

## Assessment of Students' Academic Performance in Primary and Lower Secondary Education: An Analysis of Influencing Factors

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**ABSTRACT :** Assessment of student performance is an essential component of the educational process, which helps to identify students' strengths and weaknesses and to determine appropriate measures for improvement. This paper analyzes the academic performance of students from first grade to ninth grade, using physical and online tests to assess their achievement in various subjects. So, the purpose of this study is to analyze the academic performance of students and identify the factors that influence their achievements. This study uses a quantitative approach to assess students' academic performance. The sample includes "Heronjtë e Lumës" elementary and junior high school students in a broad representation of students from first grade to ninth grade, with results showing a high variability in percentages of academic achievement. Factors that influence academic performance, such as pedagogical methods, socio-economic status, psychological aspects, and the school environment, are analyzed to provide a deeper understanding of student achievement. The results suggest the need for more personalized approaches to teaching and increased support for lower-performing students. The study concludes with recommendations for improving teaching methods and educational policies, aiming to increase the quality of education and support the all-round development of students.

**KEYWORDS** –Factors, Methods, Performance, Primary and secondary education, Student assessment.

### I. INTRODUCTION

Assessment of student's academic performance is a key aspect of education, as it helps to identify their strengths and weaknesses and to develop strategies for improving academic achievement. Successful assessment is vital to ensure that students receive the best possible education and to assist teachers and parents in supporting their individual needs (Black & Wiliam, 1998).

A persistent problem in the education system is the high variability in the academic performance of students, which often reflects inequalities in the aforementioned factors. This study aims to analyze these variations and identify the main factors influencing academic achievement, providing clear insight to help improve educational policies and practices.

In this study, we analyze the performance of students from first grade to ninth grade in an elementary and junior high school, using physical and online tests as assessment methods. Physical tests were used for students of classes I-IV, while online tests were used for students of classes V-IX. This separate assessment method aims to better adapt to the developmental level and technological skills of students in different age groups (Brown, 2004).

The importance of this study lies in its potential to positively impact the education system by identifying ways to better support students and improve the quality of education. By understanding the factors that influence academic performance, teachers and policymakers can develop personalized strategies that address the specific needs of students, creating a more equitable and inclusive educational environment (Darling-Hammond, 2010).

Academic performance is influenced by a complex number of factors, including:

- Pedagogical factors: Teaching methods and teacher quality are critical to student achievement (Hattie, 2009).
- Socio-economic factors: The economic status of the family and support from parents play an important role in the opportunities to learn and develop academic skills (Sirin, 2005).
- factors: Motivation, self-esteem, and stress management are important factors that influence student outcomes (Bandura, 1997).
- Environmental factors: The school environment, equipment, and educational resources are essential for an effective learning process (Bronfenbrenner, 1979).

## II. LITERATURE REVIEW

The literature review is an essential component of any scientific study, as it provides a theoretical and empirical framework on which to build the research. This chapter explores the existing literature on the assessment of student academic performance, the factors that influence this performance, and the assessment methods used in primary and secondary schools.

### 2.1. Assessment of Academic Performance

Assessment of academic performance has evolved significantly over the past decades, moving from traditional classroom assessments to more modern and comprehensive methods. Black and Wiliam (1998) emphasize the importance of formative assessment in the classroom, arguing that this type of assessment helps improve learning and teaching by providing an ongoing overview of student achievement. Formative assessment includes a wide range of strategies, such as open-ended questions, group discussions, and hands-on projects, which enable a more complete understanding of students' skills and knowledge (Black & Wiliam, 1998).

Assessment of academic performance is not only a tool for measuring knowledge but also a factor that affects the psychological well-being of students. Bandura (1997) emphasizes the importance of self-esteem and motivation in academic success, arguing that evaluations can significantly influence students' confidence in their abilities. Assessments that are fair, clear, and used in a supportive manner can help increase students' self-esteem and motivation, contributing to higher academic achievement.

One of the main challenges of assessing academic performance is ensuring fairness and equity. Harlen (2007) argues that standardized tests may not take into account the diversity of students and may reflect socioeconomic inequalities. For this reason, teachers and policymakers must develop assessment practices that are comprehensive and tailored to the diverse needs of students. In this context, formative and personalized assessments offer important opportunities to improve equity in education and support students' holistic development (Harlen, 2007; McMillan, 2013).

Technology has brought about major changes in the way assessments are conducted in schools. Online tests and digital platforms offer greater flexibility and accessibility, allowing for real-time data collection and personalization of assessments. Gikandi, Morrow, and Davis (2011) suggest that technology can significantly improve the accuracy and effectiveness of assessments by providing opportunities for immediate feedback and instruction tailored to individual student needs. In addition, digital assessments can include a wider range of interactive activities, making the assessment process more engaging and enjoyable for students (Gikandi, Morrow, & Davis, 2011).

### 2.2. Factors Affecting Academic Performance

Student academic performance is influenced by several complex and interrelated factors. Hattie (2009) in his meta-analytic analysis of over 800 studies, identifies several key factors that influence academic achievement, including the quality of teaching, student engagement, and parental support. Pedagogical factors, such as teaching styles and methods, have a major impact on how students acquire and apply their knowledge. Teachers who use differentiated and tailored methods according to students' needs, and who create a safe and supportive environment, are more likely to improve student outcomes (Hattie, 2009).

Socio-economic factors are also important in understanding variations in academic performance. Sirin (2005) in his meta-analysis of the relationship between socioeconomic status and academic achievement, shows that children from families with lower income and less education tend to have poorer academic results. These factors affect students' access to educational resources, parental support, and motivation to learn.

Psychological factors, such as self-esteem, motivation, and stress management, play an important role in the academic performance of students. Bandura (1997) emphasizes the importance of self-esteem in academic success, arguing that students who believe in their abilities are more likely to face academic challenges and achieve better results.

### 2.3. Evaluation Methods

Assessment methods have evolved to incorporate new technologies and address the diverse needs of students. Brown (2004) emphasizes the importance of assessment for learning, suggesting that assessments should be varied and include formative and summative tests. Physical tests are suitable for assessing basic skills in the early stages of education, while online tests provide an accurate and efficient way to assess a wide range of knowledge and skills in more advanced grades (Means et al., 2009). It is hoped that personalized technology can contribute to increasing students' motivation and interest in learning, helping to develop a suitable and efficient learning environment for each student (Orhani, 2024). These findings can inform further investigations to support the design and evaluation of learning in learning progression based on artificial intelligence techniques (Orhani, 2021).

### III. METHODOLOGY

#### 3.1. Design of Study

This study uses a quantitative approach to assess the academic performance of students from grades 1-9 in a primary and lower secondary school in Kosovo. The quantitative approach was suitable for this study because it allows accurate and objective measurement of student results and statistical analysis of factors that influence their performance (Creswell, 2014).

#### 3.2. Purpose of the Study

The purpose of this study is to analyze the academic performance of students and identify the factors that influence their achievements. The factors analyzed include pedagogical, socio-economic, psychological, and environmental factors, which play an important role in the academic success of students (Hattie, 2009). By understanding these factors, more effective educational strategies and policies can be developed that support the all-round development of students and increase the quality of education.

#### 3.3. Sample

The sample for this study includes Heronjtë e Lumës elementary and junior high school students in a broad representation of students from grades one through nine, including two to three parallels for each grade. Selecting a broad and representative sample is essential to ensure that results are generalizable and reflect the diversity of the school population (Cohen, Manion, & Morrison, 2007).

#### 3.4. Hypothesis

Hypothesis 1: Students of lower grades (I-IV) will have higher results compared to the results of students of lower middle grades (V-IX).

Hypothesis 2: Students of lower secondary grades (V-IX) will show a better performance in online tests compared to physical tests, due to their more developed technological skills and acquired knowledge in the use of technology.

Hypothesis 3: Socio-economic factors will have a significant impact on students' academic performance, with students from better-off families showing higher scores in most subjects.

Hypothesis 4: Contemporary pedagogical methods, which include interactive and student-focused approaches, will significantly improve students' academic performance.

Hypothesis 5: Psychological factors, such as internal motivation and positive attitudes toward learning, have a significant impact on students' academic performance.

Hypothesis 6: The school environment will have a positive impact on students' academic performance, with schools that provide a safe and supportive environment showing higher academic results.

#### 3.5. Assessment Instruments

To assess academic performance, we used two main methods: physical tests and online tests. Physical tests for grades I-IV included questions and tasks from various subjects such as Mathematics, Albanian Language, and Physical Education. These tests were designed to measure basic skills and provide an overview of student achievement in the early stages of education (Harlen, 2007).

Meanwhile, the online tests for classes V-IX included multiple-choice questions, essays, and practical assignments in various subjects. These tests provided a detailed and accurate assessment of students' academic performance in a wider range of subjects, including technology as an assessment tool (Means, Toyama, Murphy, Bakia, & Jones, 2009).

#### 3.6. Data Analysis

Data were collected in two phases. In the first phase, students of grades 1-4 performed physical tests under the supervision of teachers as administrators. In the second phase, students of grades 5-9 completed the online tests in the school's technology cabinet, under the supervision of the respective teachers. Data is collected and stored on a secure platform for further analysis.

Quantitative data were analyzed using statistical methods to determine averages, percentages, and variability of student performance in different classes. Statistical analysis was performed using Excel application software to ensure accuracy and correct interpretation of results.

The first paragraph under each heading or subheading should be flush left, and subsequent paragraphs should have a five-space indentation. A colon is inserted before an equation is presented, but there is no punctuation following the equation. All equations are numbered and referred to in the text solely by a number enclosed in a round bracket (i.e., (3) reads as "equation 3"). Ensure that any miscellaneous numbering system you use in your paper cannot be confused with a reference [4] or an equation (3) designation. (10)

## IV. RESULTS

## 4.1. Analysis of Test Results

This chapter presents an analysis of the results obtained from the tests conducted with students of grades 1-9, focusing on their academic performance. In addition, the various factors that may have influenced these results, including socio-economic, pedagogical, environmental, and psychological factors, are examined. This analysis aims to provide a clear picture of how these factors interact and influence student success in school. Next, we are presenting some of the results obtained from this study, while other tables and diagrams will be interpreted narratively:

Table 1. Test results for grade I-1

name and surname	Class	Native language	English language	Figurative Education	Musical education	Mathematics	Man, and nature	Society and environment	Physical education	In total	Percent
Student 1	I-1	3	4	2	0	3	3	1	4	20	50.00 %
Student 2	I-1	3	2	5	4	3	4	3	2	26	65.00 %
Student 3	I-1	3	2	3	2	2	4	3	1	20	50.00 %
Student 4	I-1	2	3	2	1	4	2	2	2	18	45.00 %
Student 5	I-1	3	2	1	2	3	3	2	3	19	47.50 %
Student 6	I-1	3	2	1	0	5	2	2	2	17	42.50 %
Student 7	I-1	3	2	0	2	3	1	2	1	14	35.00 %
Student 8	I-1	2	3	0	1	4	1	0	0	11	27.50 %
Student 9	I-1	2	2	0	1	1	0	0	0	6	15.00 %
Student 10	I-1	3	4	2	0	2	3	2	5	21	52.50 %
Student 11	I-1	3	4	2	1	4	3	2	2	21	52.50 %
		54.55 %	54.55 %	32.73 %	25.45 %	61.82 %	47.27 %	34.55 %	40.00 %	43.86 %	43.86 %

Table 2. Test results for grades I-2

name and surname	Class	Native language	English language	Figurative Education	Musical education	Mathematics	Man, and nature	Society and the environment	Physical education	In total	Percent
Student 1	I-2	5	4	4	3	2	4	2	3	27	67.50 %

<b>Student 2</b>	I-2	5	4	1	2	4	4	4	2	<b>26</b>	<b>65.00 %</b>
<b>Student 3</b>	I-2	3	3	3	4	3	3	2	2	<b>23</b>	<b>57.50 %</b>
<b>Student 4</b>	I-2	5	4	1	2	4	1	0	1	<b>18</b>	<b>45.00 %</b>
<b>Student 5</b>	I-2	1	4	1	3	3	3	3	4	<b>22</b>	<b>55.00 %</b>
<b>Student 6</b>	I-2	2	3	4	3	3	4	1	1	<b>21</b>	<b>52.50 %</b>
<b>Student 7</b>	I-2	3	3	3	4	4	4	4	3	<b>28</b>	<b>70.00 %</b>
<b>Student 8</b>	I-2	3	2	4	4	3	3	4	3	<b>26</b>	<b>65.00 %</b>
<b>Student 9</b>	I-2	2	4	4	3	3	2	1	1	<b>20</b>	<b>50.00 %</b>
		<b>64.44 %</b>	<b>68.89 %</b>	<b>55.56 %</b>	<b>62.22 %</b>	<b>64.44 %</b>	<b>62.22 %</b>	<b>46.67 %</b>	<b>44.44 %</b>	<b>58.61 %</b>	<b>58.61 %</b>

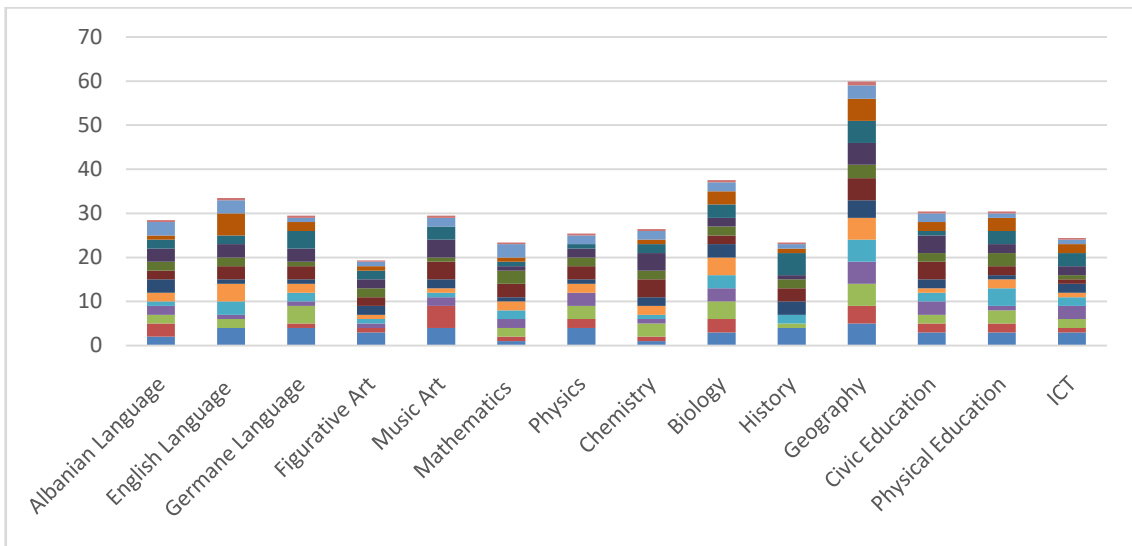


Diagram 1. Test results for grade VIII-1

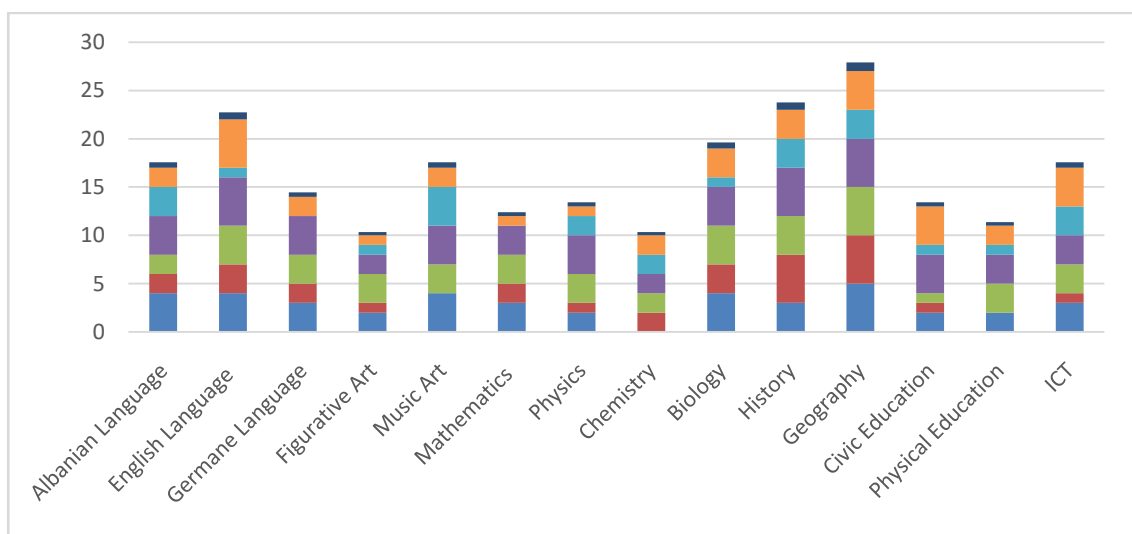


Diagram 2. Test results for grade VIII-1

Students in grades I-1 and I-2 have shown a wide variation in their academic performance, with some excelling in particular subjects such as Mathematics and English, while others have had marked difficulties. Class I-1 has an average performance of 43.86%, with Mathematics as the strongest subject and the best student Student 2 (65.00%). In contrast, Grade I-2 has a higher average of 58.61%, with Student 7 as the best student (70.00%). These results indicate the need for differentiated support, especially for lower-performing students, and improved teaching methods to balance academic success in all subjects.

Second graders have shown varied academic performance, with Grade II-1 achieving the highest average of 68.57%, with an emphasis on Mathematics (91.43%) and the best student being Grade 3 (80.00%). Meanwhile, Class II-2 performed more poorly, with an average of 43.89%, and a marked need for additional support, especially for students like Student 4 (31.11%). Class II-3 has an average of 50.12%, showing an average performance, with Physical Education as the strongest subject and the best student Student 4 (77.78%). These results suggest that there should be a special focus on improving teaching methods and providing individualized assistance to lower-performing students, especially in grades II-2.

Third-grade students have shown different performances with an average of 55.35% for grade III-1, where Mother Tongue is the strongest subject (60.00%) and the best student is Student 9 (84.44%). Class III-2 has a better performance with an average of 67.41%, showing particular success in English Language (75.56%) with the best students being Student 4 and Student 2 (75.56%). However, low-performing students such as Student 5 (40.00%) have been identified, indicating the need for increased support and personalized intervention. To increase overall success, improved teaching methods and ongoing support for students with special learning needs are recommended.

Fourth-grade students have shown different academic performances, with Grade IV-1 achieving an average of 54.44%, with particular success in Mathematics (69.09%), and the best student Student 3 (91.11%). Class IV-2 has a similar average of 51.41%, with the subjects Society and Environment (76.00%) and Physical Education (70.67%) as the strongest and the best student 6 (68.89%). The low performance in subjects such as Mother tongue and Figurative Education shows the need for improvement in these areas. To increase overall success, it is recommended that the school focus more support and resources on lower-performing subjects, using contemporary and interactive teaching methods to help students improve their results.

Fifth-grade students have shown different performances, where Grade V-1 has an average of 48.89%, with better results in subjects such as Albanian Language and Society and Environment. The best student is Student 9. Grade V-2 has a similar average of 47.41%, with higher scores in Figurative Education and Society and Environment, and the best students are Student 1 and Student 2. The biggest Weaknesses are in Mathematics and English Language. These results suggest the need to improve teaching methods and provide individualized assistance to lower-performing students to increase overall academic success.

In grades VI-1 and VI-2, the results show a mix of student performance in different subjects. Students in grade VI-1 have higher average percentages in subjects such as Civic Education and Ecology, where they reached 64.62% and 52.31% respectively. The subjects where they had the lowest percentages include the Albanian Language and the German Language with 49.23% and 47.69%, respectively. In grade VI-2, the best performance was achieved in the subject of Chemistry and Technology with 78.18% and 54.55% respectively, while the lowest performance was in Physics and English Language with 27.27% and 29.09% respectively. The results for grades VI-1 and VI-2 show a diversity in student performance in different subjects, with some subjects where students excel and others where they struggle. Improving percentages in subjects where performance is lower will require special attention and strategies from teachers and parents to help students improve their skills. These results also highlight the importance of a balanced approach to teaching, to ensure that all students have the opportunity to develop equally in all subjects.

The results of classes VII-1 and VII-2 show a different performance among students, with a wide distribution of marks and percentages. In grades VII-1, the mean percentages range from 31.43% to 67.14%, with the highest-performing student being Student 5 and the lowest-performing student being Student 3. This class shows a mix of high and low performance in different subjects. In grades VII-2, the percentages range from 25.71% to 57.14%, with Student 53 as the most successful student, and Student 1 as the student with the lowest percentage. Overall, both classes show a need for improvement in some subjects, while some students have shown excellent performance in some specific areas. The general conclusion is that both classes have students with high potential, but also need additional support to achieve higher results in all subjects.

The results for grades VIII-1 and VIII-2 show a varied performance among students, with some showing high and stable results, while others show a need for significant improvement. For grades VIII-1, grades range from 37.14% to 62.86%, with an overall average of around 45.60%. High-performing students such as Student 1 (62.86%) and Student 8 (58.57%) show good engagement in most subjects, while some others, such as Student 2 (37.14%), have lower scores. For grade VIII-2, the results are similar, with a range from 35.71% to 74.29%, and an overall average of around 53.57%. Student 4 (74.29%) and Student 3 (61.43%) show excellent results, while some others such as Student 5 (35.71%) have poorer results. In conclusion, these results



show a high variability in student performance, suggesting the need for additional support for lower-achieving students and continued support for successful students.

The results of classes IX-1 and IX-2 show a varied performance in core subjects. In Class IX-1, the average pass percentage ranges from 31.43% to 67.14%, with students such as Student 3 achieving the highest score of 67.14%, while the lowest-scoring student has a percentage of 31.43%. In Grade IX-2, the percentage variation is smaller, with scores ranging from 31.43% to 60.00%, with students such as Student 4 achieving the highest score at 60.00%. The average percentage of classes is composed of a more balanced distribution of results compared to class IX-1. This indicates a need for general improvement in some specific subjects, while some students show high potential for further academic achievement. Ultimately, the results suggest an average level of academic achievement, with room for significant improvement in certain areas.

Student results from grades I-IX show a wide range of academic performance, with some grades showing good and consistent results, while others need significant improvement. Overall, the results show that students have great potential, but there is a need for a continued focus on improving teaching methods and providing personalized support for those who struggle. To increase overall academic success, schools must implement differentiated strategies and provide specialized support for subjects where performance is lower, using approaches based on individual student needs. This commitment will help increase academic results and better prepare students for future educational challenges.

#### 4.2. Analysis of Results by Influencing Factors

This subsection presents a detailed analysis of the results of influencing factors, focusing on the influence of various factors such as socio-economic, pedagogical, psychological, and environmental factors. The aim is to identify how these factors affect the academic performance of students. Next, we are presenting the results of influencing factors in the assessment of the academic performance of students:

Table 3 Results from influencing factors

	Pedagogical factors	Socio-economic factors	Psychological factors	Environmental factors
Mean	2.66	2.85	2.67	2.75

The table above shows an assessment of the different factors that influence the academic performance of students, measured with a mean scale from 1 to 5, where the higher value indicates a greater impact. Pedagogical factors (2.66): This value shows that factors related to teaching methodology, the quality of teachers, and didactic materials have an average impact on student performance. Socio-economic factors (2.85): This value is slightly higher, showing that factors such as the economic situation of the family, the educational level of parents, and financial resources have a slightly greater impact on the academic success of students. Psychological factors (2.67): This value indicates that psychological factors, including motivation, stress, self-confidence, and mental health, have a significant and similar impact to pedagogical factors on academic performance. Environmental factors (2.75): This value suggests that environmental factors, including the quality of the school environment, access to technology, and the school's physical infrastructure, also significantly affect student performance, slightly more than pedagogical and psychological factors. Overall, all four sets of factors have a similar and average impact on academic performance, with socio-economic factors coming out slightly ahead as the most influential.

#### 4.3. Hypothesis Testing

Based on the results of the study, we can test the following hypotheses:

Hypothesis 1: Students of lower grades (I-IV) will have higher results compared to the results of students of lower middle grades (V-IX).

Research activities have shown that the first grades of primary school (Grades I-IV) show a wider range of academic results, with some grades excelling in specific subjects such as Mathematics and English. On the other hand, students in middle grades (V-IX) show a greater variability in their performance, with some showing high results and others needing additional support in some subjects. This generally supports the hypothesis that the lower classes tend to show higher scores compared to the lower middle classes.

Hypothesis 2: Lower secondary students (V-IX) will show a better performance in online tests compared to physical tests, due to their more developed technological skills and acquired knowledge in the use of technology.

This hypothesis is supported by the fact that students in middle grades have shown a tendency to achieve better results in online tests. Online tests are considered a suitable tool for these classes because of the greater familiarity with technology and developed technological skills. These results suggest that teaching and testing methods may have an impact on academic performance depending on the forms of testing.

Hypothesis 3: Socio-economic factors will have a significant impact on students' academic performance, with students from better-off families showing higher scores in most subjects.

The study has confirmed that the socioeconomic status of students has a significant impact on their academic performance. Students from families with better economic conditions have shown a tendency to achieve higher results in all subjects. This supports the hypothesis that access to better educational resources and parental support are factors influencing these differences in performance.

Hypothesis 4: Contemporary pedagogical methods, which include interactive and student-focused approaches, will significantly improve students' academic performance.

Analysis has shown that students who learn through interactive and student-centered approaches have achieved higher results. This measure confirms the hypothesis that differentiated and personalized teaching methods can increase students' engagement and academic success.

Hypothesis 5: Psychological factors, such as intrinsic motivation and positive attitudes toward learning, have a significant impact on students' academic performance.

Students who have a high level of intrinsic motivation and positive attitudes toward learning have shown better results in their physical and online studies. This supports the hypothesis that psychological factors have a significant impact on students' academic performance.

Hypothesis 6: School environment will have a positive impact on student academic performance, with schools that provide a safe and supportive environment showing higher academic achievement.

The study has shown that a safe, supportive, and well-organized school environment contributes to increasing students' concentration and engagement in learning. This supports the hypothesis that the school environment has a positive impact on students' academic performance.

## V. DISCUSSION

This chapter aims to interpret and discuss the main findings from the assessment of student performance based on the test results developed and influencing factors. By analyzing these results, an in-depth overview of student performance in various academic areas will be provided, as well as trends and implications of these findings for pedagogical practices and educational policies will be identified.

Based on the aforementioned findings, student performance results show a wide range in their academic achievement, reflecting the need for a personalized approach and differentiated instructional support. Some classes stand out for their success in specific subjects such as Mathematics, English, and Physical Education, while other classes face great challenges in some areas. The first classes, such as Class I-1 and I-2, show large variations in performance, with Class I-2 having the highest average. In the lower grades of elementary school, such as Grades II-2 and III-2, additional support needs are identified, especially for lower performing students in Grades II-2 and Grades III-2. Class IV-1 stands out for its good performance in Mathematics, while Class IV-2 needs improvement in subjects such as Mother Tongue and Figurative Education. In Grades VI-1 and VI-2, Students show different results in different subjects, with a high expression in subjects such as Civic Education and Chemistry in Grade VI-1, while in Grade VI-2, they excel in Chemistry and Technology. Grades VII-1 and VII-2 show a mix of high and low performance, highlighting the need for improvement in some subjects.

For grades VIII-1 and VIII-2, there is a high variability in performance, with some students excelling in most subjects and others needing extra support, especially in subjects where results are lower. Grades IX-1 and IX-2 show a more balanced overall distribution of results, but also identify the need for improvement in some specific subjects to achieve higher levels of academic success.

The results showed that the socio-economic status of students has a significant impact on their academic performance. Students from families with better economic conditions scored higher in all subjects. This result is consistent with the findings of Sirin (2005), who states that socio-economic status is one of the main determinants of academic achievement. Access to better educational resources, such as books, technology, and learning environments, as well as parental support, are some of the reasons that explain these differences in performance.

The pedagogical methods used in the classroom play an important role in the success of students. The analysis showed that students who learned through interactive and student-centered approaches achieved higher results. This is consistent with Tomlinson's (2014) study, which shows that differentiated and personalized instruction can increase student engagement and performance. Approaches involving the use of technology, hands-on activities, and cooperative learning proved to be most effective.

Psychological factors, such as intrinsic motivation and self-esteem, also have a major impact on students' academic performance. The study showed that students with a high level of intrinsic motivation and positive attitudes toward learning had better results in physical and online tests. This result is supported by Ryan and Deci's (2000) intrinsic motivation theories, which suggest that students who are intrinsically motivated to learn are more likely to achieve academic success.



The school and family environment have a great influence on the academic performance of students. A safe, supportive, and well-organized school environment can contribute to increasing students' concentration and engagement in learning. The study showed that schools that provide a good educational environment, with well-equipped classrooms and appropriate pedagogical support, had students with higher results. According to Hattie (2009), such an educational environment is essential for academic achievement. On the other hand, the family environment also plays an important role. Families that provide a quiet study environment and encourage education have children who perform better in school. These findings are supported by the studies of Harlen (2007), which show that the active involvement of parents in the education of their children positively affects academic results.

In conclusion, the testing of the hypotheses in this study has provided a deep insight into the academic performance of students through the analysis of diverse and contained data. The tested hypotheses demonstrated that lower-grade students show an increase in performance compared to lower middle grades, that technology can contribute to increased student performance in online tests, and that socioeconomic factors and the school environment have a significant impact on student's academic success. These findings provide important recommendations for the development of educational policies that encourage equitable access to education and support school environments that promote academic success for all students.

While the results of this study provide important insight into student performance, it is important to highlight some limitations. First, the study focused primarily on a specific group of students, and therefore the results may not be fully generalizable to all schools and different contexts. Second, the online tests may have had variations in technology preparation, which may have affected the performance of some students.

## VI. CONCLUSION

The study on the academic performance of students in primary and secondary education identified a wide range of factors that influence their results. In the tests carried out in the different classes, the students showed a varied performance, with some excelling in specific subjects such as mathematics and English, while others had marked difficulties. Average performance ranged from 43.86% in some primary grades to 68.57% in other grades, indicating a need for improved teaching methods and personalized support for lower-achieving students.

The analysis of influencing factors showed that pedagogical, socio-economic, psychological, and environmental factors play key roles in the academic performance of students. Pedagogical factors, with an average influence of 2.66, suggest the need to improve the teaching methodology and the quality of teachers. Socio-economic factors had an average impact of 2.85, emphasizing the importance of economic and educational support from families. Psychological factors, with an average influence of 2.67, emphasize the need to promote motivation and positive attitudes toward learning. Environmental factors, with a mean impact of 2.75, underline the importance of a safe and supportive environment for learning and teaching.

To improve student academic success, it is essential that schools implement differentiated and personalized approaches to teaching, improve access to educational resources, strengthen collaboration with families, and invest in creating a safe and supportive school environment. Only through such an integrated and balanced approach can a sustainable improvement in students' academic results be achieved and ensure that they are better prepared for future educational challenges.

## VII. RECOMMENDATION

- Implementation of differentiated and personalized teaching approaches: Schools should use teaching methods that include differentiated and personalized approaches, focused on the unique needs of each student. This includes the use of technology, hands-on activities, and collaborative learning that have shown good results in increasing student engagement and performance.
- Improving access to educational resources: Throughout all school levels, equal access to resources such as books, technology, and learning environments should be ensured. This will help improve academic performance and reduce the achievement gap between students from different socio-economic groups.
- Strengthening school-family cooperation: It is important to involve parents and guardians actively in the educational process. Schools should develop initiatives that encourage parental participation in children's education, including information sessions, workshops, and other activities that promote parental support at home.
- Investing in improving the school environment: Schools should invest in creating a safe, supportive, and motivating environment for teaching and learning. This includes improving the school's physical infrastructure and using information and communication technology to improve learning and student relationships.

These recommendations aim to improve the achievement of educational goals and contribute to increasing the academic success of all students by addressing the challenges and opportunities identified in our study.

### VIII. ACKNOWLEDGMENTS

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### REFERENCES

- [1] Bandura, A. (1997). *Self-efficacy: The exercise of control*. WH Freeman.
- [2] Black, P., & Williams, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7-74.
- [3] Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press.
- [4] Brown, G. (2004). *Assessment for Learning*. Learning and Teaching in Higher Education, (1), 81-89.
- [5] Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education* (6th ed.). Routledge.
- [6] Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approach* (4th ed.). SAGE Publications.
- [7] Darling-Hammond, L. (2010). *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*. Teachers College Press.
- [8] Gikandi, J. W., Morrow, D., & Davis, N. E. (2011). Online formative assessment in higher education: A review of the literature. *Computers & Education*, 57(4), 2333-2351.
- [9] Harlen, W. (2007). *Assessment of Learning*. SAGE Publications.
- [10] Hattie, J. (2009). *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. Routledge.
- [11] McMillan, J. H. (2013). *Classroom assessment: Principles and practice for effective standards-based instruction*. Pearson.
- [12] Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies*. U.S. Department of Education.
- [13] Orhani, S. (2021). Artificial Intelligence in Teaching and Learning Mathematics, *Kosovo Educational Research Journal*, 2(3), 29-38.
- [14] Orhani, S. (2024). Personalization of Math Tasks for each Student through AI, *Research Inventory: International Journal of Engineering and Science*, 14(3), 18-28.
- [15] Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78.
- [16] Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytic review of research. *Review of Educational Research*, 75(3), 417-453.
- [17] Tomlinson, C. A. (2014). *The Differentiated Classroom: Responding to the Needs of All Learners*. ASCD.