

Children's Perceptions of Their Classroom Environment: A Comparison between Korean and American Gifted Students

*Diane Montgomery, Michelle Sumner, U.S.A.
Jeong-Hwa Moon, Korea*

Introduction

The psychological nature of the classroom or learning environment is integral to the process of learning. The student perception building of the learning environment has been the focus of research for many decades (Waxman, 1991). Because the classroom and its climate form the context in which a child expresses creative and critical thought throughout the learning process, the attitude that a student has about the learning environment has been viewed as an important educational outcome for curriculum planning. Various aspects or perspectives of the class experience have been linked to student achievement (Fraser, 1986; Heroman, 1990) and student attitude (Fraser & Fisher, 1983). Traditionally, many of the studies have focused on secondary or college level students in English-speaking countries.

Interest in the ways that students of all ages and grade levels in schools from different countries experience their classroom is evident with the growing

number of international studies. Schiller and Walberg (1982) studied student achievement and attitudes in Japan. A new instrument was validated in a study of university science students from the United States, Canada, England, Australia, Israel, and Nigeria regarding their attitudes toward the laboratory class (Fraser, Giddings, & McRobbie, 1992). Burden and Fraser (1991) used classroom environment instruments to improve instruction in Britain. Additionally, university students in teacher training programs in Spain (Villar-Angulo, 1987) and Botswanan secondary students (Snyder, 1991) were recently studied. Yet, to date, few international studies focus on Asian students or student perception of the elementary class environment.

An outline of the research needed on classroom learning environment was identified by Fraser (1991) as progressing along three main branches: personal (individual value as well as group), cross-national (recognition of international differences and cultural implications), and links between and

among various environments (e.g. school and class). This agenda supports the need for additional investigation of the classroom learning environment among students with unique learning needs, such as the student who is academically gifted, and demonstrates a need for international comparisons of the classroom environment for this population.

The purpose of the present study was to determine the perceptions of the classroom learning environment for students who are identified as gifted in Korea or the United States. The classroom climate components studied were satisfaction, friction, cohesiveness, competitiveness and difficulty. The primary focus of the research was to describe any differences; therefore, no determination of more favorable scores was made for any of the categories. The comparisons were made at three grade levels (third, fourth, and fifth) to investigate the possible developmental differences between the two groups of students.

Method

Subjects

Subjects in this study were enrolled in grades three, four, and five in Oklahoma and Korea. The 76 American students were enrolled in self-contained classes designed for students identified as academically talented by a team evaluation of assessment data including a group achievement test, teacher nominations, parent nominations or student work. The 65 Korean students participated in a specialized private program for gifted students and were enrolled in regular public school classes.

Instrument

A number of instruments have been validated as appropriate assessment tools for the study of classroom environment (Framer, 1991). Many of these instruments have been used internationally. The My Class Inventory (NCI, Fisher & Framer, 1981) was chosen for this study because it measures the components thought to potentially differentiate the Korean and American students. It is designed for elementary students, and it has been widely used as an instrument for the study of student perceptions of their classroom environment.

The MCI was adapted for elementary students (ages 8 to 12 years) based on

the widely used Learning Environment Inventory (LEI) (Anderson & Walberg, 1974). The MCI retained five of the fifteen scales of the original LEI. The short form of the MCI contains 25 items. The satisfaction scale has items such as, "Children seem to like the class." The friction scale measures the amount of perceived disagreement among classmates in the learning environment and a typical item is: "Children in our class fight a lot." The competitive scale examines the degree to which students make self-other comparisons with a typical item such as: "Most children want their work to be better than their friend's work." The difficulty scale relates to schoolwork and a typical item is: "In our class the work is hard to do." A typical item for the cohesion scale is: "Children in our class like each other as friends." Students are required to answer yes or no to each item. Reverse scoring is required for some items; however, each of the items scored positively on the scale is worth three points for a total possible score of 15. The negative response is scored as one point for the lowest possible score of 5.

The instrument and the directions for its completion were translated into the Korean language from the English

version by a doctoral level professor whose native language is Korean. A second Korean teacher highly qualified in English reviewed the translation. The directions for the instrument were read to the class by the researcher from the respective country. Students were given as much time as needed to complete the instrument. All students invited to participate in the study completed the instrument.

Results

Four of the five scales (cohesion, competitiveness, friction, and satisfaction) showed similar alpha reliabilities to those obtained in another validity study (Fraser & O'Brien, 1985). A surprisingly low reliability (.22) was found for the difficulty scale (see Table 1).

Table 1. Internal consistency of each scale compared with validity study

Scale	Alpha Reliability	Australian Study*
Satisfaction	0.74	0.68
Friction	0.67	0.78
Cohesiveness	0.73	0.81
Competitiveness	0.57	0.7
Difficulty	0.22	0.58

*Fraser & O'Brien (1985)

A multivariate analysis of variance (MANOVA) was conducted to determine the effect of grade with a significance difference among grades three, four and five ($F = 1.93$; $p = .041$). A MANOVA by country also showed significant differences between Korean and American students ($F=10.16$, $p < .001$). The satisfaction and cohesion scales contributed to the overall significance by country.

Subsequent univariate analysis of variance (ANOVA) were conducted for four of the five scales on the MCI. On the cohesiveness scale, there was a significant main effect found for country ($F = 7.452$, $p = .007$) with Koreans scoring higher than Americans (see Table 2). Table 3 demonstrates the significant interaction found between country and grade level on the satisfaction scale ($F = 7.564$, $p = .001$). No significant differences were found on the friction and competitiveness scales. The difficulty scale was not analyzed because of the low reliability.

Table 2. Summary table for cohesion by grade level and country

Source	SS	df	MS	F	p
Country	78.68	1	78.68	7.45	0.007*
Grade	41.09	2	20.55	1.95	0.147ns
Country by Grade	25.53	2	12.76	1.21	0.302ns
Explained	131.18	5	26.24	1.49	0.035ns
Residual	1,425.47	135	10.56		
Total	1,556.65	140	11.12		

*significant at the .01 level

Table 3. Summary Table for Satisfaction by Grade Level and Country

Source	SS	df	MS	F	p
Country	163.03	1	163.03	20.85	0.000*
Grade	56.99	2	28.5	3.64	0.029*
Country by Grade	118.32	2	59.16	7.56	0.001*
Explained	379.1	5	75.82	9.69	0.000*
Residual	1,055.85	135	7.82		
Total	1,434.95	140	10.25		

*significant at the .01 level

Table 4. Descriptive statistics table
scale reliability and means for grade and country

Group	Grade	n	Satisfaction	Friction	Competition	Cohesion	Difficulty
Korean	Third	25	9.48	10.12	11.4	10.04	7.16
	Fourth	21	9.57	9.76	12.33	9.95	7.57
	Fifth	19	8.58	9.42	12.89	10.05	8.26
American	Third	20	9.5	9.3	11.01	8.2	7.01
	Fourth	21	11.38	9.57	11.48	7.48	7.48
	Fifth	35	13.06	9.63	11.4	9.63	7.17
Reliability			0.75	0.67	0.58	0.73	0.22

Discussion

This exploratory comparison of Korean and American students' perceptions of their class environment pointed to some interesting similarities and differences in the ways that students who are gifted experience their classroom. Korean and American students who are gifted rated their classrooms similarly on the friction and competitiveness scales. Typically viewed as a more negative characteristic of a classroom, students from both countries appear to have a consistently low perception of friction among their

classmates. Competitiveness, although rated somewhat higher than the other scales, is also perceived similarly across grade level for both cultural groups.

Although the difficulty scale achieved such low alpha reliability that it was not used for analysis, the other scales appear to reach internal consistency similar to MCI validity studies (Fraser & O'Brien, 1985). There are several possible explanations for the low reliability of the difficulty scale. Perhaps the concept was translated into the Korean form of the MCI with a different meaning. A reverse translation by someone unfamiliar with the test may provide some insight. Perhaps there is a

very different understanding of the construct of "subject difficulty" in other cultural groups. Exploratory factor analysis of the instrument within each cultural group may be helpful. The MCI has been validated and used with general ability populations of students. It may be that students who are gifted have a different notion of the meaning of difficulty or have differing reports of the level of difficulty in their classes. It appears that the five items comprising the difficulty scale do not adequately capture the meaning of difficulty for the students in this study.

It seems that this study is a beginning of a fruitful line of research for international studies of students who are gifted. More study is needed to determine the meaning of the classroom for gifted students in Korea and America. - Particularly, there is a need to understand the adequacy of the instrumentation in the assessment of attitude. To better understand the results of the present study, gender must be analyzed. Lawrenz (1987) found no gender differences using similar scales of the MCI at the fourth grade level; however, there were more gender differences for older American students. For instance, there may be gender

differences that influenced the fifth grade Korean satisfaction difference in the present study. Furthermore, there maybe cultural influences and expectations for students who are capable of high achievement that would dictate a study of the differences of Korean and American students who are gifted and their non-gifted peers. It is also important to be able to determine the effects of the program placement on the student's perception of the classroom environment.

References

- Anderson, G. J., & Walberg, J. J. (1974). Learning environments. In H. J. Walberg (Ed.), *Evaluating educational performance: A sourcebook of methods, instruments, and examples*. Berkeley, CA: McCutchan.
- Burden, R., & Fraser, B. J. (1991). *Use of classroom environment assessment in school psychology: a British perspective*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Fisher, D. L., & Fraser, B. J. (1981). Validity and use of my class inventory. *Science Education*, 65,

- 145-156.
- Fraser, B. J. (1986). Determinants of classroom psychosocial environments: A review. *Journal of Research in Childhood Education, 1*, 5-19.
- Fraser, B. J. (1991). Validity and use of classroom environment instruments. *Journal of Classroom Interaction, 26*, 5-11.
- Fraser, B. J., & Fisher, D. L. (1983). Effects of classroom openness on science students' achievement and attitudes. *Research in Science and Technological Education, 1*, 41-51.
- Fraser, B. J., Giddings, G. J., & McRobbie, C. J. (1992). Assessment of the psychosocial environment of university science laboratory classrooms: A cross-national study. *Higher Education, 24*, 431-451.
- Fraser, B. J., & O'Brien, P. (1985). Student and teacher perceptions of the environment of elementary school classrooms. *The Elementary School Journal, 85*, 567-580.
- Heroman, D. S. (1990). *Student perceptions of the learning environment: Assessments of teacher performance and student learning*. (ERIC Document Reproduction Service No. ED 338 356).
- Lawrenz, F. (1987). Gender effects for student perception of the classroom psychosocial environment. *Journal of Research in Science Teaching, 24*, 689-697.
- Schiller, D. P., & Walberg, H. J. (1982). Japan: The learning society. *Educational Leadership, 39*, 411-412.
- Snyder, C. W., Jr. (1991). *Classroom affect and complexity: Ecological perspective of Botswana junior secondary schools*. Washington, DC: Agency for International Development. (ERIC Document Reproduction Service No. ED 357 008).
- Villar-Angulo, L. M. (1987). *Evaluating, psychosocial classroom environments*. (ERIC Document Reproduction Service No. ED 283 880).
- Waxman, H. C. (1991). Investigating classroom and school learning environments: A review of recent research and developments in the field. *Journal of Classroom Interaction, 26*, 14.