# The Investigation of Educational Falling Reasons in Mathematics' Students of Guilan Payame Noor University

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**Abstract:** The student's education falling is one of the major instructional problems. Among the main tasks and duties of instructional system, persuading the students to learn the cognitive and business skills is one of the most important tasks. So to promote the instructional quality of universities, the educational falling factors must be determined and eliminated. This study is a comparative one has been carry out to investigate the main factors of educational falling in Mathematics students of Guilan Payame Noor University. For this purpose, a population 622 students (302 unsuccessful and 320 successful) ones were selected. The tools that were used of to collect data were Rajers Test for measuring the students self-concept variable Rion Test for measuring IQ level of students variable Mc inerny academic motivation Test for measuring the students academic motivation and the questionnaire that was prepared by the investigator for measuring the other variables. The confidence degree of these tests were 0.80, 0.85 and 0.87 and the confidence degree of the questionnaire was 0.87. This questionnaire was included the questions to assess the students expectance of their future job and the social and personal instructional characteristics. By considering the kind of exist variables the data analysis was conducted by using the t-statistical methods the mann-whitney U Test factor analysis and auditor analysing. The t-test results showed that diploma average IQ level of students academic motivation, self-concept, level of study for students and family income are significant differences between successful and unsuccessful students. Man Whitney Test results showed that the level of education, environment, culture, birth order, according to the professor, students are significant differences between successful and unsuccessful students. Factors affecting students educational falling were fitted using factor analysis. Final model fit revealed that the factor of 11, 5 factors, i.e., low diploma average level, IQ level of student, level of study for students, parents' education level and low-income parents to explain the causes of educational falling. And finally to predict membership in two groups of successful and unsuccessful students. And drawing a linear model to determine the predictive variables in explaining the dependent variable (academic failure) the regression equation, discriminant analysis was used. The results showed that among 11 existing factors, 6 factors diploma average, IQ level of student, academic motivation, hours of study, parents, education and family income can explaine the students educational falling reasons. And other variables and coefficients for high vilks lambda function were excluded from the equation. In this pattern, the diploma average factor has highest weight in determining the educational falling reasons.

**Key words:** Educational falling, IQ level, diploma average, academic motivation, hours of study, parents, education, parents' income

## INTRODUCTION

The instruction is the head stock of development. And the main foundation of instruction is teaching and training. The founder of classic econom Adam Esmith in 1776, in his book "The Nations Capital" wrote that skills accomplish via instruction include costs that can be considered as investment of individual and society. These costs have economic output for society and individuals.

Unsucsesful students that is those who have not obtaind the requird marks during the terms. Deployment of instruction is a main factor in development. This result was considered in the world since two centurie ago. To reach the development goals, we must pay attention to learning and teaching skills and human development. If adequate investiment was allocated to instruction but its result that is proper changes and educational development of students was not desirable, so the high instruction system has not reach its main goals that is training of desirable human force.

To obtain these desired goals, the factors that are interfered in educational falling must be determined. Now-a-days, investigators study reflects a variety of

factors that can have influence in educational falling. Some of these factors are related to inner instructional factors, such as unconformity of goals and talents unconformity of methods and instructional tools and unappropriatness of assessment methods and some of them are related to outer instructional factors, such as social, family and individual factors.

Hassan (1352) in his research titled "The Causes of School Leaving" considered the effect of economical, cultural and social variables and proclaimed that economical conditions, parents poverty in appropriate nutrition, unemployment of parents and cultural elements are direct or in direct factors of school leaving. Mohammad (1375) in his research "The Impact of Effective External Elements in Education" falling and listed them as follows:

- Poverty and economical privation
- Cultural and social factors and consequences
- Family conditions
- Geographical and local privation
- Appropriate distribution of educational facilities (Atkinson and Feather, 1996)

Atkinson's research showed that self-respect with regard to academic motivation causes strengthening of motivation in students with little motivation or lack of motivation and decreasing the feature causes of the education falling (Brcher and Thomas, 1997).

Brcher and Thomas (1997)'s findings showed that the ability and interest of teacher in teaching encouragement and considering individual differences among students causes decreasing education falling.

By recognizing school leaving like other issues in educational progressing (like exam scores) is considered as difficult issues since they are impacted; family fundamental factors as student family live with in, they are considered as the factors of school leaving and falling. In fact, the factors that causes school leaving are the main reasons of education falling.

Khozeh Belay narrated from Micheal Todar concluded that the poor are the first groups who school leaving because they have to work. They fall a sleep in class due to malnutrition. They are the first group who failed since childhood with high income have better conditions and facilities for learning at home. Also, Khozeh narrated from Ed Shena that the most people who completed their education belonging to rich families since the poor children are only people that school leaving.

By virtue of information that exist in Guilan Payame Noor University and because of bereavement of the area on account of library and constraction and on account of having specific educational, social, cultural and economical situation, the education falling is high in comparision with other courses.

So, early determination of educational falling factors, need careful and scientific investigations in this area in which the desighners and policy makers of instructional system can consider and review these factors and can deliver proper methods to promote the quality of instructional system.

So, the present investigation has been carry out to find the educational falling reasons of mathematics students of Guilan Payame Noor University so that steps taken to promote the instruction quality in this university.

## MATERIALS AND METHODS

This study is a comparative one. The necessary information is collected by the following test: Rajerz's Test to measure the self-imagination variable of the students; Rion's Test to measure the intelligence percent of students; Mack Inerniy's Test to measure the educational motivation of students and a questionnaire to measure another variables. The confedence degree of these tests, we have 0.80, 0.85, 0.87 and 0.87 for the questionnaire. This questionnaire was included a number of questions to assess the hope of students of the future of their job and to assess their social, family and personal construction characteristics. In this study, researchers used the following methods to analyse the collected inputs:

- Descriptive statistical method such as plenty average median and to describe the input
- Deductive statistical method such as t-test and Mann Whitney U Test to compare the score average of both successful and unsuccessful students
- Factor analysis to determine the influence variables in subject explaining and eginvalue each of variable
- Step by step auditor analysis to design the comparative linear model and membership in both successful and unsuccessful group by using the provident variables

## RESULTS

Recent statistical investigation sample includes 622 Mathematics students of Guilan Payame Noor University. A total number of 342 of them are girls and 280 are boys (Table 1).

Table 1: Sex plenty of student

| Sex | Plenty | Percent |
|---|---|---|
| Boy | 280 | 45.1 |
| Girl | 342 | 54.9 |
| Total | 622 | 100.0 |

Table 2: The results of correlative factors by variance method

| Factors | Title of factors | Factor load | Eginvalue | Explaind variance ratio |
|---|---|---|---|---|
| 1 | Diploma average | 0.81 | 1.48 | 13.48 |
| 2 | Low studing hours | 0.91 | 1.31 | 11.80 |
| 3 | Low academic motivation | 0.55 | 1.19 | 10.88 |
| 4 | Low parents education level | 0.61 | 1.11 | 10.06 |
| 5 | Low income parents | 0.40 | 1.02 | 9.28 |

The t-test results show that by considering the variables, such as intelligence percent educational motivation diploma average hours of study and the parents income, there are meaningful differences between successful and unsuccessful students.

It means that the amount of above variables among successful students is high in comprison with unsuccessful students but there were not any meaningful differences in variables, such as self-concept and family factors in both successful and unsuccessful students.

The Mann-Whitney U Test's results show that by considering the variables such as parent educational level and birth sequences there are meaningful differences between successful and unsuccessful students. It means that the amount of above-mentioned variables in successful students is high in comparison with unsuccessful students. But, there were not any considerable differences in attention to professor to student variable between two groups. To determine this subject that the studing case (educational falling) is consisted a number of general agent, three indicators such as Eginvalue explained variance ratio and positive correlation of variances were considered. The results of exploratory factor analysis on these 11 variables show that these variables are explainable via 5 agents. These extractionary 5 factors were classified exploratory. These factors and their titles were shown in Table 2.

To determine the portion of provident variables in educational falling and to draw the linear subject to membership in successful and unsuccessful groups with independent variables that we had researchers' used step by step auditor analysis equation of Regression. The results showed that average and standard deviation in diploma average variables the study hours, intelligence percent, educational motivation, income level of family, educational level of parents, birth sequence, cultural environment or between successful and a unsuccessful groups are different. The average and standard deviation of successful students in above mentioned factors is high

Table 3: The results of variables that are inside or outside of the equation

| Steps | Variables inside the eqauation | Variables outside the equation | Vilks | Meaningful level |
|---|---|---|---|---|
| 1 | The diploma average of students | - | 0.26 | 0.0 |
| 2 | IQ level of students | - | 0.46 | 0.0 |
| 3 | Academic motivation | - | 0.65 | 0.0 |
| 4 | Level of study for students | - | 0.71 | 0.0 |
| 5 | Level of parents' income | - | 0.92 | 0.0 |
| 6 | Level of parents' education | - | 0.91 | 0.0 |
| 7 | - | Self-concept | - | - |
| 8 | - | Family dimention | - | - |
| 9 | - | Birth order | - | - |
| 10 | - | Hope to future job | - | - |
| 11 | - | According to professor of studen | - | - |

Meaningful level = 0.000; Freedom degree = 9; $\chi^2$ = 916.21

Table 4: Coefficient of variables that intered in auditor subject

| Variables | Coefficient of variables in auditor subject | Surfeited of input stomach |
|---|---|---|
| Diploma average | 0.75 | Successful student |
| IQ level | 0.48 | Groups 2.42 |
| Academic motivation | 0.33 | |
| Level of study for students | 0.29 | Unsuccessful student |
| Parents' education | 0.14 | Groups -2.59 |
| Parents' income | 0.13 | |

than the average and standard deviation of unsuccessful students. Also, the average and standard deviation of unsuccessful students in variables such as family dimention and birth sequence is high than average and standard deviation of successful students. Later in input analysis, researchers used single ratio and Vilks Lambada, in provident variables. To draw linear subject variances were interd on auditor analysis equation. In this stage, researchers used step by step method and also lowest amount of F to adding and lowest amount to be submi Hed with results in 6 step, 6 variable were indeed in subject and 5 variables were put out-side of the equation (Table 3).

On above mentioned analysis, by foresighting membership in successful and unsuccessful students group, on variables that were entred in equation, researchers can get an equation that has high discernment between mentioned groups. To eliminate the results of Table 4, the auditor subject coefficients that come in Table 3 were used.

By considering the results of the above tables, the equation of auditor subject to membership in successful students groups and unsuccessful students groups and unsuccessful students group is as:

D = (Diploma average) 0.75 + (IQ level) 0.48 + (Academic motivation) 0.33 + (Study hours) 0.29 + (Parents' education) 0.14 + (Parents' income) 0.13

In this study, diploma average of students has the highest weight in forecasting the membership in

successful and unsuccessful students group and the role of the other variables were low in comparision with diploma average of students.

## DISCUSSION

This research showed that if a student gets higher scores (Marks) in diploma with high probability he/she will succeed in university.

Ali Jani, Mar Kazi Moghadam, Bromand and Zand confirmed this finding in 1383 and concluded that there was a meaningful relationship between the diploma average and educational fallin in next educational sections.

Quotient (IQ) in successful students is more than in unsuccessful ones. Ali (1378) concluded that lower intelligence quotient has positive relationship with educational failing.

Johnson in 1997 in his study considered the family envirement role as a basic role in successful or unsuccessful educational situation of students. In his results, he introduced this variable as a forecasting factor of unsuccessful education situation. The result of this study showed that the cultural environment of successful student's family is more suitable than unsuccessful students.

The results of recent research show that there is a meaningful difference between the sequence of birth of successful and unsuccessful students.

The results of this research show that there are differences in degree of motivation among successful and unsuccessful students and motivation in successful students is higer than in unsuccessful ones. Restox showed that academic motivation in successful group is more than in unsuccessful ones.

In this research, it must be noted that the degree of study hours in successful students is more than in unsuccessful ones. UNESCO in 1378 studies showed that there was a direct and positive relation between the degree of interest of an issue and the degree of success.

## CONCLUSION

In this research by using statistical tests, reserchers concluded that the level of parents education in successful students is higer than in unsuccessful ones. Bardly (1993) in his research showed that the illiteracy of parents and low level of economy in families have effective impact in educational failing.

This research showed that family's income is higher in successful students and low income of educational drop-out. Robert noted that education falling is one of the biggest problems of educational system in most of the countries the causes of school leaving are because of economical and cultural poverty of families.

In this research, researchers found that the professor's attention is same to both of the successful and unsuccessful ones and analysis of examiner is also considered as a foresight variable in membership of both groups via valsh equation that in his equation, the lack of close friendship between professor and students, lack of interest and also discrimination in attention are preventive factors in educational progressing. By considering under studied society in this research, researchers found that there was meaningful differences between two groups of successful and unsuccessful students.

The meaning of self-thought is a complex individual idea that comes from direct experiences and reflection of other evaluations. Benjamins (1363)'s reported the correlation of two variables self-thought and education progress among students in 17 countries in the world that was about 0.34 which is a low percentage. The recent research showed that there was not meaningful differences in the range of self-toughness between successful and unsuccessful students.

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