



## RETHINKING EXAMINATION-ORIENTED LEARNING: A STUDY OF ASSESSMENT PRACTICES IN EDUCATION

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### Abstract

Student academic performance is influenced by demographic, social, and school-related factors, and understanding these relationships can support early intervention and evidence-based educational planning. This study uses the Student Performance Data Set to examine patterns associated with secondary school achievement. The objective is to identify key variables related to student grades and demonstrate how educational data can be used to predict and interpret academic outcomes. A quantitative, secondary-data approach was applied using student records containing demographic characteristics, family background, study habits, school support, alcohol consumption, absences, and prior grades. Descriptive analysis summarized student characteristics, while predictive modelling and comparative analysis explored relationships between independent variables and final academic performance. Prior academic achievement emerged as the strongest indicator of final performance, suggesting that earlier grades provide substantial information about later outcomes. Study time, attendance, family support, and school-related engagement were also associated with achievement differences. Higher absence levels and risk-related behaviours, such as frequent alcohol consumption, were generally linked with weaker academic outcomes. The findings indicate that student performance is shaped by multiple interacting academic and social factors rather than by a single cause. The dataset provides useful evidence for identifying students who may need academic or social support. Early monitoring of grades, attendance, and learning behaviours can help educators design targeted interventions to improve student success.

**Keywords:** Student performance; academic achievement; educational data mining; predictive modelling



## **1. Introduction**

Assessment is a key element in the practice of education since it influences what students are learning, how teachers are teaching and what institutions consider academic success to be. Assessment remains, in most education systems, however, dominated by examinations, grades and performance rankings. Although examinations may present some standardized measure of success, over reliance on high stakes testing can reduce learning to memorization, test preparation, and grade competition. Recent research has thus highlighted the necessity to rethink assessment culture and to rebrand assessment as a facilitating process as opposed to a certifying one (Adie et al., 2021; French et al., 2024).

Examination oriented learning is a state of education where students and teachers attach paramount significance to examination scores. In this type of systems, classroom teaching can be tightly confined to anticipated questions, mark distribution and syllabus coverage. This may undermine in-depth learning, creativity, critical thinking, and contemplation. According to French et al. (2024), some of the benefits associated with high-stakes final examinations include; comparability and academic accountability, yet they might also lead to stress, strategic learning and limited student engagement. Likewise, the global experience of learning and equity demonstrates that the performance outcomes cannot be disaggregated without the rest of the more general questions regarding the provision of educational access, support, and equity (OECD, 2023).

The necessity to reconsider the examination-based learning has become more pressing in the framework of assessment reform. Countries in education have tried to shift towards a less summative testing system to a more formative, competency-based testing and learning-centered testing. Nevertheless, reform does not concern merely a technical issue of modification of tools or formats. It also involves modifications in teacher beliefs, institutional routines, policy expectations and classroom cultures. Alonzo et al. (2021a) reveal that policy-driven expectations influence teacher beliefs regarding assessment, whereas Arrafii (2022) proves that conceptions of assessment among teachers can be broad, inconsistent, or compliance-oriented in the context of reforms. In Indonesia, contextual barriers still influence the enforcement of assessment reform, despite policy orientations favoring more integrative types of assessment (Arsyad Arrafii, 2023).

The National Education Policy 2020 in India is no exception to the acknowledgment of the constraints of rote learning and examination pressure. It focuses on competency-based learning, formative assessment, and progress-based evaluation as options to overreliance on examination (Ministry of Education, Government of India, 2020a). The examination and assessment reforms policy document also suggests reforming assessment to a more frequent, formative, and multidimensional process that facilitates student growth (Ministry of Education, Government of India, 2020b). These policy guidelines align with international demands to re-create education that is based on equity, inclusion, lifelong learning and holistic development (UNESCO, 2021).

Special consideration has been given to formative assessment as one of the avenues to curb examination-oriented learning. It allows educators to gather information about learning, offer feedback and make changes to teaching prior to overall evaluation. In a systematic review, Schildkamp et al. (2020) demonstrate that success in formative assessment depends on teacher knowledge, assessment literacy, supportive beliefs, and capacity at the classroom level. On the same note, Yan et al. (2021b) present various issues that shape the intentions and practices of teachers towards formative assessment, such as perceived usefulness, self-efficacy, contextual support, and institutional expectations. These results indicate that without teacher training and enabling school policies, it is not possible to establish formative assessment.

It is also important that students are engaged in assessment. Yan et al. (2021a) discovered that formative assessment is connected to both achievement and growth mindset, and the assessment practices can affect the way students perceive learning and learning improvement. There is also evidence that formative assessment has the potential to enhance the learning results in certain areas, such as reading achievement in K-12 classrooms (Xuan et al., 2022). But the realization of assessment is really formative when students understand and accept and act on feedback. Thus, Zhang and Hyland (2022) propose an integrated approach to feedback engagement that takes into account behavioral, cognitive, and affective aspects of student response.

Mass assessment and data on school levels can also be useful in reforming assessment when it is applied in a responsible manner. Teig and Steinmann (2023) demonstrate that effective and equitable school practices can be backed by large-scale assessment evidence when considered in the context of accountability and not



solely implemented to increase accountability. This is significant in that the results of examination can be used to show performance trends, but not necessarily the conditions of learning that led to the trends. Accordingly, assessment data must be diagnostic to determine the learning gaps, facilitate timely intervention, and guide instructional planning.

It is in this context that the current research is conducted to study examination-oriented learning in terms of the influence of past academic achievement on the final academic performance, the engagement in studying, attendance, past academic problems, and its support related factors. The study will add to the existing discussions about assessment reform by exploring the relationship between final outcomes and the performance of initial assessment and chosen learning-related variables. It supports that the assessment practice must shift the focus of a limited reliance on final examination results and instead employ a more balanced approach that incorporates summative assessment with formative, diagnostic and feedback-focused assessment approaches to facilitate meaningful and equitable learning.

## **2. Methodology**

### **2.1 Research Design**

The current research design is a secondary quantitative research design to investigate patterns of assessment on academic performance of students. The article is concerned with examination-oriented learning, therefore, the research employs an existing educational dataset to test the relationship between final academic performance and the previous grades, study habits, attendance, previous failures, and the chosen school and family-related factors. A secondary data design is suitable since it enables the researcher to review prior gathered student-level data, without necessarily going to the field. This design also enables objective statistical investigation of the variables that have a direct or indirect relationship with the examination performance and learning outcomes. The research is quantitative since it involves measurements of the variables and statistical methods to determine the relationship and predictive patterns of the data.

### **2.2 Data Source**

The data that is used in the study is the publicly available Student Performance Data Set that was found at the Kaggle. The data was referred to as: Larsen0966. (2020). Student performance information [Data set]. Kaggle. The data consists of student level data on academic performance, demographic data, school support, family data, study time, school absences, past failures and other educational indicators. In the current investigation, the data set is considered as the primary secondary data to analyze the examination based learning and assessment practices. The academic grade variables presented in the dataset are specifically important in that they enable the researcher to research the connection between the previous assessment scores and the final examination outcomes (Larsen0966, 2020).

### **2.3 Population and Sample**

The sample population in the dataset is comprised of students whose academic, personal, school-related and family-related data were stored in the original data. In this case, the researcher does not choose respondents per se since the study is founded on secondary data. Rather, the entire dataset sample is analyzed, with data cleaning and variable appropriateness. The application of the entire data set assists in maintaining the initial form of the data and minimizes the chances of bias in sampling that may be instigated by the researcher. Nonetheless, the results are understood within the confines of the data set and not extrapolated to similar learning environments.

### **2.4 Variables of the Study**

Final academic performance, denoted by the variable G3, is the main dependent variable of the study. This variable is taken as a measure of end examination or end grade. Independent variables are G1 and G2 which are previous grade periods and other student related variables such as studytime, absences and failures. These variables are significant to comprehend the extent to which final achievement is mainly determined by past performance in the assessment or more extensive aspects of learning.

Some of the support and background variables that are also considered in the study include schoolsup which is the school support, famsup which is the family educational support, paid which is the paid extra classes, Medu and Fedu which is the parental education, higher which is the aspiration towards higher education,



activities which is the participating in extracurricular activities and internet which is the access to internet facilities. These variables can offer a broader perspective on how student performance could be interpreted, and how the results of examinations in relation to the educational support and social background could be.

### 2.5 Data Preparation Procedure

The data will be filtered prior to analysis to make sure that the variables chosen are appropriate to be analyzed statistically. Data preparation will involve verification of missing values, checking of variable labels, categorical and numerical variables and the variables of interest to the research objectives. Descriptive statistics will be used to analyze numerical variables: grades, time spent in studying, absences, and failures. Categorical variables like school support, family support, paid classes, internet access and higher education aspiration will be coded accordingly to compare the groups or do a regression analysis. This is done to provide consistency, accuracy and reliability in the analysis.

### 2.6 Data Analysis Techniques

Descriptive and inferential statistical methods will be employed in the study. To summarize the distribution of academic grades and the chosen explanatory variables, first, descriptive statistics will be employed. The calculations of mean, standard deviation, minimum, and maximum of G1, G2, G3, study time, absences, and failures will be done.

Second, a correlation analysis will be done to analyze the strength and direction of relationships between previous grades, study-related factors, and end academic performance. This will assist in ascertaining whether final performance is closely related with the past assessment performance.

Third, a multiple regression analysis will be performed to determine the degree to which the variables selected determine final academic performance. In this model, G3 will be considered as dependent variable where G1, G2, study time, absences, failures, school support, family support and other related variables will be taken as independent variables. The regression outcomes will assist in evaluating whether end performance is mainly grade-based or subject to more widespread educational aspects.

## 3. Results

In this part, the findings of secondary analysis of the Student Performance Data Set that was retrieved on Kaggle (Larsen0966, 2020) are provided. The analysis targets the end performance, G3, and its correlation with the previous grades, study time, absences, historical failures, parent education and the chosen school related variables. These findings are provided in the form of descriptive statistics, correlation analysis, group-wise comparison, and multiple regression analysis.

### 3.1 Dataset Profile

There were 649 student observations and 33 variables in the dataset. The dataset did not have any missing values. Thus, the entire data was saved to be analyzed. G3 (final performance) was the primary dependent variable. The principal independent variables were G1, G2, the studytime, the absences, failures, Medu and Fedu. Table 1 presents the basic profile of the dataset used for the analysis.

**Table 1: Profile of the Dataset**

Item	Result
Number of observations	649
Number of variables	33
Missing values	0
Dependent variable	G3
Main academic predictors	G1, G2
Main learning-related predictors	studytime, absences, failures
Main family background predictors	Medu, Fedu

The dataset was suitable in studying the patterns of student performance as shown in Table 1 since the dataset comprised not only the academic grade variables but also the wider educational variables. This enabled the study to examine the final performance as being more related to the past assessment grades or the broader learning-related and background factors.



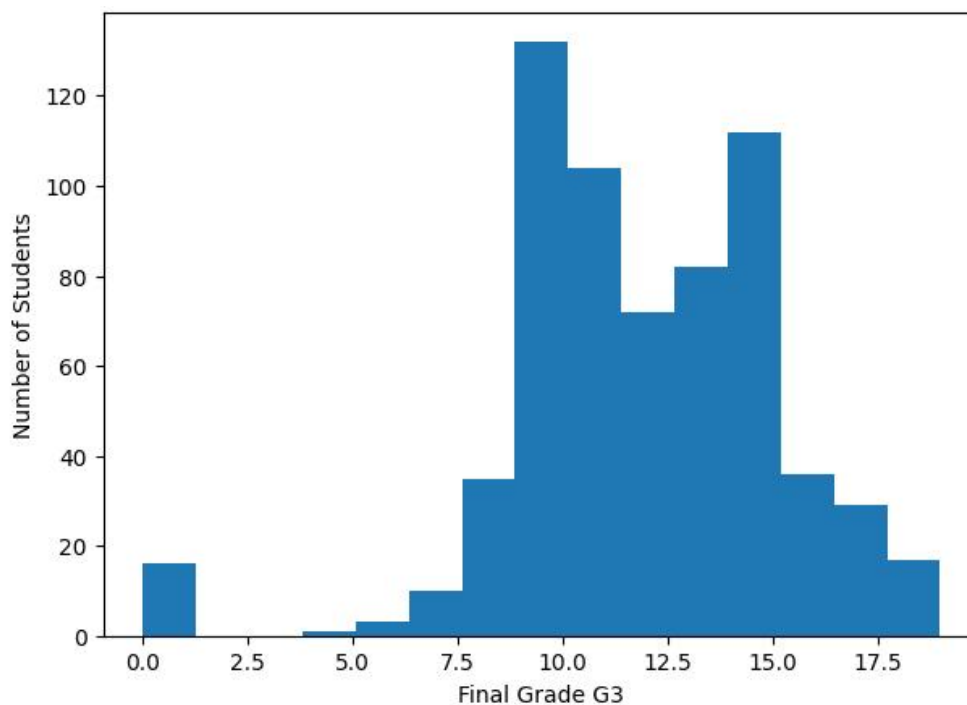
### 3.2 Descriptive Statistics of Key Variables

The key variables of analysis were subject to calculating descriptive statistics. These were the three grade variables, study time, absences, past failures and parental education. Table 2 shows the results.

**Table 2: Descriptive Statistics of Selected Variables**

Variable	Mean	SD	Minimum	Maximum
G1	11.40	2.75	0	19
G2	11.57	2.91	0	19
G3	11.91	3.23	0	19
Study time	1.93	0.83	1	4
Absences	3.66	4.64	0	32
Failures	0.22	0.59	0	3
Mother’s education	2.51	1.13	0	4
Father’s education	2.31	1.10	0	4

Table 2 results indicate that the average final grade, G3, was 11.91 with a standard deviation of 3.23. The means of G1 and G2 were 11.40 and 11.57 respectively. This means that there was little change in the average performance of students in the three test intervals. Mean studytime was 1.93, meaning that the highest and lowest values of the weekly study time were near the lower and the middle values of 1.93. The mean was 3.66 with an upper limit of 32 indicating that there were some students with very high absenteeism.



**Figure 1: Distribution of Final Academic Performance, G3**

As shown in Figure 1, final academic performance was distributed across the full grade range, although most students were concentrated around the middle and upper-middle score levels.

### 3.3 Correlation Between Selected Variables and Final Performance

Correlation analysis was conducted to examine the relationship between selected academic and learning-related variables and final academic performance. The results are presented in Table 3.



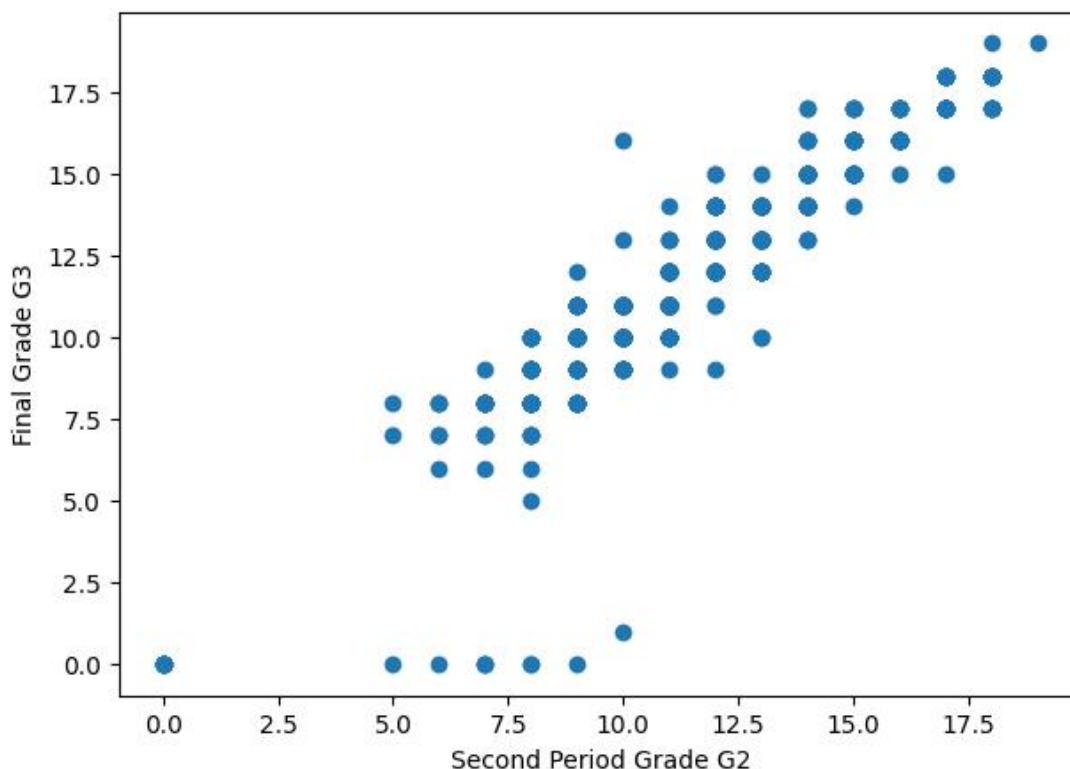
**Table 3: Correlation of Selected Variables with Final Academic Performance, G3**

Variable	Correlation with G3
G2	0.919
G1	0.826
Study time	0.250
Mother’s education	0.240
Father’s education	0.212
Family relationship	0.063
Going out	-0.088
Absences	-0.091
Health	-0.099
Free time	-0.123
Travel time	-0.127
Failures	-0.393

Table 3 indicated that G2 had the highest correlation with final academic performance with  $r = 0.919$  then G1 with  $r = 0.826$ . The outcome of these results suggests that there is a very strong positive correlation between previous academic performance and the final performance. This implies that students that had performed well in the previous assessment stages had high chances of performing well in the end grade performance.

The non-grade variables had positive correlations with G3 ( $r = 0.250$ ) and mother education and father education had positive correlations of  $r = 0.240$  and  $r = 0.212$  respectively. There was a moderate negative correlation between previous failures and final performance ( $r = -0.393$ ). There was a weak negative relationship between absences and G3 ( $r = -0.091$ ).

These findings indicate that learning-related and background variables were correlated with final performance; however, earlier grade variables showed the strongest correlation with final performance. This observation holds significance in the current study since it shows a high grade dependency trend in the assessment framework.



**Figure 2: Relationship Between Second-Period Grade, G2, and Final Grade, G3**



Figure 2 illustrates the strong positive relationship between G2 and G3. The upward pattern indicates that students with higher second-period grades generally achieved higher final grades.

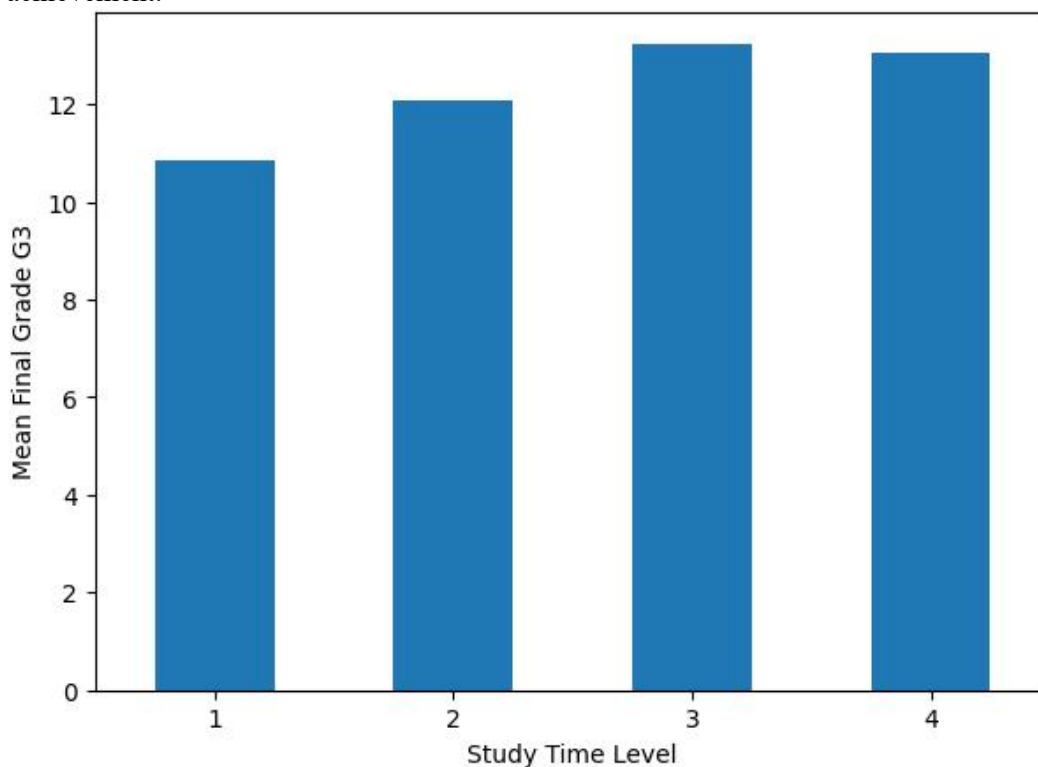
### 3.4 Final Performance by Study Time

To examine whether study time was associated with final academic performance, mean G3 scores were compared across study time categories. The results are presented in Table 4.

**Table 4: Final Academic Performance by Study Time**

Study Time Level	Number of Students	Mean G3	SD
1	212	10.84	3.22
2	305	12.09	3.24
3	97	13.23	2.50
4	35	13.06	3.04

Table 4 results indicate that students who studied longer, tended to get higher final grades. Level 1 students had a mean G3 of 10.84 and level 3 students had the highest mean score of 13.23. Level 4 students scored a little lower with a mean of 13.06, but still scored higher compared to those students in lower categories in the time of study. In general, the findings showed that time spent studying was positively correlated with end academic achievement.



**Figure 3: Mean Final Grade by Study Time Level**

As shown in Figure 3, mean final performance increased from study time level 1 to level 3, suggesting that greater study engagement was associated with better academic outcomes.

### 3.5 Final Performance by Previous Failures

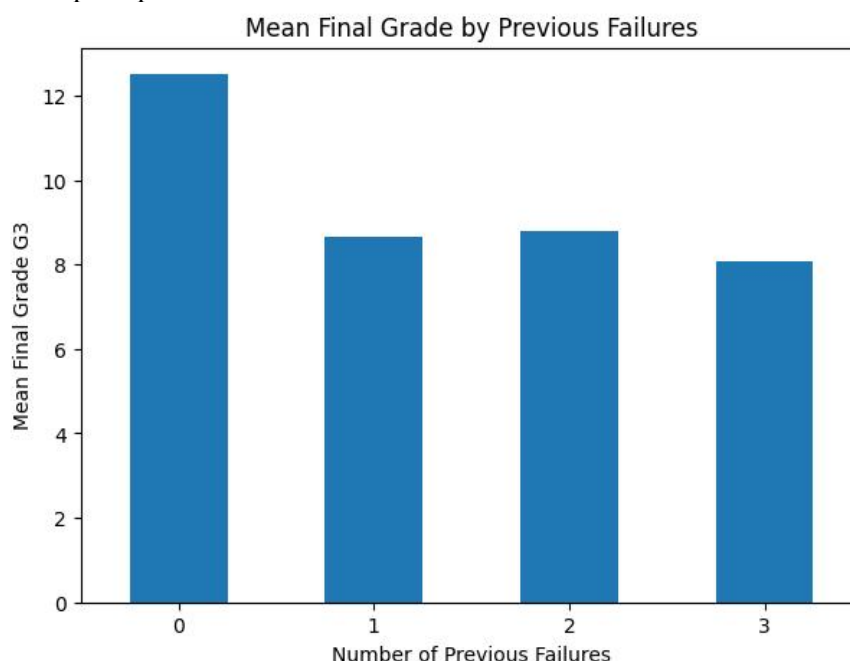
The study also examined final performance according to the number of previous failures. The results are presented in Table 5.



**Table 5: Final Academic Performance by Number of Previous Failures**

Number of Previous Failures	Number of Students	Mean G3	SD
0	549	12.51	2.83
1	70	8.64	3.44
2	16	8.81	3.21
3	14	8.07	2.79

Students who had no prior failures as indicated in Table 5 had a final grade average of 12.51. However, students who failed once before had a mean final grade of 8.64 as compared to students who failed thrice before with the lowest mean final grade of 8.07. These results indicate that past academic performance failure was correlated with low final performance. This finding applies to studying that is examination based since it indicates that students who initially underperform in their academic performance can still be disadvantaged in subsequent performance of assessments.



**Figure 4: Mean Final Grade by Number of Previous Failures**

Figure 4 reveals the evident decrease in mean final grade of students who had prior failure indicating the value of early academic support and uninterrupted assessment intervention.

### 3.6 Final Performance by Support and Motivation-Related Variables

Group-wise analysis was also conducted for school support, family support, paid extra classes, and higher education aspiration. The results are presented in Table 6.

**Table 6: Final Academic Performance by Support and Motivation-Related Variables**

Variable	Category	Number of Students	Mean G3	SD
School support	No	581	11.98	3.32
School support	Yes	68	11.28	2.30
Family support	No	251	11.67	3.60
Family support	Yes	398	12.06	2.97
Paid extra classes	No	610	11.95	3.25
Paid extra classes	Yes	39	11.21	2.85
Higher education aspiration	No	69	8.80	2.97
Higher education aspiration	Yes	580	12.28	3.06



Table 6 results indicate that the mean final grade of the students who were supported by their families was slightly higher as compared to those who were not supported by their families. Students who were supported by their families had a mean of G3 of 12.06 as compared to 11.67 of students not supported by their families. The mean G3 score of the students who reported school support was lower than the students who did not report school support. This finding must not be construed to mean that school support lowers performance. It can be a sign that school support was offered more often to already weak academically students. Extra classes paid were related to a marginally low mean final grade. The students that got paid extra classes had a mean of 11.21 in G3 and students that did not get paid extra classes had a mean of 11.95 in G3. Like school support, this can indicate that students who were already struggling academically took extra classes. The biggest group difference in Table 6 was in the case of higher education aspiration. Students who were willing to continue their studies to a higher level had an average final grade of 12.28 as compared to students who did not have the same ambition with an average of 8.80. This implies that academic aspiration and motivation could be linked to better performance in exams.

**3.7 Predictors of Final Academic Performance**

The predictors of the final academic performance were determined using multiple regression analysis. G3 was the dependent variable and G1, G2, study time, absences, past failures, mother education and father education were independent variables. The results are shown in Table 7.

**Table 7: Multiple Regression Analysis Predicting Final Academic Performance, G3**

Predictor	Coefficient	Standard Error	t-value	p-value
Constant	-0.124	0.268	-0.463	0.644
G1	0.141	0.036	3.878	< .001
G2	0.887	0.034	26.047	< .001
Study time	0.099	0.062	1.593	0.112
Absences	0.024	0.011	2.165	0.031
Failures	-0.222	0.091	-2.424	0.016
Mother’s education	-0.045	0.058	-0.783	0.434
Father’s education	0.020	0.059	0.343	0.731

**Model statistics:** R<sup>2</sup> = 0.851; Adjusted R<sup>2</sup> = 0.849; F = 521.8; p < .001.

Table 7 indicates that the regression model described 85.1 percent of the variance in the final academic performance. This reveals an extremely good fit to the model. G2 was the best predictor of G3, as it had a coefficient of 0.887 and a statistically significant p-value of < 0.001. This implies that, other things held constant, a unit change in G2 was related to a final grade change of an estimated 0.887 units. G1 was also a strong positive predictor of G3 with the coefficient of G3 at 0.141 and p-value at < 0.001.

There was statistically significant negative impact of past failures on final performance. The failure coefficient was -0.222, which had a p-value of 0.016. This shows that a history of poor performance in school was linked to poor performance at the end anyway after other factors were taken into consideration.

G3 had a positive association with study time, but it was not found to be significant in regression model when earlier grades were taken into consideration. The education of mothers and fathers was not also significant in the model. The regression model indicated small positive coefficient of absence albeit the simple correlation was negative with G3. This finding must be taken with care since it might be due to a suppression effect when G1 and G2 are controlled.

**3.8 Summary of Major Findings**

The findings reveal that there was a strong relationship between academic performance in the past and final academic performance. G1 and G2 were both significantly and positively correlated with G3 and were both statistically significant predictors in the regression model. G2 was the best of all predictors of final performance.

The analysis further revealed study time to have a positive association to final performance, and previous failures to have a negative association to final performance. The mean final grades of students who had



higher education aspirations were significantly high compared to students who did not have such aspirations. Patterns of support related variables were mixed. Family support was linked with a marginally greater performance, whereas school support and paid extra classes were linked with decreased mean performance, likely due to the fact that the supports may have been targeted at students who were already at risk of having academic problems.

In general, the results show that grade performance in the dataset in final examination greatly relied on previous grade performance. This helps to support the point that examination-based learning can perpetuate grade continuity, in which the high-achieving students in the initial testing still enjoy an advantage, and the student who struggles early in life academically will still struggle unless they receive formative intervention to improve.

#### **4. Discussion**

The study findings suggest that the academic performance in the end or the final performance was strongly correlated with academic performance earlier. Correlation analysis revealed that G2 correlated with G3 the most with G1 coming second followed by G2, whereas the regression model revealed that the two previous grade variables were both significant predictors of final performance. This observation implies that test result is not unique but has a strong association with the past evaluation history. This trend is indicative of a type of grade dependency, in the case of examination-oriented learning, high-achieving students in the previous assessment will tend to stay ahead, and low-achieving students with initial academic challenges will persist in their disadvantaged status. This supports the necessity of changing assessment practices to move off of final-result measurement to continuous learning support.

One significant implication of the results is that the assessment systems are supposed to detect the difficulties in academics at the young stage as opposed to the end of the exams. The large negative correlation between past failures and the end performance indicates that the students who had earlier experiences of failures in the academic field need prompt intervention. This type of intervention is not probably to be effective when assessment is considered as a summative instrument. Formative assessment is critical as it assists a teacher to obtain evidence regarding student learning, learning gaps, and modify instruction. This is consistent with the perception that formative decision-making must be designed in a systematic manner that assessment evidence enables classroom action instead of just capturing achievement (van der Steen et al., 2022). On the same note, Veugen et al. (2021) note that the practice of formative assessment makes sense when teachers and students are aware and interact with evidence of learning.

The findings also revealed that the study time positively correlated with the final performance, but was not a significant predictor when earlier grades had been measured. This implies that the role of engagement in the studies is important but the effect can be negated by the previous assessment performance within a grade based system. In test-based situations, learners might concentrate their learning on achieving good marks in tests instead of building a more comprehensive knowledge base. Thus, it is not merely a matter of asking students to study more but rather restructuring the learning tasks, feedback mechanisms, and practices of assessment in such a way that facilitates deeper learning. This transition can be facilitated with the help of effective instructional strategies and educational technology that will facilitate interaction, active learning, and flexible access to learning resources (Zhu et al., 2021).

The conflicting results on school support, family support, and paid classes should also be interpreted with caution. Students who were supported by the school or who took additional classes at extra charges did not exhibit any significant improvement in the mean final grades. This does not mean that support systems are inefficient. Instead, the supports can have been channeled to those students who are already struggling academically. This underscores the need to utilize assessment data in a diagnostic manner. Multisource data can assist teachers in determining the type of support students require conceptual support, motivational support, feedback, or focused remediation. Understanding about analytic dashboards and digital assessment systems can assist teachers to integrate assessment outcomes with other learning indicators to promote formative decision-making (Kannan and Zapata-Rivera, 2022). Nonetheless, this application of such tools should be pedagogically based as opposed to being an additional tool of performance monitoring.

The results also indicate that feedback must be a major focus of assessment reform. When final performance is highly anticipated based on previous grades, then it will be important to note that the response of students to previous assessment feedback will be critical. Simply because it is given does not mean that feedback is



effective. Students need to process, comprehend and put into practice. Lui and Andrade (2022a) believe that formative assessment relies on the internal processes of feedback processing, whereas Lui and Andrade (2022b) demonstrate that the factual response of students to the feedback of the teacher determines whether feedback is a factor in improving learning. Examination-based systems must therefore not just stop at the marks and comments but instead shift to a feedback loop that entails revision, reflection and action on the part of the learner.

The findings of the study at the institutional level justify the necessity of a whole-school approach to assessment reform. It might be hard to change assessment practices when institutional expectations still depend on marks, rankings, and final examinations, and individual teachers. According to Alonzo et al. (2021b), school-wide leadership, shared decision-making, and coordinated practices should be considered to reform assessment. On the same note, Oo et al. (2024) demonstrate that school-based assessment reforms have a higher probability of improving learning when they are carried out in a systematic manner and with professional development and aligned with curriculum and classroom practice. Therefore, to reconsider the examination-oriented learning, it is necessary to change both the culture of classroom assessment and institutional assessment.

The implications of the strong predictive value of previous grades on the use of educational data also exist. Students who are at academic risk can be identified using predictive models, although these models need to be interpreted. According to Wang and Luo (2024), interpretable modeling is important in academic achievement prediction (especially since teachers should know why students are expected to excel or fail), as the model can provide deeper insights into students. The high explanatory power of previous grades in the current study suggests that predictive information can be employed to intervene at an early age. Nevertheless, prediction cannot be employed to brand students forever. Rather, it ought to be applied in order to support timely and help minimize cumulative disadvantage.

Lastly, the research indicates the increasing importance of digital and AI-based systems of assessment. The field of artificial intelligence in education has grown tremendously, providing the opportunities of adaptive learning, automated feedback, and predicting performance (Sing and Yung, 2021). Nonetheless, these technologies must facilitate formative and human-centered assessment and not support the pressure of examinations. The results of this research indicate that the end grades are strongly related to the previous assessment results. Thus, the reform in assessment must strive to break the bad performance patterns with the help of feedback, formative assessment, specific help and broader learning indicators. On the whole, the findings indicate that tests can still be used to certification, though, they cannot take over the learning process. An effective assessment system should be balanced with the integration of summative assessment with formative, diagnostic and learner-centered assessment that promotes constant improvement.

## **5. Conclusion**

The current research discussed examination-based learning based on secondary quantitative analysis of the Student Performance Data Set acquired with Kaggle. The research was aimed at examining the correlation between the final academic performance and the chosen academic, learning-related, and background factors, such as previous grades, study time, absences, failed in the past, school support, family support, and parental education. The results indicated that the ultimate academic achievement was highly related to the previous evaluation results. More specifically, G2 was found to be the best predictor of G3, then G1. This shows that performance in final examination was very much reliant on the performance in grades. The findings also revealed that past failures were negatively correlated with the end performance and the time spent on the study was positively correlated with the end performance. But when the previous grades were added to the regression model, the effect of a number of more general variables was reduced. These results indicate that the system which is examination based can increase grade dependency in which students with higher performance in previous exams still keep enjoying benefits as students with initial academic challenges can still be vulnerable. As such, final exams might not be adequate in promoting meaningful and fair learning. The paper concludes that assessment practices must shift towards the exclusionary summative evaluation and more balanced approach. Educational practice should be characterized by formative assessment, diagnostic feedback, continuous monitoring, project-based assessment, and timely academic assistance. These reforms would enable recognition of any learning deficiencies at an early stage of learning, assist struggling learners and encourage learning as opposed to performance on exams. Therefore, the revision of examination-based



learning involves the need to have assessment systems that both measure achievement and positively contribute to learning, improvement and overall development of the student.

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