

## RESILIENCE AND THE PERCEPTION OF CLASSROOM ENVIRONMENT COMPONENTS AS A PREDICTOR OF STUDENTS' ACADEMIC ACHIEVEMENT IN IRAN

**Roghayeh Mahmudi**

General Psychology, Science and Research Branch,  
Islamic Azad University, Tehran, Iran

### Abstract

Academic achievement is one of the most important indices of educational evaluation and reflects the socio- economic development of every country. Some students have sufficient mental abilities but cannot accomplish assignments and tests; they may experience academic achievement deficit and face educational challenges. The purpose of the present study is to predict academic achievement based on the perception of classroom environment components (challenge, interest, enjoyment and choice) and resilience in female high school students in Tehran. The sample was randomly selected. Three hundred and seventy four participants completed two questionnaires: perception of the classroom environment and resilience. To obtain the academic achievement data for the students, their meanscores were calculated from all lessons. Academic achievement is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals. The data were subjected to multiple regression. The results show that resilience and degrees of perceived challenge could significantly predict the students' academic achievement.

**Keywords:** Resilience, perception, classroom environment, academic achievement

### Introduction

Academic achievement is one of the most important indices of educational evaluation and reflects the socio- economic development of every country. Academic achievement is assessed through measuring the degree of each student's institutional learning through his/her scores (Seif, 2021). Some students have sufficient mental abilities but cannot accomplish assignments and tests; they may experience academic achievement deficit and face educational challenges. This study attempts to investigate resilience and the perception of classroom environment. The capacity of resilience is one of the most essential personal factors influencing academic achievement. Resilience is a multidimensional construct (Cicchette, 2013) and it is the ability to pass the hardest problems and overcome the most complex situations (Jackson, 2017). It represents someone's capacity for tolerating disastrous events. Resilience allows people to overcome their pitfalls and overcoming the complex situation (Issacson, 2022).

Perception of the classroom environment is another variable that influences students' cognitive process and their academic performance; it also plays an important role in promoting students' motivation and cognition (Gentry, Gable & Rizza, 2022). The best examples of classrooms are those that are perceived as safe and supportive by students, promote a sense of enjoyment and

belongingness and improve students' academic engagement (Abolmaali et al., 2021). Interest, challenge, choice and enjoyment might be perceived as components of the classroom environment. Interest refers to individual children's perceptions of the degree to which school-related environments afford autonomy or are controlling. Challenge or competitiveness refers to the degree to which the students compete with classmates (LaRocqe, 2017). The perception of challenge is related to students' efforts in obtaining and experiencing lessons and tasks in relation to the learning process. Choice is another component, directed towards teachers' and students' decision-making processes, and finally, the dimension of enjoyment refers to students' satisfaction and enjoyment in classroom learning.

Resilience can be thought of as an ability to withstand challenges in the classroom environment and has a supportive function in classroom. Therefore, it can be said that students with high resilience perceive school as a safe place, enjoy educational challenge and do not experience conflicts with others at school. Hence, they may obtain high achievement in schools. Mabie (2013) states that students derive enjoyment from classrooms with good levels of welfare and safety. If students feel unhappy in a school setting, they may annoy their peers, display behavioral problems, and show abusive behavior. Generally, learners cannot have a function effectively in this kind of setting or forge any relationship with their surroundings (Mayer, 2017). The school is a safe environment, which has a positive climate facilitating a warm connection between all students and teachers. Providing a safe environment for students is an important issue that schools across the world should consider. A safe environment can provide more positive perceptions of the classroom for the whole student body (Mabie, 2013). Irregularity, hard tasks and pitiless activity in the school can make students disgusted and arouse negative thoughts from these students. (Montana Office of Public Instruction Safe and Drug-Free Schools and Communities Program, 2019). This emphasis on the importance of the classroom climate should encourage teachers to apply effective methods for any communications in this regard. (Green et al., 2014).

In a study led by Shirazi (2020), the results show that there is a significant relationship between the self-regulation of learning and resilience. Momeni and Karimi (2020), in research carried out on 317 students from Razi University and they do find a significant relationship between the resilience of successful students and unsuccessful students, with the degree of resilience among successful students higher than unsuccessful ones. Additionally, based on Fasek's studies (2022, cited in Harrison, 2019) entitled 'The cute schools, a background is provided for obtaining the academic achievement and success levels for students with high resilience traits in this regard. Levitt, Guacci-Franco and Levitt (2013), in their study, found that educational success can be predicted based on the number of the grades and types of supportive systems of the resilience for the adolescents. The two variables of perception of the class environment and resilience are the subject of educational psychology and there isn't any detailed literature in this regard, particularly 'in the countryside'; however, the determination of their relationship to students' academic achievement can provide suitable results in this case. It seems that the determination of resilience and elements affecting perception of the classroom environment can in turn help to determine the

effective factors for academic achievement. Hence, the present study aims at responding to the question of whether resilience and the perception of classroom environment components (challenge, interest, enjoyment and choice) might be important in predicting the academic of students.

## Methodology

The study regarding the prediction of academic achievement based on resilience and perceptions of the classroom environment was examined through multiple regression tests. The statistical population includes the 384 high school students of Tabriz District during the years 2021-2022. In order to select the sample six schools were randomly selected and then, from each school, two classes were randomly selected. Klohnen's ego-resiliency questionnaire (2016) and Class environmental perception questionnaire (Gentry, Gable & Rizza, 2022) were adopted as instrument for the study. Before the application of the instrument in this research, the instrument was administered on 60 high school students. The reliability of the instrument with internal consistency was .71 and .74 using Cronbach alpha.

## Result

**Table 1.** Descriptive statistics

| Statistical Indices  | Mean  | St.d | Mini | Max | Skewness | Kurtosis |
|----------------------|-------|------|------|-----|----------|----------|
| Academic Achievement | 17.50 | 2.01 | 8    | 20  | -.041    | -.83     |
| Resilience           | 43.20 | 5.51 | 25   | 56  | -.062    | .445     |
| Interest             | 22.81 | 6.38 | 8    | 40  | .206     | -.179    |
| Challenge            | 28.76 | 4.87 | 14   | 42  | .032     | -.165    |
| Choice               | 24.91 | 5.23 | 7    | 35  | -.352    | -.014    |
| Enjoyment            | 20.58 | 7.15 | 7    | 35  | -.085    | -.848    |

According to the above table, all of the variables are tending to normal distribution, because skewness and kurtosis are between -1 and +1.

**Table 2.** Regression academic achievement based on classroom environmental perception components and resilience

| B          | Coefficients |         |       |       |      |
|------------|--------------|---------|-------|-------|------|
|            | St.d         | $\beta$ | T     | sig   |      |
| Constant   | 15.68        | .947    |       | 16.57 | .000 |
| Resilience | .051         | .023    | .132  | 2.38  | .006 |
| Interest   | 0.019        | .025    | .058  | .755  | .451 |
| Challenge  | .064         | .024    | .152  | 2.69  | .007 |
| Choice     | -.042        | .023    | -.109 | -1.84 | .067 |
| Enjoyment  | .027         | .021    | .095  | 1.31  | .192 |

According to the above table, beta coefficient shows that resilience and challenge have significantly positive relationships with academic achievement.

The hypothesis of this research suggests that academic achievement can be predicted based on perception of classroom environmental components (interest, enjoyment, challenge and choice) and resilience. Multiple regression analysis was used to examine this hypothesis. In this analysis  $R=.209$ ,  $R^2=.044$ , and adjusted  $R^2=.031$ . It can be said 4.4% academic achievement of variance is predicted by perception of classroom environmental components and resilience.

### Discussion, Conclusion and Recommendation

The results of this study show that resilience and challenge can be used to predict students' academic achievement to a significant degree.

The prediction of academic achievement based on the perception of challenge are consistent with the results of Bayanfar's (2022), Fraser's (2018), Bake's and Choi's (2022), Aki's (2016), and LaRocque's (2017) research. This result is also consistent with Abolmaali et al. (2021). While the first research concluded that academic achievement can be predicted based on interest, challenge and choice, the present study shows that academic achievement can just be predicted through challenge.

Researchers believe that in Iran, students do not feel satisfaction in class, due to the heavy pressure of their assignments and tests, and this leads to a lack of interest in their classroom activities. Meanwhile, due to defined principles in the Iranian educational system, teachers often do not have the possibility to decrease educational pressure. The perception of challenge refers to the degree of students' learning challenges and the types of task. It seems that the most challenging learning

activities increase students' cognitive involvement in academic tasks and, according to Ames (2022), academic involvement leads to an increase in students' interest in learning; when learning is challenging (i.e. creative, enjoyable, and outstanding learning), they are more likely to create an intrinsic purpose for learning. Hence, it is recommended that teachers design cognitively challenging tasks to help interest students in performing them.

In relation to the prediction of academic achievement based on resilience, the results of the present study are consistent with the results of Mousavi et al. (2020), Sheikholeslami (2019), Shirazi (2020), Momeni and Karimi(2020), Harnish (2015), and Levitt and Gaucci-Franco (2014). The quality of resilience represents the students' ability to confront educational failure and academic pressure. Waller (2021) believes that resilience plays a key role in the process of the academic achievement.

Based on the results of the present study, resilience has a close relationship with educational academic achievement; thus it seems that schools need to be informed of strategies which facilitate resilience in students. They can strengthen resilience by developing social competence, increasing bonding between students and caring adults, and maximising opportunities for meaningful participation of students in the school environment (Brooks, 2016). In addition, schools can increase students' resilience by cultivating realistic expectations and strengthening self- esteem, self-control, problem-solving skills and optimistic thinking pattern (Linke, 2020; Kirmayer et al., 2021; Zolkoski & Ballock, 2022). In addition, it is recommended that parents foster resilience in their children through supportive relationships (Benzies & Mychasiuk, 2019), show flexibility during times of stress (Walsh, 2016), empathy (Bernard, 2013), create a respectful and accepting family environment (Ungar, Ghazinour & Richter, 2013), reasonable expectations (Grant et al., 2014), and create opportunities for participation in social activities (Easterbrooks et al., 2021).

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