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The Supportive Classroom Environment Habits Used by Mathematics Teachers for Essential Stage in Jordan

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Abstract The purpose of this qualitative study is to investigate the supportive classroom environment habits used by mathematics teachers for essential stage in Jordan. The research questions for the present study are: 1) What are the supportive classroom environment habits used by mathematics teachers for Essential Stage in Jordan? 2) Is there a significant difference at level (0.05≥α) in the means of supportive classroom environment habits (SCEH) teacher used with respect to teacher education? 3) Is there a significant difference at level (0.05≥α) in the means of supportive classroom environment (SCEH) teacher used with respect to teacher experience? To answer the questions of the study, (7) schools were selected from Amman, and (10) female teachers participated in the study, who were observed in the natural setting during math classes. The researcher built a study instrument using theoretical background related to mathematical classroom environment (SCEH). The psychometric properties for (SCEH) were verified. Each teacher has been observed (5) times, and each observation was coded, analyzed and reported using (SCEH). The process of collecting data continued about 2 months during the 1st semester of the academic year (2018-2019). The results revealed that the percentage of positive habits of the classroom environment did not exceed 50%, but less in all domains of the study except for the domain "Safe environment to participate and the domain "support student motivation and self- esteem' were the last with the percentage 39.6. This research recommends that school mathematics teachers adopt more supportive classroom environment habits to improve student's success; such as supporting problem solving, high expectation for all the students and support students' motivation and self-esteem.

Keywords: *the supportive classroom environment habits, mathematics, teachers for essential stage in Jordan*

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1. Introduction

There have been significant shifts in the way of teaching and learning of mathematics is conceptualized internationally. The National Council of Teachers of Mathematics (NCTM) created a set of mathematics standards that addressed content and instruction. The instructional standards focus on the transition classrooms from traditional direct instruction to student-centered standards-based instruction [1,2]. The standards articulate five general goals as follows; students become mathematical problem solver; students should learn to reason mathematically; students should learn to communicate mathematically; students should use mathematical relation; and finally students should use representation to model mathematical situations. The point of view of the standards that learning has many factors such as motivations, the supportive learning environment, and the nature of the curriculum. Therefore, meeting all needs is a necessity for learning. Student learning was defined generally as part of student success [3]. Teachers are a key component of the educational process [4]. Mathematics education and classroom environment researchers have highlighted three main factors as measures of student success: increased student efficacy, increased student motivation, and student academic achievement which has been correlated with the effectiveness of the teacher [5,6]. Also Hattie states, "The differences between high-effect and low-effect teachers are primarily related to the attitudes and expectations that teachers have when they decide key issues of teaching". In addition, Hattie reported that teachers' attitudes and belief systems make a difference in the way they teach. High-quality teachers are expected to provide emotionally supportive classroom environments that contribute to manage classroom behaviors, deliver accurate content, support thinking [4].

Theories of teaching and learning have long emphasized teachers' important role in supporting students' development in areas beyond their core academic skill. For example, in their conceptualization of high-quality teaching, Pianta and Hamre described a set of emotional supports and organizational techniques that are equally important to learners as teachers' instructional methods. They posit that, by providing "emotional support and a predictable,

consistent, and safe environment", teachers can help students become more self-reliant, motivated to learn, and willing to take risks. Furthermore, by modeling strong organizational and management structures, teachers can help students to build their ability to self-regulate [7].

Many researchers revealed the importance of supportive relationships in learning; this learning will purposefully change the world and oneself, whereas knowledge is the practice of change rather than merely a discrete body of facts, concepts, or rules that can be transferred from one situation to another. They suggested that teachers should focus more on finding ways to develop students' quest for knowledge and understanding in an environment of "collective efficacy", which they portrayed as teachers and students working well together to reach the class goals. So teachers' role has been examined as community organizers to support student involvement. Psychological and physical condition is very important to the student, and the presence of students in the physical environment appropriate and healthy, safe and clean, reflected positively on academic achievement of science and efficiency in education. These are an essential complement to the reform process, which requires hardworking of the entire educational process, to pay attention to the physical environment surrounding the student, the calls for educational reform emphasize that the presence of students in a safe environment is positively reflected on the whole learning process, and vice versa an essential complement to the reform process [7-13].

For example, when a student exhibits organized behavior, teachers may receive credit in classroom organization. In this case, students in the classroom will simulate the same organized behavior, which in turn will affect the quality of education for students' results and have a positive impact on students. Such attitudes reflect the positive environment that influences the development of learning and learning processes [14,15].

Furthermore, by modeling strong organizational and management structures, teachers can help build students' own ability to self-regulate. Content-specific views of teaching also highlight the importance of teacher behaviors that develop students' attitudes and behaviors in ways that may not directly affect test scores [3,16].

2. Review of Related Research

In mathematics, researchers and professional organizations have advocated for teaching practices that emphasize critical thinking and problem solving around authentic tasks [1,3,16]. Others have pointed to teachers' important role of developing students' self-efficacy and decreasing their anxiety in math [6,17]. Some studies have been recognized that high-quality teachers are not only expected to raise test scores but also to provide supportive environments that contribute to the social and emotional development of students, to manage classroom behavior, to provide accurate content, and to support critical thinking [7,11].

Although evidence from other studies suggests that a wide range of attitudes and behaviors are equally important to students 'long-term success and have significant effects on students' self-efficacy in mathematics, happiness and classroom behavior, including emotional support for teachers and classroom organization. These studies have found that, as with test scores, teachers vary considerably in their ability to affect students' social and emotional development and a variety of observed school behaviors [6,18].

However, teachers who are effective at improving test scores often are not equally effective at Improving students' attitudes and behaviors. These findings lend empirical evidence to well-established theory on the multidimensional nature of teaching and the need to identify strategies for improving the full range of teachers' skills [19].

In recent years, two research traditions have emerged to test this theory using empirical evidence. The first tradition has focused on observations of classrooms as a means of identifying unique domains of teaching practice [20,21]. Several of these domains, including teachers' interactions with students, classroom organization, and emphasis on thinking within specific content areas, aim to support students' development in areas beyond their core academic skill. The second research tradition has focused on estimating teachers' contribution to student outcomes, often referred to as "teacher effects" [22-24]. Other studies have found that, as with test scores teachers vary considerably in their ability to affect students' social and emotional development and a variety of observed school behaviors [5-6,18,24-26].

A number of studies have described the relationships between dimensions closely related to classroom environment. For example, teacher interactions with students will reflect students' social competence, participation, risk tolerance, and classroom behavior [28-30]. A supportive classroom environment promotes student success by improving self-efficacy and motivation to learn [17-18,27,30-31].

Reevesa & Le Mare [32] examined the beliefs and experiences of three elementary school teachers who, over one school year, participated in bi weekly, guided discussions of care theories that introduced them to relational pedagogy as a way of supporting students "positive social, emotional, and academic growth. Findings revealed that as teachers" understandings of the aims of education during the guided discussion, they reflected a more relational perspective at the end of the study than the beginning [33].

A review of mathematics education research has shown that the supportive classroom environment has a significant impact on students' success, making it necessary to examine the classroom environment habits that support the growth of the positive student in all its aspects during the mathematics lessons away from the content knowledge [9,34].

A critical look into the above cited studies indicated that there is a need to investigate supportive classroom environment habits especially in Jordan. This study suggests some professional practices that work to understand interactions and relationships between teacher and students to build positive classroom environment habits.

3. Statement of the Problem

The classroom environment is a dynamic place, supporting student success in many ways. Specifically, mathematics education researchers have found that successful mathematics classrooms have a positive influence on (a) student efficacy [34]; (b) motivation [18,27,31-32]; and ultimately, (c) academics [9,12]. The teacher– student relationship is the one characteristic of the classroom environment that supports collective efficacy [12].

Teaching have been characterized as multidimensional. High-quality teachers are expected to provide emotionally supportive environments that contribute to students' social and emotional development, manage classroom behaviors, deliver accurate content, and support critical thinking [7,11,30].

Although researchers have emphasized the importance of a supportive classroom environment for student success, Jordan's results in mathematics at the international Assessment [35], is still at a low level compared to global results, which indicates the achievement gap among students. This study was intended to explore and highlight the ways teachers manage and build cultures that support students' success.

4. Study Questions

This study aimed to investigate in depth the supportive classroom environment habits used by mathematics teachers for Essential Stage in Jordan during the 1st semester for the academic year (2018-2019). In specific the study tried to answer these questions:

1) What are the supportive classroom environment habits used by mathematics teachers for Essential Stage in Jordan?

2) Is there a significant difference at level ($0.05 \geq \alpha$) in the means of supportive classroom habits (SCEH) teacher used with respect to teacher education?

3) Is there a significant difference at level ($0.05 \geq \alpha$) in the means of supportive classroom habits (SCEH) teacher used with respect to teacher experience?

5. Purpose of the Study

Positive classroom environment has a significant impact on student success in several directions [8,12,31,32].

This research seeks to explore the classroom environment habits of mathematics teachers for the basic stage that promotes positive student growth in areas beyond the knowledge of content, also the study investigates these habits, which focuses on the educational learning environments practiced by teachers to support students success academically and emotionally The researchers highlighted five domains as key factors for teaching mathematics and the classroom environment as follows: Safe environment to participate, strengthening classroom discussion, Support student motivation and self-esteem, support math problem solving, and Taking into account individual differences.

6. Significance of the Study

Classroom environments support students in a variety of ways. Teachers have a great influence on students in the classroom. They move around the curriculum, decide on educational practices, and set rules for environmental culture management. This study focused on assessing the habits of positive classroom environments related to educational practices. Understanding how teachers build positive learning environments can have a significant impact on teacher development both in-service and in pre-service education programs. As well as influencing the development of effective classroom management cultures and strategies for future classes. Leaders in teacher education are under increasing pressure to identify teacher habits that influence student success, since these habits are the key to developing positive classroom habits that support students' development and success [31-32]. This study can help identify these practices, and thus be the reference that guide to set effective classroom environment habits. This is an urgent need especially for mathematics teachers, given the high risk of accountability that exists in math classes today.

Finally, this study is unique because it makes teacher practices the focus of study, so it will be a source of understanding clarify the positive classroom environment habits for the development of the student's learning and success.

7. Methodology

The following procedures have been taken:

1) The researcher intentionally selected (10) Sites; Government and UNRWA schools in Amman. Participated in this study were (10) female Math teaches for the essential grades (4-10). Table 1 shows the distribution of the sample of the study according to the variables of the study.

Table 1. The distribution of the sample according to study 'variables

Variable	level	Frequency	Percent
Grade	4	14	14.1
	5	14	14.1
	6	14	14.1
	7	15	15.4
	8	14	14.1
	9	15	14.1
	10	14	14.1
	Total	100	100
Education	2	80	79.79
	3	20	20.20
	Total	100	100
Experience	1	38	38.4
	2	15	13.1
	3	49	48.5
	Total	100	100

2) In recent years, it is recommended to develop and use of observation Instruments that capture the quality of teachers' instruction, and provided a unique opportunity to examine the related theories empirically [7].

3) Study Instrument: The researcher built a study Instrument using theoretical background related to mathematical classroom environment. A supportive classroom environment was defined for this research as interactions, activities, and relations in the classroom environment that support student success, it is also defined by the grade that is monitored for the participating teacher after analyzing the class observation using the study Instrument (SCEH). The study Instrument has been viewed by the researcher's colleagues.

4) The (SCEH) consists of 30 items covering five domains, (6 items) for each domain: Safe environment to participate), Strengthening classroom discussion (6 items), Support student motivation and self-esteem (6 items), support math problem solving, and Taking into account individual differences (6 items).

5) A reliability coefficient (Cronbach alpha) for the research Instrument (SCEH) was (.815), which is acceptable for such research. The Instrument used was rated: Strongly agree=5, Agree=4, Neutral=3, Disagree=2, Strongly disagree=1. The Instrument (SCEH) has been used by the researcher and the co-researcher team to analyze the data collected from the observations.

6) A team of (5) students who were enrolled in math teaching course on Math Department in the University of Jordan, participated in the study as co-researcher. This team is 3rd and 4th year mathematics student. This course was taught by the researcher and this is one of the students' projects for this course. The team with the researcher agreed on the way to record, code and analyze the data collected. Each member of the team selected randomly (2) teachers to be observed during math classes. During each observation the observer will coded the indicator. After each observation the observer analyzed and reported the data using (SCEH). Another researcher will repeat the analysis for the same observation to calculate agreement ratio between the two researchers who analyzed the same data. The average of the agreement ratio was 91% which is acceptable for qualitative research [36]. Each teacher has been observed (5) times and interviewed twice.

7) Researcher's Role: In this study, the researcher and co-researcher observed the participant while teaching in different times and recorded the habits. In addition to the sub-roles represented by good listening, linguistic flexibility, honestly and clearly, without making judgments, asking questions, and then analyzing the phenomenon in depth [37].

8) Each teacher has been observed (5) times, and each observation were analyzed and coded using the (SCEH).

9) The team and the researcher interview the Administration of each site to clarify the aim of the study and to set the convenient timetable for the interviews with the participants.

10) The data was collected contextually, in the natural setting in the light of the researcher's observations, which focused on highlighting the strategies from the points of view of the participants.

11) The process of collecting data continued about three months during the 1st semester of the academic year (2018-2019).

12) Many Strategies has been used to ensure the subjectivity and objectivity of collecting and analyzing the data that such as:

- Triangulation strategy in the analysis of data to show agreement between researcher and researchers' assistance.
- Extended stays at the different sites by the team of researcher.

13) The collection and processing of the data passed through the following four stages: planning, developing intimate relations with the participant, collection of raw data, and finally summarizing, coding, and analyzing the collected data.

14) Data Analysis: The analysis of data in qualitative, inductive, and inductive research involves the extrapolation of meanings, patterns, products, and critical summaries of data [37]. The study adopted the descriptive design using percentage, averages and standard deviation for each domain or subdomain of the supportive classroom environment habits from all sites. Quantities analysis used for the sub variables like education and experience.

8. Study Results

Three research questions guided this study. Findings of the data, which obtained through inductive analysis for the data collected from the observation in the natural setting to explore habits of supportive classroom environment used by mathematics teachers. To answer the first question this is: What are the supportive classroom environment habits used by mathematics teachers for Essential Stage in Jordan?

To answer this question means, standard deviation and means percent were calculated for each domain for the SCEH, and the results were as shown in Table 2.

Table 2 indicates that the 1st domain among all the domains is 'Safe environment to participate" with a mean of 16.40. and standard deviation 7.44, and a mean percent for the first domain is 54.7%, and the 3rd domain" Support student motivation and self-esteem" which is last with a mean 11.87, standard deviation 1.94, and mean percent 39.6%; this indicate that the supportive classroom environment habits is about 50% for the first two domains, and less than 50% for the three remaining domains.

Table 2. Means, Standard deviation and mean percent for The Five Domains of SCEH Ranked according to Means from Highest to Lowest

Mean %	Standard deviation	Mean	Domain	Domain Number	Rank
54.7	7.44	16.40	Safe environment to participate	1	1
53.7	6.20	16.12	Strengthening classroom discussion	2	2
48.9	5.60	14.65	support math problem solving,	4	3
46.7	4.19	14.01	Taking into account individual differences	5	4
39.6	1.94	11.87	Support student motivation and self-esteem	3	5
	16.99	73.06			Total

The researcher attributes the finding of the low means percentage of the domains of the supportive classroom environment habits to the fact that mathematics teachers for the essential grades in Jordan didn't transmit their classrooms from traditional direct instruction to student-centered standards-based instruction which have been recommended by the National Council of Teachers of Mathematics [3], and Ministry of Education in Jordan [2].

Table 3 shows that the item of the first domain which rank first "support students' responsibility to learn" with a mean of 3.23 and standard deviation 1.54, and the item "The discussion takes place between the role of the teacher and the student" with the mean of 1.88, and standard deviation 1.07 of ranked the lowest of this domain.

The researcher will justify these results to the standard which states that students should learn to communicate mathematically to create positive classroom environment [1,3]. The researcher thinks about the low rank of the discussion between the teacher and the students because teaching didn't transmit from traditional instruction to student-centered instruction which have been suggested by the National Council of Teachers of Mathematics [1,3], and Ministry of Education in Jordan [2]. Also this result is in contrast to that of [4], who indicated that the differences between high-effect and low-effect teachers is in the way they teach. High-quality teachers are expected to provide emotionally supportive classroom environments habits that contribute to manage classroom discussions [4]. Also the standards suggest that the teacher's role is to monitoring student's participation in discussion and deciding when and how to encourage each student to participate [38].

Table 3 shows that the item of the second domain which rank first is "Students are expected to listen to their colleagues' explanation carefully" with a mean of 3.39 and standard deviation 1.99 ranked first and the item "Students are expected to explain and justify their ways of thinking for others" with the mean of 2.38, and SD 2.09 of ranked the lowest of this domain.

This result is inconsistent with what is recommended by the standards of reasoning and communication which highlight the need to involve children in actively exploring, investigating, describing and explaining mathematical thinking to the teachers and students. It is also reported that students should have the ability to work with others, and to express their mathematical ideas orally and in writing. So The use of dialogue and social interaction leads the student to identify mathematical ideas and reorganize knowledge to reach conceptual understanding [1].

Table 3. Means and Standard deviation for the Domains of SCEH Ranked according to Means from Highest to lowest

No.	First Domain Items / Safe environment participate	Mean	SD
1	Supports students' responsibility to learn	3.23	1.54
2	Encourage students to discuss each other's mistakes, since errors are normal part of learning	2.50	1.75
3	teacher and the students supported their classmate who made mistakes;	2.38	1.28
4	Teacher and student mistakes are learning opportunities	2.18	0.97
5	The teacher supports the student who share by giving praise and encouragement	2.10	1.35
6	The discussion takes place between the role of the teacher and the student	1.88	1.07
No.	Second Domain Items/ Strengthening classroom discussion	Mean	SD
7	Students are expected to listen to the explanation of their colleagues carefully	3.39	1.99
8	Students work in small cooperation groups to develop the competencies of its members	3.24	2.11
9	Students are expected to speak out loud to everyone	2.71	1.77
10	Enhances students' ability to participate through high expectations	2.64	1.67
11	Students discuss different strategies they have employed	2.41	1.61
12	Students are expected to explain and justify their ways of thinking for others	2.38	2.09
No.	Fifth Domain Items/ Support student motivation and self-esteem	Mean	SD
13	Support the idea that math is a fundamental subject to any career	2.36	1.65
14	Support the idea that math will help him better prepare for the future career	2.29	1.48
15	Encourage students to be satisfied with himself	2.28	1.78
16	Support students to admit that they have number of good quality	2.22	1.96
17	Support students to admit that they have number of good quality	2.05	1.48
18	Encourage students to experience pleasure and satisfaction while doing math	1.86	1.40
19	The teacher encourages students to describe how to solve mathematical problems	3.11	2.07
20	The teacher encourages students to describe how to solve mathematical problems	2.96	2.77
21	The teacher presents different strategies during the solution	2.78	2.44
22	Encourage students to discuss their colleagues' ways of solving problems	2.62	2.71
23	Encourage students to discuss their colleagues' ways of solving problems	2.58	2.22
24	The teacher presents mathematical content as problems of life situations	2.11	2.10
No.	Fourth Domain Items/ Taking into account individual differences	Mean	SD
25	Enhance student strengths	4.16	1.79
26	Providing different resources for students	3.50	2.54
27	High expectations for all students	2.63	2.56
28	Enhance student self-esteem	2.53	2.35
29	Pay attention to students' wishes and interests	2.32	1.22
30	Dealing with students without prejudice	1.48	1.87

This outcome also is not in line with many researchers who reported that teachers' role has been examined as community organizers to support student involvement. These are an essential complement to the reform process, which requires hardworking of the entire educational process, to emphasize that the presence of students in a safe environment is positively reflected on the whole learning process, and vice versa [7-13].

Table 3 shows that the item of the third domain which rank first is "The teacher encourages students to describe how to solve mathematical problems" with the mean of 3.11 and standard deviation 2.07 and the item "The teacher presents mathematical content as problems of life situations" with the mean of 2.11 and standard deviation 2.10 ranked the lowest of this domain.

The result is inconsistent with problem solving standard that documented that the student should become a mathematical solver, formulate real life problems, develop and apply different strategies to solve the same problems, and solve mathematical and nonmathematical problems. The teacher's role is to develop a climate that encourages and supports problem solving efforts, and Effective teaching requires a challenging classroom environment that provides assistance and support to students [1]. Problem-based learning, or project-based learning are not only associated with more student achievement and academic success [39], but also to be more effective than traditional methods in teaching mathematics [40-43].

Table 3 shows that the item of the fourth domain which rank the highest is "Enhance student strength" with the mean 4.16 and SD 1.79, and the item "Enhance student self-esteem" with the mean of 2.53, and stand 2.35 of ranked the lowest of this domain.

The researcher attributes this results to some good habits that teachers are applying such as high expectations for all students which have been suggested by the standard" that the teacher respecting and valuing students' ideas, and encourage them to work independently to make sense of mathematics" [1,3]. Furthermore, by modeling strong organizational and management structures, teachers can help build students' own ability to self-regulate [7].

The researcher thinks about the low rank of the dealing with students without prejudice, this is not consistent with what is recommended by the main principles of mathematics teaching is to achieve equality among students, and encouraging student to work independently to make sense of mathematics. The principle of equality requires the allocation of human and material resources in the classroom and the absorption of the strengths of students to strengthen them, and the weaknesses of students to provide support and meet their scientific and emotional needs [1]. This outcome is again inconsistent with by many researcher results that successful mathematics classrooms have a positive influence on student motivation [8,41].

Table 3 shows that the item of the fifth domain which rank first is "Support the idea that math is a fundamental subject to any career" with the mean 2.36 and SD 1.65, and the item "Encourage students to experience pleasure and satisfaction while doing math" with the mean 1.86 and standard deviation 1.40 of ranked the lowest of this domain. This outcome is not in line with the standards that reported that Mathematics must give all students the knowledge that mathematics is a human activity in their daily lives; this allows them to trust their mathematical abilities and become positive towards their learning, and develop mathematical habits of mind [1].

The researcher thinks about the low rank of this domain is inconsistent with many research results that, although there is evidence from other studies that teachers differ greatly in their ability to influence students 'long-term success, they have significant effects on students' self-efficacy in mathematics and enjoy studying mathematics and classroom behavior, including emotional support for students [5-6,18,25-27].

To answer the second question which says: Is there a significant difference at level ($0.05 \geq \alpha$) in the means of supportive classroom habits (SCEH) teacher used with respect to teacher education? ((2) BSc. In math, (3) More than BSc.). To answer this question, the researcher use t-test to compare means scores of teacher education. Table 4 shows this result.

Table 4 shows that there is no significant statistical difference between the means of supportive classroom habits among the different domains and the total score of (SCEH) with respect to teacher education.

This finding is supported by the what reported that "The differences between high effect teacher and low effect teachers are mainly related to the attitudes and expectations of teachers when they decide on key teaching issues, this effectiveness may be associated with teacher experience but not with teachers' education, so that high-quality teachers provide supportive, emotionally positive classroom environments that contribute to manage classroom behaviors, providing accurate content, and supportive thinking [4].

Table 4. T-Test results of the differences between means scores of Teacher Education

	Domains	education	N	Mean	Standard deviation	Std. Error Mean	T	sig
a	Safe environment to participate	2.00	79	16.9873	8.14845	.91677	1.560	.122
		3.00	20	14.1000	2.57314	.57537		
b	strengthening classroom discussion	2.00	79	16.4684	6.55907	.73795	1.107	.271
		3.00	20	14.7500	4.42332	.98909		
c	support math problem solving	2.00	79	12.0000	1.56893	.17652	1.343	.182
		3.00	20	11.3500	2.99605	.66994		
d	Taking into account individual differences	2.00	79	15.0886	5.86207	.65953	1.536	.128
		3.00	20	12.9500	4.11000	.91902		
e	Support student motivation and self-esteem	2.00	79	14.0759	4.47435	.50340	.309	.758
		3.00	20	13.7500	2.88143	.64431		
	Total	2.00	79	74.6203	17.99381	2.02446	1.837	.069
		3.00	20	66.9000	10.47252	2.34173		

Table 5. ANOVA results of the differences between means scores of Teacher Education

Domain			Sum of Squares	df	Mean Square	F	Sig.
a	Safe environment to participate	Between Groups	1294.888	2	647.444	15.003	.000
		Within Groups	4142.950	96	43.156		
		Total	5437.838	98			
b	strengthening classroom discussion	Between Groups	769.680	2	384.840	12.295	.000
		Within Groups	3004.866	96	31.301		
		Total	3774.545	98			
c	support math problem solving	Between Groups	4.342	2	2.171	.571	.567
		Within Groups	364.951	96	3.802		
		Total	369.293	98			
d	Taking into account individual differences	Between Groups	391.786	2	195.893	7.010	.001
		Within Groups	2682.537	96	27.943		
		Total	3074.323	98			
e	Support student motivation and self-esteem	Between Groups	.407	2	.204	.011	.989
		Within Groups	1720.583	96	17.923		
		Total	1720.990	98			
Total		Between Groups	6510.481	2	3255.241	14.349	.000
		Within Groups	1779.155	96	226.866		
		Total	28289.636	98			

To answer the third question which says: Is there a significant difference at level ($0.05 \geq \alpha$) in the means of supportive classroom habits (SCEH) teacher used with respect to teacher experience? (1) less than 5 years, (2) more than or equal to 5 and less than 10 years, (3) more than or equal to 10 years. To answer this question, the researcher use ANOVA to compare means scores of teacher experience. Table 5 shows this result.

ANOVA results of the differences between means scores of teacher education revealed that there are statistically significant differences at the significance level ($\alpha = 05$) in the first, second, fourth domains in the means of the study Instrument (SCEH), and in the total score of the study Instrument (SCEH); and the absence of statistically significant differences due to the experience of the third and fifth domains of the study Instrument (SCEH). To find out the source of these differences, a Scheffe Post Hoc Multiple Comparisons have been applied, and Table 6 show this results.

Table 6 shows statistically significant differences of the teachers' experience between the levels of experience of the first and the second experience level, as well as the existence of statistically significant differences between the levels of experience of the second and third. And the absence of statistically significant differences between the levels of experience of teachers for the first and third levels in all total score domains.

Table 6. Scheffe Post Hoc Multiple Comparisons results of the differences between means scores of Teacher Education

Dependent Variable	(I) experience	(J) experience	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
A	1.00	2.00	-10.92915-*	2.11077	.000	-16.1775-	-5.6808-
		3.00	-.42434-	1.42645	.957	-3.9711-	3.1224
	2.00	1.00	10.92915*	2.11077	.000	5.6808	16.1775
		3.00	10.50481*	2.05396	.000	5.3978	15.6119
	3.00	1.00	.42434	1.42645	.957	-3.1224-	3.9711
		2.00	-10.50481-*	2.05396	.000	-15.6119-	-5.3978-
B	1.00	2.00	-8.62551-*	1.79762	.000	-13.0952-	-4.1558-
		3.00	-.79057-	1.21483	.810	-3.8112-	2.2300
	2.00	1.00	8.62551*	1.79762	.000	4.1558	13.0952
		3.00	7.83494*	1.74924	.000	3.4856	12.1843
	3.00	1.00	.79057	1.21483	.810	-2.2300-	3.8112
		2.00	-7.83494-*	1.74924	.000	-12.1843-	-3.4856-
D	1.00	2.00	-6.29960-*	1.69847	.002	-10.5227-	-2.0764-
		3.00	-1.05921-	1.14782	.654	-3.9132-	1.7948
	2.00	1.00	6.29960*	1.69847	.002	2.0764	10.5227
		3.00	5.24038*	1.65276	.008	1.1309	9.3499
	3.00	1.00	1.05921	1.14782	.654	-1.7948-	3.9132
		2.00	-5.24038-*	1.65276	.008	-9.3499-	-1.1309-
Total	1.00	2.00	-25.00607-*	4.83957	.000	-37.0394-	-12.9728-
		3.00	-2.09101-	3.27056	.816	-10.2231-	6.0410
	2.00	1.00	25.00607*	4.83957	.000	12.9728	37.0394
		3.00	22.91506*	4.70931	.000	11.2056	34.6245
	3.00	1.00	2.09101	3.27056	.816	-6.0410-	10.2231
		2.00	-22.91506-*	4.70931	.000	-34.6245-	-11.2056-

*. The mean difference is significant at the 0.05 level.

The result of Table 5 and Table 6 revealed that for some domains of the study Instrument (SCEH) is consistent with the results of [24], that individual teacher characteristics of years of experience have clear impact on instructional practice, Community, Trust, Efficacy, and Shared responsibility. Also It is supported with what reported in [7] that experienced teachers can help students become more self-reliant and build their self-regulatory abilities and become more motivated to learn, by designing strong organizational and managerial structures [7]. In addition to what clarify in [4] that the effectiveness of high quality teacher may be associated with teacher experience so that high-quality teachers provide supportive, emotionally positive classroom environments that contribute to manage classroom behaviors, providing accurate content, and supportive thinking [4,40].

Based on the study results it urges those responsible for teacher training to stress the importance of mathematical supportive classroom environment habits that's improve students' participation in classroom discussion, their motivation and self-esteem programs, and to emphasize the need to employ these programs in-class. The study also urges mathematics teachers, to be more aware for changing their role from being a carrier of information to being a supervisor and facilitator of the process of education, and to adapt more supportive classroom environment habits to improve students' success in many dimensions such as problem solving, classroom discussion and reasoning. Also similar studies cover different stages are recommended.

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