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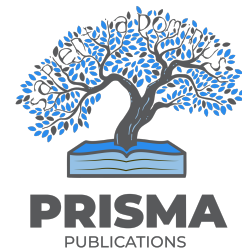
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# Performances of Level 1 and Level 2 Students in Basic Math under New General Foundation Program's Prospectus: A Comparative Study

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## ABSTRACT

With the implementation of New General Foundation Program's (GFP) Prospectus, Basic Math is now being offered to Level 1 students, whereas foundation students study this course once they reach Level 2 only in the previous mechanism. A question comes in mind whether Level 1 students can cope up with the pressure of Basic Math course without the advantage of a semester-long study of an English language in an online mode of teaching. Query whether Level 2 students will be able to adjust quickly with the reduced absent percentage allowed invokes interest that requires factual basis. This study aims to compare the performances of Level 1 and Level 2 students in Basic Math on the initial semester of implementation of the GFP Prospectus.

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## I. INTRODUCTION

Performances of Level 1 and Level 2 Students in Basic Math under New General Foundation Program's Prospectus: A Comparative Study

University of Technology and Applied Sciences, Oman started implementation of General Foundation Program's Prospectus in Semester 1, 2021-2022. This mechanism comprises numerous new policies that includes offering Basic Math course to Level 1 or new-entry foundation students. Also, the absent percentage allowed for students becomes 15% only and that is about 5 to 7 absences depending on the actual number of meetings in a semester. The researchers are aimed to study the performance in Basic Math of Level 1 students as compared with Level 2 foundation students whereas both groups are studying Basic Math first time in Semester 1, 2021-2022. Note that old GFP mechanism provides Basic Math course to foundation students once they reach Level 2 only. A question comes in mind whether Level 1 students can cope up with the pressure of Basic Math course without the advantage of a semester-long study of an English language. Query whether Level 2 students will be able to adjust quickly with the reduced absent percentage allowed invokes interest that requires factual basis.

## II. MATERIALS AND METHODS

Quantitative research method is employed in this study which involves collecting and analyzing numerical data for statistical analysis.

In Semester 1, 2021-2022, the University of Technology and Applied Sciences – Shinas starts to offer Basic Math to fresh-entry students as required by the new GFP Prospectus 2021, and classes were conducted online through MS Teams in adherence to pandemic protocol. Most of the class assessments were administered online through Moodle platform but the final exam of fifty (50) marks was conducted on-campus and on paper-and-pen mode. At the end of said semester, final marks and attendance of Level 1 and 2 students were collected and statistically analyzed in response to the queries of this research work.

## III. ANALYSIS

Presented herein are the performances of 182 Level 1 and 154 Level 2 students respectively with regard to average marks, percentage of number of passers, and average percentage of absent in Basic Math course. Also, students' performances were compared and statistically analyzed using z-test:

- Level 1 students got an average mark of 56.38 and standard deviation of 10.195 while Level 2 students got an average mark of 57.59 and standard deviation of 15.915 (see Table 1).
- In the analysis of average marks of students, the computed z value is -0.76. Considering a two-tailed test, level of significance at 5%, and critical value as  $\pm 1.96$ , the decision is to accept null hypothesis. Thus, there is no significant difference in the average marks of Level 1 and Level 2 students (see Table 2).
- One hundred sixty-nine (169) out of one hundred eighty-two (182) Level 1 students passed the course that is equivalent to 92.86% passing rate while 137 out of 154 Level 2 students passed that is equivalent to 88.96% passing rate (see Table 3).
- In the analysis of percentage of number of passers, the computed z value is 1.248. Considering a two-tailed test, level of significance at 5%, and critical value as  $\pm 1.96$ , the decision is to accept null hypothesis. Thus, there is no significant difference in the percentage of number of passers of Level 1 and Level 2 students (see Table 4).
- Level 1 students got an average absent percentage of 7.7% with variance of 0.0142 while Level 2 students got an average absent percentage of 8.5% with variance of 0.0142 (see Table 5).
- In the analysis of average absent percentage, the computed z value is -0.614. Considering a two-tailed test, level of significance at 5%, and critical value as  $\pm 1.96$ , the decision is to accept null hypothesis. Thus, there is no significant difference in the average absent percentage of Level 1 and Level 2 students (see Table 6).

Table 1: Average Marks of Students

	Level 1	Level 2
Mean	56.38	57.59
Standard Deviation	10.195	15.915

Table 2: Analysis of Average Marks of Students

Computed Value	Critical Value (2-tailed, $\alpha = 5\%$ )	Decision
$z = -0.76$	$z = \pm 1.96$	Accept null hypothesis

Table 3: Percentage of Number of Passers

	Level 1	Level 2
Number of Passers	169	137
Percentage	$169/182 = 92.86\%$	$137/154 = 88.96\%$

Table 4: Analysis of Percentage of Number of Passers: Difference of Proportions

Computed Value	Critical Value (2-tailed, $\alpha = 5\%$ )	Decision
$z = 1.248$	$z = \pm 1.96$	Accept null hypothesis

Table 5: Average Absent Percentage of Students

	Level 1	Level 2
Mean	7.7%	8.5%
Variance	0.0142	0.0142

Table 6: Analysis of Average Absent Percentage

Computed Value	Critical Value (2-tailed, $\alpha = 5\%$ )	Decision
$z = -0.614$	$z = \pm 1.96$	Accept null hypothesis

#### IV. CONCLUSION

Recommendation systems as the name suggests recommends movie based on certain criteria. We have implemented our recommendation system such that it recommends movies based on genre and category. This way the user will find it easy to choose movies of his/her liking. It will also help overcome the cold start problem. By implementing this system, we are saving time the user takes in selecting movies, based on the past history and flabbergasted the cold start problem. Hence, recommendation systems help a wide number of users to narrow down potential movies to fit their unique tastes.

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