a particular sentence, which needs to be incorporated into a student-created question.   |   |   |
| 14. The student-created questions indicate the use of a common noun that is found to describe an individual, place, concept, and others.  |   |   |
| 15. Student achievement is assessed by describing the use of a proper noun, which cannot be changed in a sentence because it specifies the name of a person, place, or thing, among other things. |   |   |
| 16. Student-created questions need to contain questions on a collective noun, which is synonymous with a particular group of either animals or things.  |   |   |
| 17. The student-created question is required to contain questions on an abstract noun.  |   |   |
| 18. Verbs and adverbs make a sentence more meaningful and are required to be incorporated in a student-created question to improve the student’s achievement.                                     |   |   |
| 19. Adjectives tend to cause restriction in understanding the meaning of either a noun or a pronoun, and questions on adjectives are important for student-created questions.                     |   |   |
| 20. The subject and predicate can either be an essential part of a sentence or a clause within the question.  |   |   |
| 21. An adjective offers more information on a particular noun or pronoun, and thus, a student’s achievement depends on knowing the adjective.   |   |   |
| 22. A sentence is often stated to be well-constructed within a student-created questionnaire if that sentence contains a noun, verb, adverb, adjective, and others.                               |   |   |

(Source: Self-developed)

**Appendix 2: Survey questionnaire for experiment group**

The experimental group has a sample size of 40 people.

Please rate the following responses:

1=yes and 0=no

20 items of multiple choice questions

**Demographic Questions**

1. **Age**
2. a) 15-16 years
3. b) 16-17 years
4. **Gender**
5. a) Male
6. b) Female

**Survey Questions:**

Table 2. Experimental Group

| Statements   | 1 | 0 |
|--|---|---|
| 3.Normal assessment methods must access noun knowledge.  |   |   |
| 4. The methods of normal assessment have the potential to evaluate the understanding of verbs as an important part of speech.  |   |   |
| 5. Normal assessment methods To distinguish it, ask questions about adverbs and verbs.   |   |   |
| 6. The student’s achievement is understandable through the results of normal assessment methods.   |   |   |
| 7. The student’s achievement regarding subject and predicate can be understood through simple and normal methods on assessments.   |   |   |
| 8. The predicate states about specific subjects that can be understood using standard assessment methods.  |   |   |
| 9. The student’s achievement is understandable through understanding of the pronoun.   |   |   |
| 10. Singular and plural pronouns are used to enhance a sentence and specify the student’s understanding, achievement, and grasp of English grammar.  |   |   |
| 11. There are different varieties of pronouns used in sentences that can enhance a student’s achievement.  |   |   |
| 12. Relative pronouns establish relations between two different sentences and need to be part of the normal assessment method.   |   |   |
| 13. Demonstrative pronouns signify specific objects in a particular sentence, which needs to be incorporated within normal assessment methods.   |   |   |
| 14. The normal assessment methods indicate the use of a common noun that is found to describe an individual, place, concept, and others.   |   |   |
| 15.Student achievement is assessed by describing the use of a proper noun, which cannot be changed in a sentence because it specifies the name of a person, place, or thing, among other things. |   |   |
| 16. Standard assessment methods must include questions about the collective noun, which is synonymous with a specific group of either animals or things.   |   |   |
| 17. As part of standard assessment methods, questions on an abstract noun must be included.  |   |   |
| 18. Verbs and adverbs make a sentence more meaningful and are required to be incorporated in normal assessment methods to improve students' achievement.   |   |   |

|   |  |  |
|---|--|--|
| 19. Adjectives tend to cause restrictions in understanding the meaning of either a noun or a pronoun, and questions on adjectives are needed to be included within normal assessment methods. |  |  |
| 20. The subject and predicate can either be an essential part of a sentence or a clause within the method.  |  |  |
| 21. An adjective offers more information on a particular noun or pronoun, and thus, a student's achievement depends on knowing the adjective.   |  |  |
| 22. A sentence is often stated to be well-constructed, and those sentences are asked through normal assessment methods.   |  |  |

(Source: Self-developed)

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