

# Integrating Formative Assessment in Hybrid Pedagogy in Higher Education: From Theory to Practice

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## ABSTRACT

Educational policies on teaching, learning, and assessment have been reexamined and redefined under the influence of emerging theories and research findings, as well as various political, cultural, and social changes, particularly intensified after the Covid-19 pandemic outbreak. Newly created online and hybrid teaching and learning environments spurred policymakers and educators to adapt the existing educational practices to these educational contexts and improve the quality of teaching they provide. This paper focuses on the importance of creating a meaningful assessment framework in higher education that effectively responds to the demands of hybrid pedagogy. It aims at providing an instructional assessment framework that supports not only assessment of learning but also assessment as/for learning, reporting on the case study researching the correlation between utilizing formative assessment practices and learning outcomes. The case study involves three groups of students who attended the English Syntax course - one experimental and two control groups. The research is based on the analysis of the results obtained from two midterm tests done by all students, and from ten continuous assessment tasks done by the experimental group. Descriptive and inferential statistics were used for the analysis of the results, and the paired sample *t*-test results show that there is a significantly higher difference between the scores obtained on midterm test 1 and midterm test 2 by the Experimental group than by the control groups, which leads to the conclusion that there is a positive correlation between learning outcomes and the integration of formative assessment in teaching and learning processes.

**Keywords:** formative assessment practices, feedback, hybrid pedagogy, learning outcomes, educational technologies

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## 1. Introduction

Technological advancements and digital transformation had become an integral component of educational sectors worldwide long before the Covid-19 pandemic crisis affected education institutions to heavily rely on online teaching and learning environments and use various digital platforms and tools. Nonetheless, the abrupt and unprecedented overnight switch to exclusively online teaching and learning organization has accelerated the inexorable development of digitalization of educational systems that will never be the same as prior to the pandemic (Bećirović, 2023). Consequently, the need for adaptation to the newly created educational contexts and frameworks and developing teaching, learning, and assessment strategies that will effectively and purposefully respond to these changes has arisen and made researchers, educators, and policymakers challenge and reexamine the existing practices.

With the aim to support and engage learners, deepen their understanding, develop competences needed for the 21st-century demands, and enhance learning outcomes, various approaches to pedagogy have been proposed for the last several decades. The introduction of the digital component in education has added more layers to the existing pedagogical tenets



and practices that demand a careful and systematic approach to aligning the existing pedagogies on the one hand and digital transformation, on the other, and, thus, providing a sustainable framework capable of responding to the challenges imposed on educational systems.

Engaging students and organizing classes in compliance with the learner-centered approach have become imperative at all levels of education regardless of the teaching and learning environments - exclusively in-person, only online, or hybrid. Additionally, the inseparable interconnection of teaching, learning, and assessment has been emphasized to represent an in-depth model that provides a sound basis for achieving the defined learning outcomes. The use of technology can greatly support such a model making it more coherent, wherein these three components are more easily aligned and interdependent.

As online and hybrid teaching and learning environments have become more common nowadays in higher education, the need for devising assessment strategies that would effectively respond to such complex and multi-layered contexts has been identified and emphasized. Assessment, in a broader sense, implies the activity of monitoring students' progress, and, as an integral part of education, is directly related to the curriculum, learning process and learning outcomes, and teaching practices and methods. Although both formative and summative assessments contribute to a more comprehensive insight into student's progress and achievements, it has often been emphasized that formative assessment is not encouraged and implemented enough at the tertiary level and universities should invest more resources in research and provide evidence-informed approaches to formative assessment (Morris et al., 2021).

This paper reports on the findings obtained from research conducted during the first semester of the academic year 2022/2023, with a group of students who attended the one-term English Syntax course at the English Studies Programme at a private university in the Republic of Serbia. The aim of the research was to gain a better insight and understanding of the effects of applying formative assessment principles in a higher education context that is strictly defined by the official exam framework. This paper focuses on the characteristics of continuous assessment practices and the use of digital tools in hybrid teaching and learning model, the purpose of which is to investigate their effects on students' progress and learning outcomes, i.e., to determine whether there is a difference in students' test results when they are regularly involved in formative assessment practices. The goal of the paper is to promote a more evidence-informed approach and evidence-based practices for assessment in higher education by presenting the results of research conducted within an instructional assessment framework created to respond to the demands of hybrid pedagogy in higher education.

## 2. Literature Review

Emerging learning theories and research findings have had a considerable impact on educational policies regulating teaching, learning, and assessment practices in all educational stages. There has been a great shift in educational strategies and refocusing attention from teaching to learning, with an emphasis on the learner-centered approach that has been promoted for decades and prioritized in UNESCO's global agenda for education and development by 2030 (UNESCO, 2016). Adjusting teaching practices and activities to students' needs, i.e., creating a learner-centered teaching environment can greatly contribute to enhancing learning and greater success for students (Wright, 2011). Emaliana (2017) considers the learner-centered approach, which takes into consideration the needs of the students as a group and as individuals, to be a link towards flexible, experiential, and self-directed learning.

As an essential element of the learning process, assessment has been acknowledged to contribute to creating a qualitative and purposeful framework for teaching and learning (Fernández, 2017). The issue of applying formative assessment and providing students with regular feedback has received considerable attention in research and various documents regulating teaching, learning, and assessment practices. Still, even though continuous assessment practices have been recognized as rudimentary aspects of learning at all educational levels, the literature shows the gap between theory and practice in higher education, and there is not enough evidence that proves effective formative assessment practices that contribute to a sustainable course design and delivery (Moris et al., 2021).

## **2.1. Hybrid Pedagogy**

The integration of technology in education has considerably enhanced possibilities for students' continuous professional and personal development, and the use of educational technologies has challenged exclusively face-to-face teaching and learning environments, encouraging both educators and students to reconceptualize their roles and responsibilities, and the options available for meaningful and purposeful learning. As a result of the integration of technology into the educational processes, blended learning, which combines traditional face-to-face teaching and the use of learning technologies, became a desirable model in many educational institutions worldwide. Gradually, as the division between online and offline spaces became less distinct and the needs of learners made these spaces more intertwined and mutually overlapping in both synchronous and asynchronous modes, the more common term has been used lately - hybrid learning, or, rather, hybrid approach to teaching and learning. Although many authors still use blended learning and hybrid learning synonymously, there has been a tendency lately to use the term "approach" to a more complex organization of online and offline teaching and learning practices - it is more than just presenting lessons in both modes. The hybrid approach incorporates both formal and informal contexts, and it uses both analogue and digital media (Munday, 2022). Munday also suggests that the hybrid approach is comprehensive and more demanding because it requires an educator to reorganize lesson delivery, reexamine classroom management elements, ensure qualitative feedback, and improve communication among students, adjusting all these elements to both modes of delivery. Central to hybrid pedagogy is the concept of inclusiveness that does not include only teaching that takes place partially online, but represents a new methodology and its focal part is "pedagogy in a hybrid context and not emerging trends in educational technology" (Carrasco & Johnson, 2015: 3).

Hybrid pedagogy offers a framework for a qualitative implementation of a student-centered approach and a wide range of possibilities for learners, ensuring their engagement, and allowing students to self-pace and take responsibility for their own learning (Linder, 2017). Although the concept of Technology Pedagogical Content Knowledge, or TPACK, is widely used to promote the integration of technology in higher education, Munday (2022) states that there is a gap between theory and practice illustrating the claim with the conclusion drawn from a JISC (2020) Teaching Staff Digital Experience Insights Survey that a number of teachers never created interactive classes or used any digital tool to mediate a more effective hybrid teaching and learning practices.

## **2.2. Formative Assessment**

As an integral part of education, assessment is in close relation with teaching and learning, and the three processes cannot be perceived in isolation - they are mutually intertwined and highly affect each other. Assessment is also perceived as a vital component needed for

effective learning; it shows the progress of learning (Gikandi et al., 2011). The commonest classification into formative and summative assessment illustrates two very important properties of assessment: to support learning and to verify what has been achieved. Although these two types are often contrasted, they are not fixed but rather complement each other.

Summative assessment, as an assessment of learning that provides a learner with a final score or a grade as a verification of the level of learning achievement, still dominates various formal and informal educational landscapes. However, there is a growing tendency among researchers, policymakers, and practitioners to examine and integrate various opportunities for assessing students' progress over time, thus providing a learner with valuable feedback about their learning progress. Unlike summative assessment which takes place after a period of instruction and verifies the level of the achieved learning outcomes, formative assessment promotes learning in the sense that a learner has the opportunity to amend the mistakes, focus on those aspects that need to be worked on more, thus improving and being able to progress. Other terms found in studies researching formative assessment are assessment for learning, assessment as learning, continuous assessment, or feedback; additionally, due to its characteristic of being an inherent part of classroom practices, not a separate activity, formative classroom practice is used synonymously (Andersson, 2017).

The importance of incorporating formative assessment in everyday teaching and learning practices has been identified by many authors and researchers who emphasize various benefits for both teachers and learners, making teaching, learning, and assessment a coherent process. On the one hand, the information teachers gain from continuous assessment tasks can be used as a diagnostic tool, as well as an indicator of how to improve the instruction (Boston, 2019), which contributes to developing instructors' teaching competences. Andersson (2017) reports on the results obtained from a study conducted with a group of Year 4 teachers in a Swedish mid-sized municipality who participated in a professional development programme whose aim was to improve teachers' skills in applying various strategies for formative assessment. The reported results illustrate the complex nature of formative assessment when applied in practice, with the main conclusion relating to major changes in both teaching and learning practices (Andersson, 2017).

On the other hand, providing feedback through formative assessment aims at helping students identify learning goals and encourages students to develop effective learning strategies (Gikandi et al., 2011). Additionally, formative assessment practices can contribute to creating new learning opportunities, and motivate students to enhance autonomy in learning. In his study (2021), Leenknecht investigated formative assessment and students' autonomous motivation, concluding with a positive relation between the use of formative assessment and students' feeling of being autonomous in learning, and providing guidelines for applying formative assessment in teaching effectively. Research findings show a strong correlation between students' achievement and various formative assessment strategies, such as teachers' teaching practices modified according to the feedback on learners' progress, and students' self-assessments done based on the feedback received on the learning progress (Andersson, 2017).

### **2.3. Formative Assessment in Hybrid Pedagogy**

Learner-oriented assessment, as an integral segment of the learner-centered approach, has been incorporated into various documents regulating education practices at all levels. The evidence of applying formative assessment strategies has been found in research work reporting on practices in primary and secondary schools; yet, the practice of applying

formative assessment strategies has not been sufficiently documented at the tertiary level (Morris et al., 2021).

Online teaching and learning environments have greatly affected not only the organization of teaching and learning practices but assessment as well. The existing assessment strategies have been reexamined in the online environment, supported by diverse techniques of assessing learning which have emerged as a result of ever-growing possibilities of technology integration in the classroom. Furthermore, formative assessment in the hybrid environment is even more complex since the teacher has a demanding task to create meaningful assessment activities that will be inclusive for both modes of delivery - in-person and online. By creating such activities for the hybrid delivery, pedagogy, as an overarching system containing assessment strategies, should be respected. Some researchers focused on pedagogical perspectives of online formative assessment (Chung, et al., 2006; Vonderwell, et al., 2007), emphasizing the positive effect of formative assessment practices on learning.

Technology provides a wide range of opportunities for effective, engaging, and motivating assessment practices and valuable learning experiences. Various digital tools are available in both synchronous and asynchronous models of interaction, thus providing excellent assessment options in the context of a hybrid learning environment. Integrating digital tools in formative assessment practices offers more meaningful and purposeful feedback to learners and teachers. Students can get immediate feedback, which will further enhance learning and increase learning outcomes (Baleni, 2015). Various interactive quizzes, surveys, and game-based assessment tasks can be rather motivating to students, the use of which can improve students' achievements and result in better learning outcomes (Gavranović & Veljković Michos, 2022; Black & William, 2009). Embedding quizzes and tests into teaching practices has been proven to be beneficial because both students and teachers easily identify errors students have made so that they can particularly focus on clarifying them afterwards (Morris et al., 2021). Peterson and Siadat (2009) conducted a case study with a group of mathematical students with the aim to evaluate the effect of continuous assessment quizzes. The results showed that those students who participated in these quizzes scored better in summative examinations at the end of the term than those who did not. Additionally, teachers can collect a significant body of information on students' progress in a very short time, reaching all students - those who have face-to-face interaction and those who are not physically present. The use of digital tools in the hybrid model, if done correctly, can respond to many challenges related to assessment practices, one of them being reliability in online environments (Baleni, 2015). Such threats occurring in online environments can be addressed effectively with the integration of continuous assessment tasks that are supported by the options digital tools and applications can offer.

### 3. Method

This paper studies formative assessment practices in higher education and the effects they have on students' learning outcomes, students' attitudes towards the use of continuous assessment, and the way instructions can be adapted and modified as a result of the obtained feedback. The research is based on the analysis of the results of ten continuous assessment tasks and two midterm tests done by second-year undergraduate students majoring in English at Singidunum University, the biggest private university in the Republic of Serbia. The study reports on the results obtained from two groups of students who attended the same course during two consecutive academic years 2021/2022 and 2022/2023. After the Covid-19 pandemic crisis and changes imposed on educational systems, the overall organisation of teaching, learning, and assessment at the university has been done in a hybrid model -

students have the option to attend the classes and actively participate in all activities either face-to-face or online (via Microsoft Teams platform), and all teaching and learning materials and video recordings of classes are available to students on the platform. This study aims at exploring the correlation between formative assessment practices and students' learning outcomes. Its goal is also to examine students' attitudes towards such practices and the effect the integration of continuous assessment has on teaching practices.

During the academic year 2021/2022, students attended English Syntax classes for one semester and were obliged to do two midterm tests as prerequisites for the final exam. These midterm tests were done electronically and comprised 30 multiple-choice questions each. The final test was taken orally. This group of students (Control group 1, the total number of students amounts to 58) was motivated to participate in all activities in the class, regardless of whether they attended the classes in person or online, but they did not do regular tasks that were designed with the aim to provide systematic feedback with concrete data on the achievement. With the aim to integrate a systematic approach to formative assessment practices, during the academic year 2022/2023, the researcher introduced continuous assessment tasks as an integral part of every lesson. The researcher focused on the same content, aims, and learning outcomes as in the year 2021/2022, applying the same teaching methods and approaches, with the only exception of introducing interactive tests/quizzes (via Quizizz application) as a means of collecting information on students' learning progress. Tests comprised tasks of various types (completion tasks, cloze-ended, multiple-choice questions, testing both theoretical knowledge and practical examples of the application of theory) and were designed to focus on the aimed content for every lesson. One group of students (Experimental group, the total number of students amounts to 34) did these tasks regularly - for five weeks before the first obligatory midterm test, and for another five weeks before the second obligatory midterm test. The other group (32 students, Control group 2) did only two obligatory midterm tests, without the experience of receiving regular feedback on the learning progress throughout the course. After the second midterm test, the students from the Experimental group did an anonymous survey conducted electronically, consisting of 8 close-ended questions, based on a Likert rating scale from 1 to 5, measuring students' attitudes and opinions regarding the formative assessment practices they had experienced in classes, and one open-ended question where they could make any comment related to the issue of the survey.

The research sample comprises results data obtained from one experimental and two control groups. The experimental group did ten continuous assessment tests which were not obligatory and were an integral part of each lesson, and two obligatory midterm tests taken by all the respondents. The control groups did only two obligatory midterm tests.

In this research, we used descriptive and inferential statistics for the quantitative analysis and summary of the collected data, and drawing conclusions about the effects of applying continuous assessment practices on learning outcomes. The results obtained from all these tests are presented in tables, formatted as a percentage of correct answers, and subsequently described, compared, and analyzed. We used the paired sample *t*-test to compare both midterm test data obtained from the Experimental group, Control group 1, and Control group 2, with the aim to determine whether there is a difference in the first and second midterm test results. Additionally, the data obtained from the survey were also represented statistically, whereby for each statement, the students could choose one of five categories of agreement, from the one whose value is marked with 1 and reads "I completely disagree" to the category "I completely agree", which is valued by the number 5. The answers obtained from the open-ended question were analyzed inductively and described according to the commonest denominator.

### 3.1. Formative Assessment Tasks Employed in Classes

With the aim to improve teaching, learning, and assessment practices by utilizing the possibilities technology and hybrid environment can offer, the researcher introduced formative assessment tasks as an integral part of every lesson. These tasks, which were devised within the Quizziz application, were given to students regularly, and students could do them during classes, in a synchronous mode (regardless of whether they attended the classes in person or online via Microsoft Teams meeting), or after the classes, in an asynchronous mode (this was exclusively used by those students who used distance-learning possibilities). In other words, the researcher devised these tasks and used the option "assignments" which means that the tasks were available to all students for 48 hours so anyone who did not do them during the class could do them afterwards. The researcher opted for the Quizziz application for the following reasons: it provides various options and different task types (multiple-choice, fill-in-the-blank, matching, drag-and-drop); students receive immediate feedback (in the form of correct or incorrect answers), the instructor receives immediate feedback on students' learning outcomes (statistics related to the percentage of accuracy at the level of the whole group, for each question, the information about the time spent on the task, a report on each student's results); it is convenient to administer (students attending in person and online can equally participate, the option that bridges the gap between the online and physical presence of attendees), it is available in synchronous and asynchronous modes; it is game-based and interactive.

The tasks the researcher devised for every lesson comprised 10-15 questions each examining whether the students understood theoretical concepts covered during the class and the application of theory in concrete examples. The following examples illustrate questions taken from one task that focused on students' understanding of theory related to sentence structure (Example 1, multiple-choice question), and the application of theory (Example 2, fill-in-the-blank question):

*Example 1:*

*Circle the statement which is not correct:*

- a. All sentences must have at least one dependent clause.*
- b. Simple sentences can also be long and complicated provided they have a subject and a verb.*
- c. A complex sentence has at least one dependent clause.*
- d. A complex-compound sentence contains at least two independent clauses and at least one dependent clause.*

*Example 2:*

*In terms of structure, the sentence "Having done all the work, she went to sleep" is \_\_\_\_.*

After each task, the researcher analyzed the results with all the students who attended the lesson, regardless of whether they were physically present or online in a synchronous mode. The immediate feedback the students received upon completing the task helped them focus on those aspects that needed to be improved, and thus they could take control over their process of learning. On the other hand, the researcher used the feedback on students' results and adapted her instructions accordingly. Additionally, after the lesson, the researcher could also obtain information related to the learning outcomes of those students who were not present in the class but did the tasks in an asynchronous mode, as an assignment, and get a more comprehensive insight into the process of learning of all students who participated in these activities. Such a design provided a more inclusive teaching, learning, and assessment framework that utilized the possibilities of technology-integrated practices with clear pedagogical goals.

#### 4. Research Results

During the academic year 2021/2022, a total number of 58 second-year students attended and took two midterm tests as prerequisites for taking the final exam in the mandatory course English Syntax. The tests comprised 30 multiple-choice questions each, combining understanding of theoretical notions related to English Syntax and concrete examples that required proper application of theory in practice. The average score at the level of the whole group (Control group 1) on the first midterm test was 57.07%, and on the second midterm test, the average result was 63.68% of correct answers.

As regards the generation of students who attended English Syntax classes during the academic year 2022/2023, the data collected relates to two midterm tests (also containing 30 multiple-choice questions, very similar to those done by the Control group 1, only slightly modified in terms of clarity of instructions) done by all students and results obtained from continuous assessment tasks done by the Experimental group (as a part of the integration of formative assessment practices). Table 1 shows the results obtained from both groups - Experimental and Control group 2, taken from the statistical test scores of 10 continuous assessment tests and the two midterm tests.

Table 1.

*Continuous Assessment Tasks and Midterm Tests Results*

	Number of students	Average value (%)
Task 1	34	38
Task 2	34	43
Task 3	34	54
Task 4	34	47
Task 5	34	52
First Midterm 1.1 - Experimental group	34	63.12
First Midterm 1.2 - Control group 2	32	58.23
Task 6	34	53
Task 7	34	46
Task 8	34	49
Task 9	34	56
Task 10	34	72
Sec. Midterm 1.1 - Experimental group	34	77.63
Sec. Midterm 1.2 - Control group 2	32	66.04

Figure 1 illustrates the first midterm results distribution, whereby the horizontal axis denotes the group and the vertical axis relates to the average value expressed in percentages.

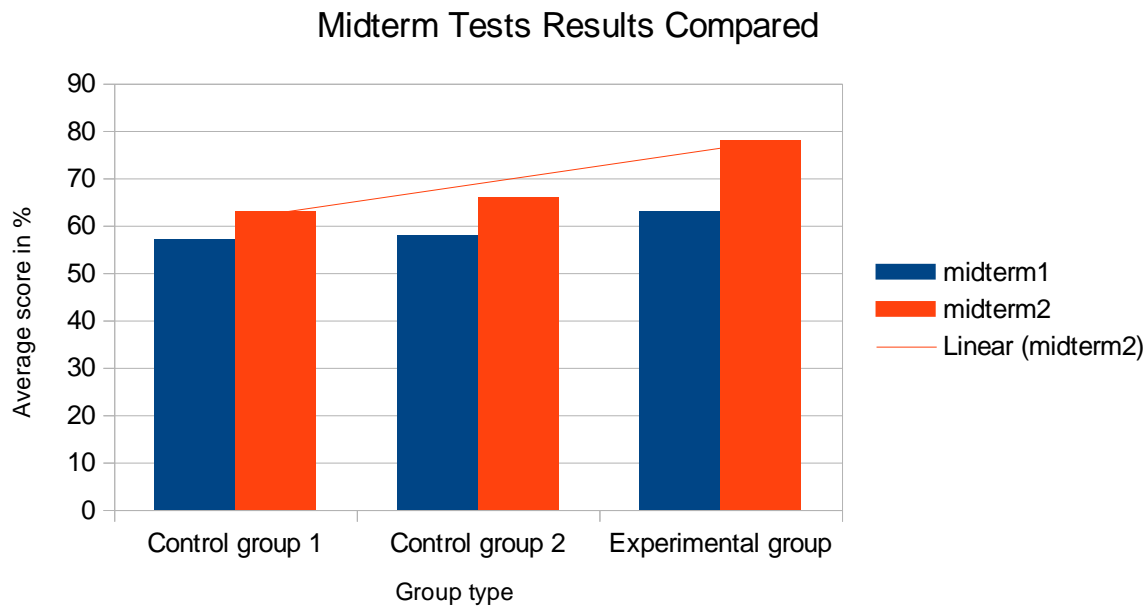


Figure 1. First and Second Midterm Tests Results Compared

In order to determine the mean difference between the values of two midterm test results obtained by all three groups, the paired sample *t*-test has been conducted. Table 2 shows the paired samples statistics of the midterm test results comprising data related to each variable (midterm test 1 and midterm test 2) of each pair (Experimental group, Control group 1, and Control group 2), mean values, the sample size (N), standard deviation, and standard error mean.

Table 2.  
*Paired Samples Statistics*

Pair	Variables	Mean	N	Std. Deviation	Std. Error Mean
Experimental Group	Midterm Test 1	63.12	34	17.09	2.93
	Midterm Test 2	77.63	34	12.31	2.11
Control Group 1	Midterm Test 1	57.07	58	16.67	2.19
	Midterm Test 2	63.68	58	16.04	2.11
Control Group 2	Midterm Test 1	58.23	32	16.78	2.97
	Midterm Test 2	66.04	32	13.02	2.3

Statistical data related to the correlation between the two variables, and the Pearson correlation coefficient with a two-tailed test of significance (Sig.) is given in Table 3.

Table 3.  
*Paired Samples Correlations*

		N	Correlation	Sig.
Experimental Group	Midterm Test 1 & Midterm Test 2	34	0.86	0
Control Group 1	Midterm Test 1 & Midterm Test 2	58	0.83	0
Control Group 2	Midterm Test 1 & Midterm Test 2	32	0.86	0

Table 4 provides the hypothesis test results comprising the following data: the difference between the two variables (Mean), standard deviation values, standard error mean with the

upper and lower values of the confidence interval, the test statistics for the paired test ( $t$ ), the degree of freedom ( $df$ ) for the test, and the 2-tailed coefficient ( $Sig.$ ).

Table 4.  
*Paired Samples Test*

		Paired Differences			95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	$t$	$df$	Sig. (2-tailed)
Experimental Group	Midterm Test 1-Midterm Test 2	-14.51	9.07	1.56	-17.67	-11.35	-9.33	33	0
Control Group 1	Midterm Test 1-Midterm Test 2	-6.61	9.46	1.24	-9.1	-4.12	-5.32	57	0
Control Group 2	Midterm Test 1-Midterm Test 2	-7.81	8.78	1.55	-10.98	-4.65	-5.03	31	0

From the results obtained by the use of the paired sample  $t$ -test, we can notice the following:

- Midterm test 1 and midterm test 2 results are positively correlated ( $p < 0.001$ ).
- On average, standard deviation value is lower for the Midterm test 2 than for the Midterm test 1 for all three groups. Standard deviation value for the Midterm test 1 is rather similar for all groups - 17.09, 16.67, 16.78 for Experimental Group, Control group 1, and Control group 2, respectively. On the other hand, the lowest standard deviation value for the Midterm test 2 has been obtained from the Experimental group (12.31); insignificantly higher value (13.02) has been obtained from the Control group 2 (13.02), whereas the highest standard deviation obtained for the Midterm test 2 has been measured for the Control group 1 (16.04).
- For all three groups, mean values are higher for Midterm test 2 compared to Midterm test 1: 63.12:77.63, 57.07:63.68, and 58.23:66.04 for Experimental group, Control group 1, and Control group 2, respectively.
- Finally, the difference between midterm test 1 and midterm test 2 is the highest for the Experimental group, with the mean value of 14.51. Significantly lower mean values have been measured for Control group 1 (6.61), and Control group 2 (7.81).

Apart from the statistics related to the analysis of the test result scores, this research also aims at investigating students' attitude towards the use of continuous assessment practices as an integral part of the teaching and learning process. For the purpose of obtaining information related to their opinions and attitudes, students who took continuous assessment tasks regularly did an electronic survey conducted after the second midterm test. The aim of the survey was to examine students' attitudes towards the effectiveness of implementing formative assessment practices in classes. Table 5 lists the survey questions (Q1-Q8) and the answers the respondents gave. The provided answers are marked from 1 to 5, whereby 1 denotes "I completely disagree", 2 is the value for "I disagree", 3 for "Neither agree nor disagree", 4 for "I agree", and 5 for "I completely agree"; the numbers in the columns 1 to 5 indicate how many students circled the given option. The final column represents the mean value calculated for each question.

Table 5.

*Questions from the survey, the number of answers and the mean value*

	1	2	3	4	5	Mean
Q1: I was motivated to do continuous assessment tasks regularly.	0	0	6	20	8	4.06
Q2: I liked the experience of doing the tasks via Quizizz application.	0	2	4	9	19	4.32
Q3: I received effective feedback from continuous assessment tasks.	0	0	8	14	12	4.12
Q4: The feedback I received helped me improve my learning.	0	0	7	13	14	4.21
Q5: Continuous assessment tasks helped me score better on the midterm tests.	0	0	6	14	14	4.23
Q6: I think that integrating formative assessment practices can be beneficial for learning.	0	0	8	12	14	4.18
Q7: I think that integrating formative assessment practices gives teachers important information how to adjust their teaching to students' needs and learning.	0	1	6	13	14	4.18
Q8: I think that formative assessment practices can be integrated in all courses.	0	0	4	11	19	4.44

The analysis of the results shows that the students' attitudes towards the integration of formative assessment practices in classes are rather consistent, and the mean value is rather high ranging from 4.06 to 4.44 for all statements from the survey.

The last survey question was open-ended, and the students could write down their thoughts and comments not covered in the first section of the survey, on any specific aspects they wanted to add and highlight. Out of the total number of 34 students who did the survey, 17 added some comments. The answers the respondents provided were analyzed and described either as positive or negative. The positive comments dominated and included the following aspects: students found the use of the Quizizz application fun, motivating, and engaging; students who attended classes online emphasized that these tasks made classes very interactive, they felt engaged and these tasks bridged the online and offline spaces; several students repeated that these tasks helped them improve their learning and midterm test scores. There were only two comments that were negative and related to the use of the Quizizz application - both students did not feel comfortable because they felt like being in a competition because they could see the progress of all the other students.

## 5. Research Results Analysis and Discussion

The analysis and comparison of the results obtained from the midterm tests done by all groups show several tendencies. Firstly, even though the Experimental group had the highest average score on the first midterm test, there are no significant differences among these three groups (57%, 58%, and 63% achieved by Control group 1, Control group 2, and Experimental group, respectively). Better results scored by the Experimental group in the first midterm test can be explained by different reasons, such as active participation in classes, better retention, and a higher level of motivation for learning, but this difference cannot be indicative and conclusive. The difference in results obtained from both control groups is even lower, almost non-existent, which means that two groups of students who attended the same course in two consecutive years performed rather similarly in the first midterm test, which does not lead to any conclusion about the effectiveness of applying formative assessment tasks as an integral part of the course organization. As regards the second midterm test results, statistically, all groups had better average scores in the second midterm test - 63%, 66%, and 78% scored by Control group 1, Control group 2, and Experimental group,

respectively. These results illustrate that those students who were involved in formative assessment practices during classes had better second midterm test results than those who just took the mandatory midterm tests, having no learning experience of receiving immediate feedback on their progress. These results also illustrate that, similarly to the first midterm test result distribution, Control group 2, had better second midterm test results, with slightly higher progress compared to the first midterm test. These results cannot also lead to any conclusive remarks related to the effectiveness of integration of formative assessment in the overall organization of the classes.

However, students who regularly did continuous assessment tasks considerably improved their second midterm test scores in comparison to the first midterm test results - from 63% to 78% at the level of the whole experimental group. Although exponential growth is present in the results obtained from the second midterm test results of all groups, there is a more significant difference in growth in the group of those students who regularly did continuous assessment tasks. The paired sample *t*-test results show that there is a significant difference between the scores obtained on midterm test 1 and midterm test 2 by the Experimental group, with a mean value of 14.51. Significantly lower differences between the midterm test results have been measured for Control group 1 (6.61), and Control group 2 (7.81).

Every class, after the students had been exposed to the new subject matter, the continuous assessment tasks were delivered to students who analyzed them with the teacher, discussed the aspects and issues they found relevant or not clear enough, asking for additional explanations. These differentiated tasks contained questions examining understanding of the new subject content of the lesson covered during each class, including both theoretical concepts and the application of theory in practical examples and problem-solving activities. Each continuous assessment task the students did after the usual process of teaching and learning activities was designed compliant with the planned outcomes for the given lesson and the envisioned test requirements. The average score achieved for the first five continuous assessment tasks (the content of the first midterm test) was 46,8%, while the average score for tests 6-10 (the content of the second midterm test) was 55,2%. These results are in accordance with the better result scores obtained from the second midterm test in all groups (which may indicate that the subject matter was less demanding for the students). However, what came as a significant finding from this analysis and comparison is a considerably higher percentage of improved second midterm test results in the experimental group - students who were involved not only in active participation during teaching and learning but also regularly did assignments that provided them with the immediate feedback on their learning progress, as a more objective indicator of learning taking place.

The analysis of the results obtained from all tests comprising the corpus of research reveals that there is a consistency in scoring better results on the second midterm test in all groups. However, the exponential growth was considerably higher with the experimental group whose members actively and regularly did continuous assessment tasks throughout the course, receiving feedback on their progress every time they did the task. Even though the experimental group scored better than both control groups on the first midterm test, the difference is considerably higher in the second midterm test results. This finding illuminates an important aspect of formative assessment practices - they represent a process, and it takes time to see the real effects of their integration into everyday teaching and learning practices. In support of that, the analysis and comparison of the average scores attained in tasks 1-5 and 6-10 with the first and second midterm test scores respectively, attained by the experimental group, show significant improvement and better learning outcomes on the second midterm test.

The comparison between the results obtained from two generations (students attending the course in the academic year 2021/2022 - Control group 1, and students attending the course in the academic year 2022/2023 - Experimental group and Control group 2) reveals that better learning outcomes were achieved with the 2022/2023 generation. The average score at the level of the whole group of students who attended the English Syntax course in 2022/2023 was 60.5% for the first midterm and 72% for the second midterm test. These results point to the relevance of providing students with regular feedback and adding formative assessment to teaching and learning practices, thus making the student-centered approach more meaningful and comprehensive. This approach leads not only to deeper learning and better learning outcomes but contributes to the development of teachers' competences and provides good feedback on teaching practices and instructions. Namely, the feedback obtained from the continuous test results helped the researcher reexamine the quality of the instruction which has been rather challenged in a hybrid model. The analysis of the answers led to reformulating questions and tasks, as well as revisiting some aspects that needed more clarification and additional explanation.

This research also aimed at investigating students' attitudes towards the integration of formative assessment practices in classes, and which aspects they found effective and useful. The analysis of the results obtained from the five-point Likert scale questions shows a rather consistent attitude towards various aspects of formative assessment. The mean values for all statements are over 4 and show positive students' attitudes and awareness that such practices contribute to their own learning. Additionally, the students also recognized the effect formative assessment practices can have on instructor's teaching practices. The analysis of the answers the students provided for the last, open-ended survey question draws attention to the importance of utilizing all relevant resources to make classes inclusive to all students, regardless of whether they attend the classes in person or online, or whether they prefer doing tasks on their own rather than participating in discussions. The last aspect shows that the use of educational technologies can greatly respond to students of different learning styles and learning preferences.

## 6. Conclusion

This paper addresses the benefits of integrating formative assessment practices in hybrid pedagogy, particularly focusing on higher education, and provides the results of a case study conducted with the aim to investigate the correlation between the use of continuous assessment tasks regularly and the learner's outcomes. This paper also illustrates the process of implementing formative assessment in practice, and how it can be utilized in a higher education context for achieving better learning outcomes, with reference to theory and available resources.

The analysis of the results illuminates several important aspects of incorporating formative assessment practices in hybrid pedagogy. Firstly, there is a positive correlation between learning outcomes and the integration of continuous assessment tasks regularly and providing students with immediate feedback after each lesson. Providing and receiving regular feedback proved to be rather effective for both the students and the teacher because the results show that those students who received feedback on their learning outcomes and progress every week had better midterm test results than those who were not involved in such activities. Additionally, the effects of integrating continuous learning tasks are more obvious when applied over a long-term period. Namely, better scores and success increased in the experiment group where the student-centered approach was applied over a period of the duration of the course. Apart from achieving better learning outcomes, students who regularly

did the assignments showed a high level of awareness of teaching and learning approaches that are likely to enhance and support their academic progress. Consequently, the positive attitude the students expressed in the survey towards the use of continuous assessment tasks regularly can be used in planning and organizing more meaningful and qualitative educational practices.

The conclusions made on the basis of the analysis of the study results are in compliance with the findings obtained from the literature on formative assessment (Gelisl, 2009; Leenknecht, 2021; Andersson, 2017). In this research, we drew attention to the importance of making formative assessment practices an integral part of teaching and learning processes in higher education but also to the lack of evidence in practice. With the use of paired sample *t*-test we have proven the alternative hypothesis which states that there is a significant difference in test results obtained from the group of students who regularly did continuous assessment tasks as an integral part of their learning process, in comparison to those who did not have this experience of practicing and receiving immediate feedback on their learning progress. The study contributes with findings that propose strategies for integrating formative assessment and feedback in higher education. Although the survey the students did reveals students' satisfaction with the positive backwash of formative assessment on teaching and learning, this study does not provide sufficient evidence to prove that the integration of formative assessment contributes to better teaching practices that, in turn, affect better learning outcomes. The analysis of the instructions in continuous assessment tasks and midterm tests could give a better and more comprehensive insight into the objective measures of the effects of formative assessment practices on the quality of teaching and providing instructions. Finally, this paper aims at emphasizing that the use of educational technologies, with clearly defined pedagogical implications and rationale, can greatly contribute to improved teaching practices on the one hand, and, on the other, to higher motivation and engagement of students, all of which can subsequently contribute to better learning outcomes.

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