# Factors that Contribute to the Improvement of the Sense of Self-Efficacy of Special Educators in Inclusive Settings in Greece

Sotiria Tzivinikou, Dimitra Kagkara

Abstract—Teacher's sense of self-efficacy can affect significantly both teacher's and student's performance. More specific, self-efficacy is associated with the learning outcomes as well as student's motivation and self-efficacy. For example, teachers with high sense of self-efficacy are more open to innovations and invest more effort in teaching. In addition to this, effective inclusive education is associated with higher levels of teacher's self-efficacy. Pre-service teachers with high levels of self-efficacy could handle student's behavior better and more effectively assist students with special educational needs. Teacher preparation programs are also important, because teacher's efficacy beliefs are shaped early in learning, as a result the quality of teacher's education programs can affect the sense of self-efficacy of pre-service teachers. Usually, a number of pre-service teachers do not consider themselves well prepared to work with students with special educational needs and do not have the appropriate sense of self-efficacy. This study aims to investigate the factors that contribute to the improvement of the sense of self-efficacy of pre-service special educators by using an academic practicum training program. The sample of this study is 159 preservice special educators, who also participated in the academic practicum training program. For the purpose of this study were used quantitative methods for data collection and analysis. Teacher's selfefficacy was assessed by the teachers themselves with the completion of a questionnaire which was based on the scale of Teacher's Sense of Efficacy Scale. Pre and post measurements of teacher's selfefficacy were taken. The results of the survey are consistent with those of the international literature. The results indicate that a significant number of pre-service special educators do not hold the appropriate sense of self-efficacy regarding teaching students with special educational needs. Moreover, a quality academic training program constitutes a crucial factor for the improvement of the sense of self-efficacy of pre-service special educators, as additional for the provision of high quality inclusive education.

*Keywords*—Inclusive education, pre-service, self-efficacy, training program.

## I. INTRODUCTION

TEACHER'S self-efficacy is the confidence teachers hold about their efficiency to influence student learning and is considered one of the fundamental motivation beliefs influencing teacher's professional behaviors and student learning [1]. Teacher self-efficacy is a teacher's anticipation that he or she will be able to bring about student learning. Reviews of research demonstrate that teachers with high selfefficacy beliefs generate stronger student achievement than teachers with lower self-efficacy [2]. Teachers with higher self-efficacy measures are more likely to try out new teaching ideas, particularly techniques that are difficult, involve risks and require that control be shared with students [2]. The use of such strategies conduces to increased achievement. In addition to this, they are able to use classroom management approaches that stimulate student autonomy and reduce custodial control. Student achievement is higher because these management strategies are more effective in keeping students on task. Also, they are more successful because they respond more closely and carefully to the needs of lower ability students. Finally, teacher self-efficacy leads to changes in teacher behavior which change students' perceptions of their academic abilities [2].

As it was mentioned before teacher self-efficacy is the confidence teachers have about their individual and collective ability to affect student learning and is considered one of the basic motivation beliefs influencing teacher's professional behaviors and student learning [1]. The sense of self efficacy that special educators have is associated with desired outcomes of student involvement and learning for students presenting with special educational needs or difficult behavior [1]. Apparently, teacher's self-efficacy is one of the most important factors affecting student's with or without special educational needs academic achievement [3].

Pre-service teachers' self-efficacy is associated with the level they participate in teacher training programs [4]. According to research findings, significant differences have been found between Taiwanese and U.S. pre-service teachers' self-efficacy beliefs at the beginning and ending levels [4]. In addition, studies have found significant differences in selfefficacy between the beginning and the end of student teaching training program [5]. For measures from a previous study both PTE and GTE, the changes from the beginning of the teacher program to the end of student teaching appear to have significant increases in efficacy [5]. It was revealed that ending-level pre-service teacher's beliefs regarding the personal teaching efficacy and professional knowledge efficacy factors had higher scores than the beginning-level and there were significant differences between the groups [5]. So, the findings showed that teacher training programs have a positive impact in gaining the adequate ability on how preservice teachers apply professional knowledge. The results of studies revealed that training program is comparatively effective in improving and developing pre-service teacher's efficacy beliefs. It can be said that it contributes to improve

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the ability to plan teaching and perform teaching during teacher training program, and this improves student teachers' efficacy beliefs [3].

As most special education intern teachers go into the field of teaching with limited exposure to students with disabilities and with minimal teaching experience, the role of teacher preparation programs becomes more critical. Teacher's selfconfidence in skills and knowledge as special education teachers seems to be highly related to their perceived efficacy. The results of previous study highlight the importance of welldesigned and effective teacher education programs that provide a high quality education [6].

Teacher's efficacy beliefs are associated with their participation in training programs [3]. This might be due to the extensive verbal and written feedback from the mentors throughout the student teaching experience [7]. The results of a study that was conducted with elementary undergraduate pre-service teachers are consistent with a previous study who found similar outcomes with secondary graduate-level teachers; in both studies the levels of self-efficacy were higher after the training program [5]. In another research it was reported a moderate, positive relationship (r O.37, p < .01) between efficacy beliefs and student teacher's perception of mentor support [5]. These findings are also consistent with similar study that was conducted in the United Arab Emirates [8]. In that study it was used a pre-post survey to measure elementary student teacher's technology integration selfefficacy beliefs and then selected the top 25% on this measure to participate in a structured interview to identify perceived sources of self-efficacy beliefs. Mastery experiences, support, and positive feedback from supervisors and cooperating teachers were identified as important in developing efficacy [8]. In the case of student teaching, verbal persuasion by the mentors often follows a mastery experience during an observation, has been shown to be significant powerful for developing efficacy [7].

Determining the level of pre-service teacher's self-efficacy belief may contribute to forecast how they will behave during in-service based on self-efficacy feelings. Also, it may be important concerning the efficiency of teacher training programs in determining the effectiveness level of teacher training on pre-service teacher's self-efficacy beliefs [3]. Bandura's theory of self-efficacy suggests that efficacy may be most malleable early in learning, thus the first years of teacher efficacy [9]. Pre-service teacher's self-efficacy beliefs are related with the level they attend teacher training programs. Additionally, since a resistance against change is observed as the self-efficacy belief arises [9], this issue is crucial to be investigated on pre-service teachers in several studies [3].

Despite the importance of the training programs there have been few studies reporting the effects of interventions who aimed to increase teacher's sense of self-efficacy [2]. Although findings associate teacher's attitudes and practices with different levels of efficacy, it remains unclear which factors can strengthen efficacy [1]. Taking in consideration the fact that the importance of teacher's sense of efficacy for quality teaching has been established, more research is needed to understand what specifically leads to its development. One important factor may be elements of teacher preparation, an area recommended as a focus of future research on teacher's sense of efficacy [7].

#### II. AIM OF THE STUDY

A variety of studies have shown that teacher's sense of selfefficacy is strongly associated with positive learning outcomes and training programs can improve the teacher's sense of selfefficacy, but there is a lack of corresponding scientific data coming from Greek educational research. Moreover, regardless the fact that previous research connects the training programs of pre-service special educators with higher levels of self-efficacy and the fact that have been developed plenty of training programs for special educators in Greece the last years, there is not systematic record regarding the correlation between training programs and special educator's sense of self-efficacy. For that reasons the present study aims to investigate further the factors that contribute to the improvement of the self-efficacy beliefs of the pre-service special educators.

## III. RESEARCH QUESTIONS

Based on the above-mentioned data, this research aims to answer the following research questions:

- Is it a training program for pre-service special educators a factor that can contribute to the improvement of special educator's sense of self-efficacy;
- 2) Is it possible a training program for pre-service special educators to:
- a) Improve special educator's self-efficacy for student engagement;
- b) Improve special educator's self-efficacy for instructional strategies
- c) Improve special educator's self-efficacy for classroom management;

## IV. METHODOLOGY

## A. Sample of Research

The research participants were 159 pre-service special educators, who were students at the final year at the University of Thessalia, at the Department of Special Education. All the participants enrolled and completed the six-month training program of the university. None of the participants hold previous teaching experience in inclusive settings.

## B. Procedure

The training program for pre-service special educators was separated in two phases. In the first phase which included the theoretical framework of the training program 30-hour lectures were delivered on theoretical topics regarding the design and implementation of best practices and effective interventions for students with various problems and disorders, such as learning disabilities, autism, behavior problems and mild mental retardation. In this phase reflection and feedback were given to the students regarding their questions on the theoretical framework.

The second phase included a 70-hour practicum, during 10 weeks. More specific, each student was placed in an inclusive classroom and was expected to design and implement an intervention program for a student with learning difficulties. During this procedure, the teachers were provided with consistent supervision/monitoring, support and feedback by the scientific coordinators of the training program. Every week students had an hour meeting with their scientific coordinators in which they were provided with feedback and useful advices regarding the design and the implementation of their teaching program.

The main characteristic of both phases was the fact that students had continuous coaching and they were given feedback and reflections regarding their work. The estimation of the effectiveness of the training-program the participants based on the estimation of their sense of self-efficacy before the training and after the training program. So, the participants filled in the TSES 24-item checklist that was adapted by the first author, based on Tschannen-Moran & Woolfolk questionnaire [10], [11].

In order to investigate the effectiveness of the trainingprogram the participants filled in the TSES 24-item checklist which was translated in Greek [9] estimating their sense of self-efficacy before the training and after the training program.

## C.Data Collection

In this study quantitative methods for data collection were used. An instrument from literature was used for data collection. The teacher efficacy was measured with the TSES 24-item long form (translated in Greek) [9]. All of these items were grouped into the three subscales (8 items for each scale), a) efficacy for student engagement (SE) (8 items), b) efficacy for instructional strategies (IS) (8 items), and c) efficacy for classroom management (CM) (8 items). Participants responded to each of the question using a rating scale, ranging from 1 (nothing) to 9 (a great deal).

## D.Data Analysis

Descriptive statistics were used for data analysis. One sample t-test was used to analyze the means between before and after the training program. One-way ANOVA was also implemented in order to investigate if there are statistical significant correlations before and after the training program. And also, the internal consistency was evaluated via the Cronbach's alpha coefficient.

## V.RESULTS

The results of the present study regarding the first research question have shown that the training program is an important factor, which can improve the self-esteem of special educator's. More specificly, the mean scores in Tables I and II verify the fact that the training program is a crucial factor for the improvement of special educator's self-esteem, as in all 24 questions of the TSES 24-item long form the mean scores are higher after the training program. It seems that the training program had an impact on the sense of self-efficacy of the preservice special educators.

TABLE I

MEAN SCORES OF THE TSES 24-ITEM CHECKLIST BEFORE THE TRAINING PROGRAM. ADAPTED BY THE FIRST AUTHOR, BASED ON TSCHANNEN-MORAN & WOOLFOLK HOY QUESTIONNAIRE [11], [9]

	N	Mean	Std. Deviation	Std. Error Mean
1. How well can you cope with the most difficult students	158	6,38	1,104	,088
2. To what extend can you offer help to your students to think critically	158	6,37	1,279	,102
3. How well can you manage disruptive behavior in the classroom	158	6,42	1,130	,090
4. Can you increase motivation of students who appear with low interest in school work	158	6,88	1,186	,094
5. To what level is it possible for you to explain your expectations about student behavior	158	6,89	1,203	,096
6. In what level can you help students to believe they can do well in school work	158	7,51	1,014	,081
7. Are you well prepared to answer to difficult questions from your students	158	6,80	1,133	,090
8. Is it possible for you to create routines to keep activities running smoothly	158	6,63	1,403	,112
9. In what level can you help your students to appreciate learning	158	6,51	1,235	,098
10. To what level can you asses student understanding of what you have teach	158	6,82	1,244	,099
11. To what level can you design good questions for your students	158	6,81	1,206	,096
12. To what level is it possible for you to empower student creativity	158	7,03	1,137	,090
13. To what level can yo make children to stick with the classroom rules	158	6,26	1,232	,098
14. To what extent can you increase the understanding of a student who is failing	158	6,49	1,198	,095
15. To what level can you manage a student who is uncontrollable or noisy	158	6,46	1,295	,103
16. To what level can you manage each group of students	158	5,94	1,573	,125
17. How well can you regulate your lessons to the appropriate level for individual students	158	6,70	1,300	,103
18. How well can you apply a big range of assessment strategies	158	6,66	1,296	,103
19. To what level can you manage a number of problem students from destroying the lesson	158	7,05	1,008	,080
20. To what level can you give a different example when students do not understand	158	7,13	1,240	,099
21. How well can you respond to defiant students	158	6,47	1,198	,095
22. How much can you assist families in helping their children do well in school	158	6,35	1,392	,111
23. How well can you implement alternative strategies in your classroom	158	6,61	1,128	,090
24. How well can you provide appropriate challenges for very capable students	158	6,90	1,169	,093

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#### TABLE II

MEAN SCORES OF THE TSES 24-ITEM CHECKLIST AFTER THE TRAINING PROGRAM ADAPTED BY THE FIRST AUTHOR, BASED ON TSCHANNEN-MORAN & WOOLFOLK HOY OUESTIONNAIRE [10], [11]

	N	Mean	Std. Deviation	Std. Error Mean
1. How well can you cope with the most difficult students	142	6,68	1,257	,105
2. To what extend can you offer help to your students to think critically	142	7,02	1,088	,091
3. How well can you manage disruptive behavior in the classroom	142	7,08	1,062	,089
4. Can you increase motivation of students who appear with low interest in school work	142	7,44	1,146	,096
5. To what level is it possible for you to explain your expectations about student behavior	142	7,32	1,082	,091
6. In what level can you help students to believe they can do well in school work	142	7,92	1,004	,084
7. Are you well prepared to answer to difficult questions from your students	142	7,51	1,090	,091
8. Is it possible for you to create routines to keep activities running smoothly	142	7,05	1,572	,132
9. In what level can you help your students to appreciate learning	142	7,06	1,168	,098
10. To what level can you asses student understanding of what you have teach	142	7,58	1,093	,092
11. To what level can you design good questions for your students	142	7,62	1,050	,088
12. To what level is it possible for you to empower student creativity	142	7,65	1,066	,089
13. To what level can yo make children to stick with the classroom rules	142	7,20	1,082	,091
14. To what extent can you increase the understanding of a student who is failing	142	7,20	1,049	,088
15. To what level can you manage a student who is uncontrollable or noisy	142	7,23	1,041	,087
16. To what level can you manage each group of students	142	6,89	1,096	,092
17. How well can you regulate your lessons to the appropriate level for individual students	142	7,51	,987	,083
18. How well can you apply a big range of assessment strategies	142	7,38	1,077	,090
19. To what level can you manage a number of problem students from destroying the lesson	142	7,61	,995	,084
20. To what level can you give a diefferent example when students do not understand	142	7,65	,931	,078
21. How well can you respond to defiant students	142	7,10	1,087	,091
22. How much can you assist families in helping their children do well in school	142	6,89	1,300	,109
23. How well can you implement alternative strategies in your classroom	142	7,27	1,039	,087
24. How well can you provide appropriate challenges for very capable students	142	7,27	1,342	,113

The comparison of the mean scores also revealed that the training program improved special educator's self-efficacy for student engagement. More specificly, in question 4 the mean was higher after the training program (mean=7,44). Meaning that after the training program pre-service special educators have better sense of self-efficacy regarding how much they can do to increase motivation of students who appear with low interest in school work. Another important difference in mean score is in question 6 (mean=7,92). After the training program, pre-service special educators believe that they can do better to help students to achieve better results in school work.

Higher mean scores after the training program also imply the existence of higher special educator's self-efficacy for instructional strategies. For example, in question 17 there is a big difference in mean scores as before the training program (mean=6.76) and after the training program (mean=7.51), showing that special educators had better self-efficacy for instructional strategies after the training program and could better regulate their lessons to the appropriate level for individual students. In addition to this, higher mean score also persists in question 18 (mean=7.38) and in question 20 (mean=7.65), expressing the improved self-efficacy for instructional strategies regarding how well they can use a big range of assessment strategies and to what level they can give a different example when students do not understand.

Same results consist about special educator's self-efficacy for classroom management after the training program. Higher mean scores in question 3 (mean=7.08), question 13 (mean=7.20), question 15 (mean=7.23) and question 16 (mean=6.89), show that after the training program their selfefficacy for classroom management has risen as it has improved their belief regarding how well they can do to manage disruptive behavior in the classroom, the level that they can make children to stick with classroom rules, the level they can manage a student who is uncontrollable or noisy and how well they can each group of students.

One-way ANOVA was also implemented in order to investigate if there are statistical significant correlations in the perceived sense of self-efficacy of special educators before and after the training program.

The ANOVA results revealed that there is a statistically significant difference between the means of the all subscales of the TSES (p < 0.05), estimated before and after the training program. Answering the first research question, the training program seems to play an important role in the improvement of special educator's sense of self-efficacy as in all 24 items (p < 0.05).

ANOVA results confirm that the training program can improve special educator's efficacy for student engagement. More specifically, there is statistically significant difference between the two phases (after and before the program) for the all of 8-items student engagement (p < 0.05), that means that the special educators can increase the motivation of students who show low interest in school work (p < 0.05, p = 0.000). Also, statistically significant correlation exists between the training program and the level that special educators can help students to believe they can do well in school work (p < 0.05, p = 0.000). The training program impacts the level that special educators can get students to believe they can do well in school work (p < 0.05, p = 0.000) as well as the level of how

# International Journal of Business, Human and Social Sciences ISSN: 2517-9411 Vol:13, No:4, 2019

much special educators can do to help students appreciate learning (p < 0.05, p = 0.000).

## TABLE III

ANOVA OF THE TSES 24-ITEM CHECKLIST BEFORE AND AFTER THE TRAINING PROGRAM. ADAPTED BY THE FIRST AUTHOR, BASED ON TSCHANNEN-MORAN &
WOOLFOLK HOY QUESTIONNAIRE [10], [11]

1. How well can you oper with the most difficult sudents     1000000000000000000000000000000000000	WOOLFOLK HO	I QUESTIONNAIRE [IV	Sum of Squares	df	Moon Squara	F	Sig
1. Tow well can you can be be submitted and and any structure body of the part of	1. How well can you cope with the most difficult students	Defenses Course	Geog	1	( 992	1 054	027
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2. To what extend can you offer help to your students to think critically       Between Groups Within Groups       423,645       298       1,22,03       ,000         3. How well can you manage disruptive behavior in the classroom       Total       455,637       299       299       290       20,000       000 <t< td=""><td></td><td>within Groups</td><td>415,955</td><td>298</td><td>1,389</td><td></td><td></td></t<>		within Groups	415,955	298	1,389		
$ \begin{array}{c} 1  by that basis of all you or in large to you students to make children to the classroom of the c$	2. To what extend can you offer help to your students to think critically	Total	420,837	299	21.001	22 502	000
Norman Groups $425,493$ $290$ $1.42$ Total $455,637$ $290$ $200$ $32,622$ $27,036$ $0.00$ A Can you increase motivation of students who appear with low interest $701$ $322,022$ $1$ $32,622$ $27,036$ $0.001$ Total $322,027$ $290$ $1.502$ $1.502$ $1.502$ $1.502$ $1.502$ $1.502$ Total $322,027$ $1.502$	2. To what extend can you once help to your students to units enticany	Between Groups	31,991	1	31,991	22,303	,000
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3. How well can you manage usuppive enavor in the cassion       Between Groups       32,022       1       24,022       21,005       0.00         4. Can you increase motivation of students who appear with low interest       Total       320,2197       229       29         5. To what level is it possible for you to explain your expectations about atudent behavior       Between Groups       13,027       1       13,027       10,580       0.01         6. To what level an you help students to believe they can do well in easy of well prepared to answer to difficult questions from your atudents       Between Groups       13,027       1       13,027       10,580       0.01         7. Are you well prepared to answer to difficult questions from your atudents to believe they can do well in foroups       366,891       298       1,219       10,700         8. Is it possible for you to create routines to keep activities running amondry       Total       407,397       299       10,101       0.00         9. To what level can you help your students to appreciate learning       Total       67,623       298       1,232       10,101       0.00         9. To what level can you help your students to appreciate learning       Total       67,623       298       1,2307       16,011       0.00         9. To what level can you help your students for your students       10,000       Within Groups <t< td=""><td></td><td>Iotal</td><td>455,637</td><td>299</td><td>22 (22</td><td>25.02.6</td><td></td></t<>		Iotal	455,637	299	22 (22	25.02.6	
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$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Within Groups	359,575	298	1,207		
4. Can you increase motivation of students who appear with low interest       Between Groups       23,782       1       23,782       1       23,782       1       3,62         5. To what level is it possible for you to explain your expectations about student behavior       Total       429,547       299		Total	392,197	299			
in action work       Within Groups       405,764       298       1.362         Total       425,547       299       299         5. To what level is it possible for you to explain your expectations about student behavior       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,927       1       13,62       1       13,62       1       13,62       1       13,62       1       13,62       1       13,63       1       13,63       1       13,63       1       13,63       1       13,63       1       13,63       6,056       0.01         ************************************	4. Can you increase motivation of students who appear with low interest	Between Groups	23,782	1	23,782	17,466	,000
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	III SCHOOL WOLK	Within Groups	405,764	298	1,362		
5. To what level is it possible for you to explain your expectations about between Groups 30,001       How and the set of th		Total	429,547	299			
students         Within Groups         392,269         298         1,316           To what level can you help students to believe they can do well in school work         Between Groups         12,955         1         12,955         1,010           7. Are you well prepared to answer to difficult questions from your students         Between Groups         36,607         298         1,218           7. Are you well prepared to answer to difficult questions from your students         Between Groups         36,801         1         38,406         31,017         ,000           8. Is it possible for you to create routines to keep activities running smoothly         Total         407,937         298         .207         1         13,363         6,056         ,014           9. To what level can you help your students to appreciate learning         Total         670,987         298         1,412         298         1,412         .000           0. To what level can you help your students to appreciate learning         Total         431,923         298         1,412         .000           10. To what level can you asses student understanding of what you have         Total         445,130         298         1,342         .000           11. To what level can you design good questions for your students         Between Groups         333,760         298         1,242	5. To what level is it possible for you to explain your expectations about	Between Groups	13,927	1	13,927	10,580	,001
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	student behavior	Within Groups	392,269	298	1,316		
6. To what level can you help students to believe they can do well in school work       Between Groups       12,955       12,955       12,714       ,000         7. Are you well prepared to answer to difficult questions from your students students       Total       316,597       299       299         7. Are you well prepared to answer to difficult questions from your students is nonsulfy       Between Groups       38,406       1       38,406       31,017       ,000         8. Is it possible for you to create routines to keep activities running smoothly       Between Groups       13,363       1       13,363       6,056       ,014         9. To what level can you help your students to appreciate learning       Between Groups       23,207       1       22,207       16,011       ,000         10. To what level can you asses student understanding of what you have teach       Within Groups       431,923       298       1,429       1,429       14,439       14,439       14,430       31,422       ,000       14,51,30       14,429       1,513       1		Total	406,197	299			
school work       Within Groups       303,642       298       1,019         Total       316,597       299         7. Are you well prepared to answer to difficult questions from your       Between Groups       368,406       1       38,406       31,017       000         students       Total       407,397       299       298       1.228       238       2.207       36,591       298       2.207       36,591       298       2.207       36,591       298       2.207       36,591       298       1.3,363       1       1.3,363       6,056       0,14         smoothly       Total       670,987       298       1.449       31,023       1.449       31,422       0,000         Total       455,130       299       299       1.449       31,022       0,001       38,063       0,000         10. To what level can you asses student understanding of what you have teach       Total       435,130       299       1.1524       298       1.3,431       31,422       0,000         11. To what level can you design good questions for your students       Between Groups       383,709       298       1.288       1.288       1.288       1.288       1.288       1.218       1.288       1.218       1.218,181	6. To what level can you help students to believe they can do well in	Between Groups	12,955	1	12,955	12,714	,000
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	school work	Within Groups	303,642	298	1,019		
7. Are you well prepared to answer to difficult questions from your students       Between Groups $38,406$ 1 $38,406$ $31,017$ $000$ Within Groups $368,991$ $298$ $1,238$ $1,238$ 8. Is it possible for you to create routines to keep activities running smoothly $1000000000000000000000000000000000000$		Total	316,597	299			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	7. Are you well prepared to answer to difficult questions from your	Between Groups	38,406	1	38,406	31,017	,000,
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	students	Within Groups	368,991	298	1,238		
8. Is inpossible for you to create routines to keep activities running moduly       Between Groups (70,23) (298)       2,207       1       13,363       6,056       ,014         9. To what level can you help your students to appreciate learning       Between Groups (23,207)       1       23,207       16,011       ,000         10. To what level can you help your students to appreciate learning       Between Groups (23,207)       1       23,207       16,011       ,000         10. To what level can you asses student understanding of what you have teach       Total       455,130       299       17       14       3,393       31,422       ,000         11. To what level can you design good questions for your students       Between Groups       43,393       1       49,018       38,063       ,000         11. To what level can you design good questions for your students       Between Groups       49,018       1       49,018       38,063       ,000         12. To what level can you make children to stick with the classroom       Total       432,787       299       29,053       1       29,053       23,855       ,000         13. To what level can you make children to stick with the classroom rules       Between Groups       66,748       1       66,748       1,343       30,097       ,000         14. To what extent can you increase the unders		Total	407,397	299			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	8. Is it possible for you to create routines to keep activities running	Between Groups	13,363	1	13,363	6,056	.014
$ \begin{array}{c} {\rm Total} & {\rm for}_{0.987} & {\rm 299} & {\rm 1}_{0.01} & {\rm 0}_{0.00} \\ {\rm Between \ Groups} & {\rm 23,207} & {\rm 1}_{0.22,207} & {\rm 16,011} & {\rm 0}_{0.01} & {\rm 0}_{0.00} \\ {\rm Within \ Groups} & {\rm 43,1923} & {\rm 298} & {\rm 1,449} & {\rm 1}_{0.01} & {\rm 1}_{0.00} \\ {\rm Within \ Groups} & {\rm 10,00} & {\rm 11,524} & {\rm 298} & {\rm 1,349} & {\rm 1}_{0.01} & {\rm 10,00} & {\rm 10,$	smoothly	Within Groups	657.623	298	2.207		
9. To what level can you help your students to appreciate learning 0. To what level can you asses student understanding of what you have teach       Between Groups 431,923       23,207       1       23,207       16,011       ,000         10. To what level can you asses student understanding of what you have teach       Total       455,130       299       1       43,393       1       43,393       31,422       ,000         11. To what level can you design good questions for your students       Between Groups       431,724       298       1,381       1       43,033       31,422       ,000         11. To what level can you design good questions for your students       Between Groups       49,018       1       49,018       38,063       ,000         12. To what level is it possible for you to empower student creativity       Between Groups       20,033       1       29,053       23,855       ,000         13. To what level can you make children to stick with the classroom rules       Total       391,987       299       1       .128       .000         14. To what extent can you increase the understanding of a student who is failing       106,748       49,044       ,000       .000         15. To what level can you manage a student who is uncontrollable or noisy       38,435       1       38,435       1       38,435       30,097		Total	670,987	299	,		
Initial constraint of the second s	9. To what level can you help your students to appreciate learning	Between Groups	23.207	1	23.207	16.011	.000
$ \begin{array}{c} \belowdown length{\belowdown $		Within Groups	431,923	298	1.449	,	,
10. To what level can you asses student understanding of what you have teach       Between Groups       43,393       1       43,393       31,422       ,000         11. To what level can you design good questions for your students       Between Groups       49,018       1       49,018       38,063       ,000         12. To what level can you design good questions for your students       Between Groups       49,018       1       49,018       38,063       ,000         12. To what level is it possible for you to empower student creativity       Between Groups       362,933       298       1,288       70tal       391,987       299       1         13. To what level can you make children to stick with the classroom rules       Total       391,987       299       1       49,018       49,018       49,000       ,000         14. To what extent can you increase the understanding of a student who is failing       Total       470,187       299       1       1       38,435       30,097       ,000         15. To what level can you manage a student who is uncontrollable or noisy       Total       470,187       299       1       1,737       ,000         16. To what level can you manage a student who is uncontrollable or noisy       Between Groups       34,301       1       44,301       31,737       ,000         16. T		Total	455,130	299	1,112		
teach       Within Groups       41,524       298       1,381         Total       454,917       299         11. To what level can you design good questions for your students       Between Groups       49,018       1       49,018       38,063       ,000         Within Groups       383,769       298       1,288       1288	10. To what level can you asses student understanding of what you have	Between Groups	43 393	1	43 393	31 422	000
$ \begin{array}{c} \mbox{Winn Groups} & 471,224 & 293 & 1284 \\ \mbox{Total} & 434,917 & 299 \\ \mbox{Within Groups} & 438,3769 & 298 & 1,288 \\ \mbox{Within Groups} & 383,769 & 298 & 1,288 \\ \mbox{Total} & 432,787 & 299 \\ \mbox{Within Groups} & 362,933 & 1 & 29,053 & 23,855 & 000 \\ \mbox{Within Groups} & 362,933 & 298 & 1,218 \\ \mbox{Total} & 391,987 & 299 \\ \mbox{Within Groups} & 362,933 & 298 & 1,218 \\ \mbox{Total} & 391,987 & 299 \\ \mbox{Within Groups} & 66,748 & 1 & 66,748 & 49,304 & 000 \\ \mbox{Within Groups} & 66,748 & 1 & 66,748 & 49,304 & 000 \\ \mbox{Within Groups} & 60,748 & 1 & 38,435 & 30,097 & 000 \\ \mbox{Within Groups} & 60,748 & 1 & 38,435 & 30,097 & 000 \\ \mbox{Within Groups} & 38,435 & 1 & 38,435 & 30,097 & 000 \\ \mbox{Within Groups} & 38,435 & 1 & 38,435 & 30,097 & 000 \\ \mbox{Within Groups} & 38,435 & 1 & 38,435 & 30,097 & 000 \\ \mbox{Within Groups} & 38,652 & 298 & 1,277 \\ \mbox{Total} & 470,187 & 299 \\ \mbox{Is failing} & & & & & & & & & & & & & & & & & & &$	teach	Within Groups	411 524	208	1 381	51,422	,000
11. To what level can you design good questions for your students       Hour Pay (1)       29         11. To what level can you design good questions for your students       Between Groups       49,018       1       49,018       38,063       ,000         12. To what level is it possible for you to empower student creativity       Between Groups       29,053       1       29,053       23,855       ,000         13. To what level can you make children to stick with the classroom rules       Total       391,987       299       13.10       66,748       1       66,748       49,014       ,000         14. To what level can you make children to stick with the classroom rules       Between Groups       66,748       1       66,748       49,004       ,000         14. To what extent can you increase the understanding of a student who is failing       Between Groups       38,455       1       38,435       30,097       ,000         15. To what level can you manage as student who is uncontrollable or noisy       Between Groups       443,01       1       44,301       31,737       ,000         16. To what level can you manage each group of students       Between Groups       67,684       1       67,684       36,153       ,000         16. To what level can you manage each group of students       Between Groups       57,903       298       1,872		Total	411,524	200	1,501		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11 To what level can you design good questions for your students	Patwaan Grouns	40.018	1	40.018	28.062	000
12. To what level is it possible for you to empower student creativityTotal432,78729912. To what level is it possible for you to empower student creativityBetween Groups29,053129,05323,855,00013. To what level can you make children to stick with the classroom rulesTotal391,9872992991166,74849,304,00014. To what extent can you increase the understanding of a student who is failingBetween Groups364,355138,43530,097,00015. To what level can you manage a student who is uncontrollable or noisyBetween Groups380,5522981,27771443,011144,30131,737,00016. To what level can you manage a student who is uncontrollable or individual studentsBetween Groups67,684167,68436,153,00017. How well can you regulate your lessons to the appropriate level for individual studentsBetween Groups67,684167,68436,153,00018. How well can you apply a big range of assessment strategiesBetween Groups402,9112981,3521,35218. How well can you apply a big range of assessment strategiesBetween Groups38,991138,99127,211,000Within Groups402,9112981,43327,211,000Within Groups29927,211,000	11. To what level can you design good questions for your students	Within Groups	49,018	200	1 299	38,005	,000
12. To what level is it possible for you to empower student creativityBetween Groups Within Groups $29,053$ $362,933$ 1 $29,053$ $29,053$ $1.218$ $1$ $29,053$ $23,855$ $000$ 13. To what level can you make children to stick with the classroom rulesBetween Groups $66,748$ 1 $03,438$ $66,748$ 49,304 $000$ $,000$ 14. To what extent can you increase the understanding of a student who is failingBetween Groups $38,435$ 1 $38,435$ $38,435$ $30,097$ $000$ $,000$ 15. To what level can you manage a student who is uncontrollable or noisyBetween Groups $44,301$ $1$ $44,301$ $44,301$ $31,737$ $31,737$ $000$ 16. To what level can you manage each group of studentsBetween Groups $44,301$ $1$ $44,301$ $45,789$ $299$ 17. How well can you regulate your lessons to the appropriate level for individual studentsBetween Groups $44,301$ $470,187$ $299$ $299$ 18. How well can you apply a big range of assessment strategiesBetween Groups $49,169$ $1$ $492,109$ $49,169$ $36,36736,36700018. How well can you apply a big range of assessment strategiesBetween Groups38,991138,99138,99127,21100018. How well can you apply a big range of assessment strategiesBetween Groups1000038,991138,99138,99127,21100019. How well can you apply a big range of assessment strategiesBetween Groups1000000000000000000000000000000000000$		Total	422 787	290	1,200		
12. To what level is it possible for you to empower student creativity       Between Groups $29,053$ 1 $29,053$ $25,053$ <	12. To what level is it possible for you to empower student creativity	Total	432,787	299	20.052	22.055	000
$ \begin{array}{c} \text{Winn Groups} & 562,953 & 298 & 1,218 \\ \hline \text{Total} & 391,987 & 299 \\ 13. \text{ To what level can you make children to stick with the classroom rules} & Between Groups & 66,748 & 1 & 66,748 & 49,304 & ,000 \\ \hline \text{within Groups} & 403,438 & 298 & 1,354 \\ \hline \text{Total} & 470,187 & 299 \\ \hline \text{I4. To what extent can you increase the understanding of a student who is failing & Between Groups & 38,435 & 1 & 38,435 & 30,097 & ,000 \\ \hline \text{is failing} & \text{Total} & 418,987 & 299 \\ \hline \text{I5. To what level can you manage a student who is uncontrollable or noisy & Within Groups & 44,301 & 1 & 44,301 & 31,737 & ,000 \\ \hline \text{Rote and the even Groups} & 443,01 & 1 & 44,301 & 31,737 & ,000 \\ \hline \text{Total} & 460,280 & 299 \\ \hline \text{I6. To what level can you manage each group of students & Between Groups & 67,684 & 1 & 67,684 & 36,153 & ,000 \\ \hline \text{Within Groups} & 557,903 & 298 & 1,872 \\ \hline \text{Total} & 625,587 & 299 \\ \hline \text{I7. How well can you regulate your lessons to the appropriate level for individual students & Total & 452,080 & 299 \\ \hline \text{I8. How well can you apply a big range of assessment strategies & Between Groups & 38,991 & 1 & 38,991 & 27,211 & ,000 \\ \hline \text{Within Groups} & 427,009 & 298 & 1,433 \\ \hline \text{Total} & 466,000 & 299 \\ \hline \text{Total} & 466,000 & 299 \\ \hline \ \text{Total} & 466,000 & 299 \\ \hline \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	12. To what level is it possible for you to empower student creativity	Within Crowns	29,033	200	29,035	25,655	,000
13. To what level can you make children to stick with the classroom rulesBetween Groups Mithin Groups $66,748$ 1 $66,748$ $49,304$ $,000$ 14. To what extent can you increase the understanding of a student who is failingTotal $470,187$ $299$ 13. Total $470,187$ $299$ 14. To what extent can you increase the understanding of a student who is failingBetween Groups $38,435$ 1 $38,435$ $30,097$ $,000$ 15. To what level can you manage a student who is uncontrollable or noisyBetween Groups $44,301$ 1 $44,301$ $31,737$ $,000$ 16. To what level can you manage each group of studentsBetween Groups $415,979$ $298$ $1,396$ $36,153$ $,000$ 17. How well can you regulate your lessons to the appropriate level for individual studentsBetween Groups $49,169$ $1$ $49,169$ $36,367$ $,000$ 18. How well can you apply a big range of assessment strategiesBetween Groups $38,991$ $1$ $38,991$ $27,211$ $,000$ Within Groups $427,009$ $298$ $1,433$		within Groups	362,933	298	1,218		
13. 10 what level can you make children to suck with the classroom rules       Between Groups Total $66, /48$ 1 $66, /48$ 49,304 $9,000$ 14. To what extent can you increase the understanding of a student who is failing       Total $470, 187$ $299$ 14. To what level can you increase the understanding of a student who is failing       Between Groups $38,435$ 1 $38,435$ $30,097$ $,000$ 15. To what level can you manage a student who is uncontrollable or noisy       Between Groups $44,301$ 1 $44,301$ $31,737$ $,000$ 16. To what level can you manage each group of students       Between Groups $415,979$ $298$ $1,396$ 17. How well can you regulate your lessons to the appropriate level for individual students $65,587$ $299$ $1,872$ $7000$ 18. How well can you apply a big range of assessment strategies       Between Groups $49,169$ $1$ $49,169$ $36,367$ $,000$ Within Groups $402,911$ $298$ $1,352$ $7001$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$ $7021$	12 To ask of level and some make skildren to stick with the sloven of	Iotal	391,987	299	( <b>-</b> 10	10 201	
NucleWithin Groups $403,438$ $298$ $1,354$ Total $470,187$ $299$ 14. To what extent can you increase the understanding of a student who is failingBetween Groups $38,435$ 1 $38,435$ $30,097$ $,000$ 15. To what level can you manage a student who is uncontrollable or noisyBetween Groups $44,301$ 1 $44,301$ $31,737$ $,000$ 16. To what level can you manage each group of studentsBetween Groups $415,979$ $298$ $1,396$ 16. To what level can you manage each group of studentsBetween Groups $67,684$ 1 $67,684$ $36,153$ $,000$ 17. How well can you regulate your lessons to the appropriate level for individual studentsBetween Groups $49,169$ $1$ $49,169$ $36,367$ $,000$ 18. How well can you apply a big range of assessment strategiesBetween Groups $38,991$ 1 $38,991$ $27,211$ $,000$ Within Groups $427,009$ $298$ $1,433$ $27,211$ $,000$	rules	Between Groups	66,748	1	66,748	49,304	,000
Ideal $470,187$ $299$ 14. To what extent can you increase the understanding of a student who is failingBetween Groups $38,435$ 1 $38,435$ $30,097$ $,000$ 15. To what level can you manage a student who is uncontrollable or noisyBetween Groups $44,301$ 1 $44,301$ $31,737$ $,000$ 16. To what level can you manage each group of studentsBetween Groups $415,979$ $298$ $1,396$ $$ 16. To what level can you manage each group of studentsBetween Groups $67,684$ 1 $67,684$ $36,153$ $,000$ 17. How well can you regulate your lessons to the appropriate level for individual studentsBetween Groups $49,169$ $1$ $49,169$ $36,367$ $,000$ 18. How well can you apply a big range of assessment strategiesBetween Groups $38,991$ $1$ $38,991$ $27,211$ $,000$ Within Groups $427,009$ $298$ $1,433$ $27,211$ $,000$		Within Groups	403,438	298	1,354		
14. To what extent can you increase the understanding of a student who is failingBetween Groups $38,435$ 1 $38,435$ $30,097$ $,000$ is failingWithin Groups $380,552$ $298$ $1,277$ Total $418,987$ $299$ 15. To what level can you manage a student who is uncontrollable or noisyBetween Groups $44,301$ 1 $44,301$ $31,737$ $,000$ NoisyWithin Groups $415,979$ $298$ $1,396$ $36,153$ $,000$ 16. To what level can you manage each group of studentsBetween Groups $67,684$ 1 $67,684$ $36,153$ $,000$ 17. How well can you regulate your lessons to the appropriate level for individual studentsBetween Groups $49,169$ $1$ $49,169$ $36,367$ $,000$ 18. How well can you apply a big range of assessment strategiesBetween Groups $38,991$ 1 $38,991$ $27,211$ $,000$ Within Groups $427,009$ $298$ $1,433$ $27,211$ $,000$		Total	4/0,18/	299			
Within Groups 380,552 298 1,277 Total 418,987 299 15. To what level can you manage a student who is uncontrollable or noisy Between Groups 44,301 1 44,301 31,737 ,000 Within Groups 415,979 298 1,396 Total 460,280 299 16. To what level can you manage each group of students Between Groups 67,684 1 67,684 36,153 ,000 Within Groups 557,903 298 1,872 Total 625,587 299 17. How well can you regulate your lessons to the appropriate level for individual students 49,169 1 49,169 36,367 ,000 Within Groups 402,911 298 1,352 Total 452,080 299 18. How well can you apply a big range of assessment strategies Between Groups 38,991 1 38,991 27,211 ,000 Within Groups 427,009 298 1,433 Total 460,000 299	14. To what extent can you increase the understanding of a student who	Between Groups	38,435	1	38,435	30,097	,000
Total418,98729915. To what level can you manage a student who is uncontrollable or noisyBetween Groups44,301144,30131,737,000Within Groups415,9792981,39670tal460,28029929916. To what level can you manage each group of studentsBetween Groups67,684167,68436,153,000Within Groups557,9032981,87270tal625,58729918. How well can you apply a big range of assessment strategiesBetween Groups49,169149,16936,367,000Within Groups452,080299138,991138,99127,211,00018. How well can you apply a big range of assessment strategiesBetween Groups38,991138,99127,211,000Within Groups427,0092981,43327,211,000	is failing	Within Groups	380,552	298	1,277		
15. To what level can you manage a student who is uncontrollable or noisyBetween Groups $44,301$ 1 $44,301$ $31,737$ ,000noisyWithin Groups $415,979$ $298$ $1,396$ 1 $67,684$ $1$ $67,684$ $36,153$ ,00016. To what level can you manage each group of studentsBetween Groups $67,684$ $1$ $67,684$ $36,153$ ,000Within Groups $557,903$ $298$ $1,872$ $7014$ $625,587$ $299$ $7014$ $7000$ 17. How well can you regulate your lessons to the appropriate level for individual studentsBetween Groups $49,169$ $1$ $49,169$ $36,367$ ,00018. How well can you apply a big range of assessment strategiesBetween Groups $38,991$ $1$ $38,991$ $27,211$ ,000Total $452,080$ $299$ Total $427,009$ $298$ $1,433$		Total	418,987	299			
Initisy       Within Groups       415,979       298       1,396         Total       460,280       299         16. To what level can you manage each group of students       Between Groups       67,684       1       67,684       36,153       ,000         Within Groups       557,903       298       1,872       70tal       625,587       299       1000         17. How well can you regulate your lessons to the appropriate level for individual students       Between Groups       49,169       1       49,169       36,367       ,000         18. How well can you apply a big range of assessment strategies       Between Groups       38,991       1       38,991       27,211       ,000         Within Groups       427,009       298       1,433       27,211       ,000	15. To what level can you manage a student who is uncontrollable or	Between Groups	44,301	1	44,301	31,737	,000
Total       460,280       299         16. To what level can you manage each group of students       Between Groups       67,684       1       67,684       36,153       ,000         Within Groups       557,903       298       1,872       701       625,587       299         17. How well can you regulate your lessons to the appropriate level for individual students       Between Groups       49,169       1       49,169       36,367       ,000         18. How well can you apply a big range of assessment strategies       Between Groups       38,991       1       38,991       27,211       ,000         Within Groups       427,009       298       1,433       27,211       ,000	lioisy	Within Groups	415,979	298	1,396		
16. To what level can you manage each group of students       Between Groups       67,684       1       67,684       36,153       ,000         Within Groups       557,903       298       1,872       1       625,587       299         17. How well can you regulate your lessons to the appropriate level for individual students       Between Groups       49,169       1       49,169       36,367       ,000         18. How well can you apply a big range of assessment strategies       Between Groups       38,991       1       38,991       27,211       ,000         Within Groups       427,009       298       1,433       1,433       1,433       1,443		Total	460,280	299			
Within Groups       557,903       298       1,872         Total       625,587       299         17. How well can you regulate your lessons to the appropriate level for individual students       Between Groups       49,169       1       49,169       36,367       ,000         18. How well can you apply a big range of assessment strategies       Between Groups       38,991       1       38,991       27,211       ,000         Within Groups       427,009       298       1,433       1433	16. To what level can you manage each group of students	Between Groups	67,684	1	67,684	36,153	,000,
Total       625,587       299         17. How well can you regulate your lessons to the appropriate level for individual students       Between Groups       49,169       1       49,169       36,367       ,000         Within Groups       402,911       298       1,352       1       1,352         Total       452,080       299       299       1       38,991       1       38,991       27,211       ,000         18. How well can you apply a big range of assessment strategies       Between Groups       38,991       1       38,991       27,211       ,000         Within Groups       427,009       298       1,433       27,211       ,000		Within Groups	557,903	298	1,872		
17. How well can you regulate your lessons to the appropriate level for individual students       Between Groups       49,169       1       49,169       36,367       ,000         Within Groups       402,911       298       1,352       1       1,352       1       1,352         Is. How well can you apply a big range of assessment strategies       Between Groups       38,991       1       38,991       27,211       ,000         Within Groups       427,009       298       1,433       1,433       1,433       1,433		Total	625,587	299			
individual students     Within Groups     402,911     298     1,352       Total     452,080     299       18. How well can you apply a big range of assessment strategies     Between Groups     38,991     1     38,991     27,211     ,000       Within Groups     427,009     298     1,433       Total     466,000     299	17. How well can you regulate your lessons to the appropriate level for	Between Groups	49,169	1	49,169	36,367	,000,
Total         452,080         299           18. How well can you apply a big range of assessment strategies         Between Groups         38,991         1         38,991         27,211         ,000           Within Groups         427,009         298         1,433           Total         466,000         299	individual students	Within Groups	402,911	298	1,352		
18. How well can you apply a big range of assessment strategies       Between Groups       38,991       1       38,991       27,211       ,000         Within Groups       427,009       298       1,433         Total       466,000       299		Total	452,080	299			
Within Groups         427,009         298         1,433           Total         466,000         299	18. How well can you apply a big range of assessment strategies	Between Groups	38,991	1	38,991	27,211	,000
Total 466 000 299		Within Groups	427,009	298	1,433		
1000 1000 277		Total	466,000	299			

# International Journal of Business, Human and Social Sciences ISSN: 2517-9411 Vol:13, No:4, 2019

	-	Sum of Squares	df	Mean Square	F	Sig.
19. To what level can you manage a number of problem students from	Between Groups	23,625	1	23,625	23,523	,000
destroying the lesson	Within Groups	299,292	298	1,004		
	Total	322,917	299			
20. To what level can you give a different example when students do not	Between Groups	20,877	1	20,877	17,112	,000,
understand	Within Groups	363,560	298	1,220		
	Total	384,437	299			
21. How well can you respond to defiant students	Between Groups	29,112	1	29,112	22,130	,000,
	Within Groups	392,018	298	1,315		
	Total	421,130	299			
22. How much can you assist families in helping their children do well in school	Between Groups	21,238	1	21,238	11,669	,001
	Within Groups	542,349	298	1,820		
	Total	563,587	299			
23. How well can you implement alternative strategies in your classroom	Between Groups	33,277	1	33,277	28,175	,000,
	Within Groups	351,960	298	1,181		
	Total	385,237	299			
24. How well can you provide appropriate challenges for very capable students	Between Groups	10,176	1	10,176	6,477	,011
	Within Groups	468,211	298	1,571		
	Total	478,387	299			

As it concerns the correlation between the subscale of efficacy for instructional strategies and the training program, it appears to be a statistically significant correlation as in 8-items of this subscale (p < 0.05). Training program affects the extent that special educators can design good questions for their students (p < 0.05, p= 0.000) and the level of how much they can do to regulate their lessons to the appropriate level for individual students (p < 0.05, p = 0.000). It is important that the training program is associated with how well they can provide appropriate challenges for very capable students (p < 0.05, p = 0.011).

Finally, there is a statistically significant association of the training program with the third subscale of efficacy for classroom management, as in all 8-item of the subscale of efficacy for classroom management (p < 0.05). For example, there are statistically significant associations between the training program and the level that special educators can manage disruptive behavior in the classroom (p < 0.05, p =0.000) and the level they can make children to stick with classroom rules (p < 0.05, p = 0.000). Additionally, there is statistically significant association with the level of how much they can do to manage a student who is uncontrollable or noisy (p < 0.05, p = 0.000). As a conclusion the ANOVA results indicate that there is a statistically significant association between the training program and the sense of selfefficacy of pre-service special educators in inclusive settings in Greece as in all 24 items of TSES 24-item long form (p < p0.05).

## V. DISCUSSION

The present study evaluated an in-service training program as a factor that can contribute to the improvement of selfefficacy of pre-service special educators. The program was evaluated from the pre-service educators with pre-post and after-post measures using the TSES 24-item long form for teacher self-efficacy. The findings of the present study were in consistency with the findings of the previous research of the first author, that revealed that there is an amount of pre-service special educators who do not hold the appropriate sense of self-efficacy when they have to teach students with special educational needs [10]. According to research, significant differences have been found between Taiwanese and U.S. preservice teacher's efficacy beliefs at the beginning and ending levels of the training program [4]. In addition, significant differences have been found for the GTE and PTE scale between the beginning and the end of student teaching training program [9]. For measures regarding both PTE and GTE, the changes from the beginning of the teacher program to the end of student teaching program represent significant increases in efficacy. It was revealed that ending-level pre-service teachers' beliefs regarding the personal teaching efficacy and professional knowledge efficacy factors had higher scores than the beginning-level and there were significant differences between the groups [9].

The findings also showed that the training program had a significant impact in the improvement of the sense of selfefficacy of pre-service special educators and it could improve special educators' teaching skills in order to provide students with special educational needs higher quality of education. From the mean scores of the questionnaire from pre-post and after-post measurements there is remarkable improvement of the sense of self-efficacy that special educator had after the training program. After the training program there were higher mean scores in all three subscales of the questionnaire that implies that special educators had better sense of self-efficacy regarding student engagement, instructional strategies and classroom management. For example, after the training program pre-service special educators had better sense of selfefficacy regarding the level they can increase the motivation of students who show low interest in school work and they can do better to help students to believe they can do well in school work. Previous studies have found that training programs program had a positive effect on teacher expectations about their ability to handle student management issues [5]. Similarly, it has been reported that preservice teachers who had completed the training program and appeared to have high

levels of self-efficacy were more possible to use effective teaching practices [1].

The pre and post training differences in the self-efficacy were statistically significant, meaning that the training program has a statistically significant correlation with higher levels of self-efficacy of preservice special educators. In all 24 items of TSES 24-item long form (p < 0.05) that means that the training program affected the sense of self-efficacy of preservice special educators. There were statistically significant correlations with higher self-efficacy for student strategies and engagement, instructional classroom management. For example, the training program affects the extent that special educators can design good questions for their students and the level of how much they can do to regulate their lessons to the appropriate level for individual students, as well as the level that special educators can increase motivation of students who show low interest in school work and the level they can provide students with different examples when they do not understand. Similar studies have found that training program is relatively effective in improving and developing pre-service teacher's efficacy beliefs [3]. Mastery experiences, training, support, and positive feedback from supervisors and cooperating teachers were identified as important in developing efficacy [7]. Preservice teacher's self-efficacy beliefs are related with the level they attend teacher training programs [3].

Teacher effectiveness is one of the most important factors affecting student academic achievement which is founded on a personal sense of teaching efficacy. Because teacher's sense of self-efficacy is associated with the quality of the provision of inclusive education and the effectiveness of the educators to teach students with different learning needs, this study provides valuable data for the improvement of special educator's self-efficacy. Quality training program has been proved to be a crucial factor for the development and improvement of pre-service special educator's self-efficacy. The findings of the present study are important first of all because they reveal that training programs could be a crucial element in order to improve special educator's self-efficacy and as a result the quality of special education that is provided in schools. Additionally, they provide important information about the evaluation of the efficiency of teacher training programs in determining the effectiveness level of teacher training on pre-service teachers' self-efficacy beliefs.

## VI. LIMITATIONS

The first limitation of the present research is associated with the sample of the research. Perhaps a larger sample would have been better to detect the correlation between the training program and the sense of special educator's self-efficacy. The second limitation of this research is the fact that it cannot be assured that different training programs with different context and quality can lead to the same results in the improvement of the level of self-efficacy. Finally, because in Greece each education department has different training programs, the benefits of a training program regarding the improvement of the level of self-efficacy may not be the same for all the preservice special educators.

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