



## Associations Between Classroom Learning Environment and Students' Outcomes

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**Abstract:** *This article examines associations between classroom learning environment and students' outcomes. Researches on this article are analyzed and reviewed in the essence.*

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### Classroom Learning Environment

In recent years, numerous research has focused on classroom learning environment especially in western countries, because it's a significant factor for influencing students' outcomes and impacting on teachers' teaching effectiveness. Most educators believe that classroom learning environment is a critical milieu for students' cognitive and affective development. However, based on the related literature, we can see scholars seldom pay special attention to the concept of classroom learning environment.

That's why classroom learning environment includes broad educational concepts. Hence, it is complicated to define and scholars fail to define it in a uniform term. Classroom learning environment is conceptualized based on researchers' different research perspectives.

Classroom learning environment can be called learning environment, class climate, class atmosphere, school environment and educational environment. Some representative scholars mainly define the classroom learning environment in the following ways.

### Research on Classroom Learning Environment Abroad

The field of classroom learning environment has undergone remarkable growth in the past few decades because researchers gradually acknowledge that classroom learning environment is a significant determinant of students' outcomes. Therefore, it is worthwhile for researchers to pay special attention to this field. Western scholars mainly study the field of classroom learning environment in the following three aspects: associations between classroom learning environment and students' outcomes (cognitive achievement and affective achievement); the development of research instruments; the role of classroom learning environment research in evaluating curriculum reform and improving professionalism.

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classroom learning environment research in evaluating curriculum reform and improving professionalism.

### **Research on Associations between Classroom Learning Environment and Students' Outcomes**

In recent decades, western researchers have made great efforts to gain more knowledge about how classroom learning environment could help to motivate students to reach their desired outcomes. A large number of researchers showed that the relationship between classroom learning environment and students' outcomes was extremely significant (Gilbert *et al*, 2014; Fraser & Fisher, 1982; Fraser, 1998b). Generally speaking, students will gain better achievement in a more supportive classroom learning environment. Past studies have investigated the association between classroom learning environment and student outcome in different countries for different grades which ranged from kindergarten to higher education.

In the past research, little attention has been given to the use of an instrument to investigate kindergarten students' perceptions of the classroom learning environment and explore the association between classroom learning environment and students' outcomes in science class. Therefore, Robinson and Fraser (2013) used the modified form of *What Is Happening In this Class?* (WIHIC) questionnaire that is extensively used in different studies (Stephen & Fraser, 2008; Dorman, 2003) over the past decades to further this field.

For elementary school level, Goh and Fraser (1995) explored the influence of classroom learning environment on student outcome in mathematics classrooms in Singapore. Subsequently, researchers (Goh & Fraser, 1998) used the modified version of *My Class Inventory (MCI)* and *Questionnaire on Teacher Interaction (QTI)* in Singapore to examine the association between teachers' teaching behaviors and students' outcomes in mathematics classes with a sample of 1512 students in Grade 5.

According to the findings, students perceived classroom learning environment more favorably with teachers having more Leadership, Cohesion, Helping and Understanding behaviors and less uncertain behaviors and Friction. Besides, girls perceived their classroom learning environment more positively than boys whereas boys had better academic achievements than girls.

In order to explore the association between middle school students' perceptions of mathematics classroom learning environment and their motivations and achievements, a study was administrated to 979 students (Gillbert *et al*, 2014). The results suggested that low achievers perceived the use of reform practice was significantly related to their test scores, but high achievers believed the use of reform practice was not especially critical for their test performance which contradicted with the prior research that reform practice was especially beneficial for those higher performers. Furthermore, significant associations were also found between middle school students' classroom learning environment perceptions and their learning outcomes by using the instruments of *Individualized Classroom Environment Questionnaire (ICEQ)* and the *Classroom Environment Scale* (Fraser & Fisher, 1982). Besides, positive associations were also reported between affective outcomes and classroom learning environment with a sample of 661 middle school students (Ogbuehi & Fraser, 2007).

Other research had also illuminated the close relationship between classroom learning environment and students' cognitive and affective outcomes in cross national studies. For example, researchers (Haertel *et al*, 1981) analyzed the data collected from a sample of 17,805 students to investigate correlations between classroom learning environment perceptions and students' learning outcomes. Besides, significant differences were also found between Australian and Taiwanese students in their attitudes towards science by comparing students' perceptions of classroom learning environment (Aldridge *et al*, 1999).

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