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Forecast Based on the Academic Performance of High School Students' Perceptions of Classroom

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ABSTRACT— This study aims to identify the components of the perception of the classroom environment (interest, challenge, delight and selection) in predicting academic performance of students. This research is a correlation between high school girls in Tehran for this purpose sample of 400 subjects were selected by multistage random cluster sampling. one questionnaire perception of the sample group classroom activities (Gentry, Gable, Rizza, 2002) was completed. And to evaluate their academic performance was based on the average scores of the previous semester. Multivariate regression analysis showed variable predictor variables academic performance has a significant effect on the perception of the classroom environment. In other words, the perception of the classroom environment to predict academic performance. The results of analysis of variance showed that the average performance of students in academic performance, perception of the environment is different in each grade class, the third and fourth grade students a better understanding of their classroom. Students in school districts in the perception of classroom and academic performance were not significantly different.
KEYWORDS: classroom environment perception, academic performance.

Introduction

One indicator of evaluating the quality of education in today's society, the academic performance of students, many factors that affect students' academic performance in the classroom and school pupils Some of these factors depend on . Given that students spend at least six hours a day at school, the classroom environment is important research on the perception of perception and feeling positive and satisfactory .when students have to learn better classroom environment. Key principles in the classroom creates psychological climate for better learning (Chen, 2009). Based on your preferences and interests of the environment in which individual course of study and explore issues, sure. Fraser says that in examining the learning environment, the perception of students is becoming increasingly important. And their adaptability to (sunger, 2009). Research of students 'perception of the quality of classroom structures of interest, challenge, choice and fun, with emphasis on the learning process (Tapola, 2008) for the perception of the degree to which students' interest in the classroom and school they belong. (For example, my classroom is very friendly). As well as the degree to which students feel they do not belong to their classroom ratio to each other unfriendly act. The challenge is the degree to which students experience challenges in learning and homework. (For example, I work in the classroom is challenging or difficult). (Larok, 2008, p. 292). Select Or the degree to which teachers select students to participate in decisions that will have great impact on academic performance (Ryan . Grolnick, 1986). And the joy of learning can be said about the degree to which students from learning in their classroom are satisfied and enjoy. (For example, my class is interesting) (Larok, 2008. p.292).

This study sought to answer the following questions:

1. Is the perception components of the classroom environment (interest, challenge, fun choosing) can be predicted academic performance?
2. Does the perception of the classroom environment and academic performance between students in different grades based on?
3. Is the perception of the classroom environment and academic performance among students on different educational areas?

Methodology

This research is a correlation study. Since this paper was based on the perception of classroom study is Correlation For this purpose, the school female students in Tehran in the 2014-2015 school year, according to Education (13115) people, multistage cluster sampling, based on a sample of 384 randomly Morgan estimates it was estimated that over 400 people were mature.

The Research Tools

The Research Tool included one questionnaire: the questionnaire perceptions of classroom activities Gentry et al. (2002).

Methods
Twenty-two's first areas of Tehran, according to the information guide for municipalities, regions (5, 6, 10, 12, 13, 14, 20) were randomly selected. Using directories of Education, schools were randomly selected from each school, two classes were randomly selected.

Perception Questionnaire classroom activities
Perception students from the classroom to the questionnaire were measured perceptions of classroom activities. This tool has 31 questions. The four components of interest (8 items), Challenge (9 items), selection (7 items) and pleasure (7 questions) about the measure (Gentry, Gable and Rizza, 2002). Answer each question using a five-point Likert scale from one (never) to five (always) was scored. In this study, Cronbach's alpha coefficient of reliability was evaluated on the basis of which is as follows: Range of validity coefficients for the four subscales of interest vary from 0/85, challenging, 0/41, 0/78 selected, fun 0/86 , and in general, using the Cronbach's 0/87 .

Results
In order to be aware of the descriptive, mean, standard deviation, minimum and maximum observed subjects' performance in each of the variables in Table 1 indicated**.**

Table 1. Descriptive indicators variables in total

Variables	Average	Standard deviation	The minimum score	The maximum score	Elongation	Tilt
Perception classroom	94.62	18.66	56	172	0.49	0.49
Academic Performance	17.74	1/55	12/20	20	0/28	-0.77

As you can see in Table 1, the mean and standard deviation of academic 17.74 , 1/55 performance with a tilt of-0.77 show a negative tilt. This means that most of them are Grade Point Average scores less than average. Also, the score of the students from the classroom environment 62/94 and 66/18 is standard deviation. First shown "mean in the middle of the spectrum and secondly" difference in perceptions of classroom environment is relatively "is impressive. But perceptions of classroom environment also has a positive tilt (0/49) and the show, cubic total grades average, a positive number, and scores on the scale of most people mean more. Examine the differences in subjects' performance in all variables based on grades, and school district, one-way analysis of variance for each factor (grade and school district), where the results can be seen in Table 2.

Table 2: Analysis of variance significant difference in performance on grade sample

Variables	Sources of changes	Sum of squares	Degrees of freedom	Variance	F	Significant
Academic Perfozrmance	Between group Intergroup Total	63/69 891/20 954/90	7 392 399	9/09 2/27	4/002	0/001
Perception classroom	Between group Intergroup Total	21041/94 117145/28 138187/22	7 390 397	3005/99 300/37	10/08	0/001

Analysis of variance showed that the average performance of students in academic performance, perception of the environment in each grade level (P < 0/001) is different. In other words, what grade students in high school are more better understanding of their class. In academic performance between students in each grade is a significant difference (P < 0/001) . Second grade students report more progress in education. In general it can be said, we hypothesized that there is a difference in perception of the classroom, academic performance in each grade is confirmed.

Table 3: Analysis of variance significant difference in performance on The school district

Variables	Sources of changes	Sum of squares	Degrees of freedom	Variance	F	Significant
Academic Performance	Between group Intergroup Total	3/42 951/47 95/58	3 396 399	1/14 2/40	0/47	0/70
Perception classroom	Between group Intergroup Total	1488/73 136698/487 138187/219	3 394 397	496/24 346/95	1/43	0/23

Analysis of variance showed that the average performance of students in the classroom in the school districts in the perceptions of academic performance (p> 0/05) does not have significant difference. In order to answer the research questions: is the perception of the classroom environment can predict academic performance of its students? What is its contribution in predicting academic performance? Multiple regression models were used.

The results of regression academic performance based on the perception of the classroom is done, the results can be seen in Table 4.

Table 4: Summary of regression analysis based on the perception of classroom academic performance

Model	R	R^2	R^2 Justified	SE
Factors understanding of classroom academic performance	0/64	0/39	0/38	1/54

Table 5: Analysis of variance in terms of the perception of classroom academic performance

Model	SS	df	MS	F	sig
regression	302/29	1	302/29	76/16	0/000
remaining	580/08	394	1/47	_	_
Total	882/37	395	_	_	_

The results of Tables 4 and 5 and the full model, the multiple correlation between predictor variables and the criterion variable was statistically significant in terms of academic performance (R = 0/64 , P< 0/01). The practical significance of regression models that adjusted R2 can be expressed with the index shows that about 38 percent of variance in academic performance can be explained by a linear combination of predictor variables equation. This amount is based on the principle Cohen is a bit higher than average.

Table 6: significant coefficients and coefficients from the regression analysis based on the perception of classroom academic performance

Predictor variables	B	SE	β	t	sig
Fixed	4/02	1/21	-	3/93	0/001
understanding of classroom academic performance	0/04	0/13	0/54	7/50	0/000

Based on the results of the multivariate regression equation or a prediction model based on the predictor variables affect academic performance is as follows.

Understanding of classroom academic performance 0/04 +4/02 = academic performance
The predictive equation for standardized variables as follows.
Understanding of classroom academic performance 0/54 = academic performance

Discussion and conclusion

The results showed a significant effect on academic performance is perceived classroom environment.

The findings related to the perception of the classroom environment and academic performance, although much of the existing research literature, but rather with research and findings Deci and Ryan(2000), Gentry & owen(2004) , Church (2007), , Tapola(2008), Dorman ، Adams ، Ferguson (2008),Bembenutty(2008), Lian Chua ، Wong & Thanq Chen(2008)Farmihani(2009), Chae (2009), Geun Baek (2010), Shiaowel(2011), Oriaifo(2012) With this study were consistent. This means that the components of perceived classroom environment by creating interest, challenge, joy, and choose the academic performance of student. Perceived positive classroom environment by creating favorable attitudes toward school teacher, student collaboration, curriculum, teaching methods, facilities and interaction between teacher and student in the classroom that the students' academic performance. According to security Parker (2004) Students entering the school environment with personal and interpersonal challenges face new and different. These challenges need to build a new relationship requires So that students and parents understand the relationships outside the family And the habit of learning to develop educational environment (Hughes .2009).viewed academic performance, perception is different from the classroom in each grade results also Kareshki and colleagues (1386) confirms these findings and suggest that the different characteristics of students based on grades.So that, third and fourth grade students have a better understanding of the class To students after the conclusion of the first and second grade students in high school in other words, what is more better understanding of their class.In examining the perceived class differences were basic and found that for high school students (compared to elementary students) The final years of high school and first year high school students about the educational classroom activities are enjoyable and more interesting and more choice there is, in addition to academic performance also increases. Because students become clearer goals and career choice is also somewhat taken place and struggling students to achieve a goal is clear (Gentry.2002). Between academic performance and perception of the environment, there is no significant difference in the classroom.

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