

The Readiness of Pre-service Teachers to work with Deaf Students in Inclusive Settings

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The attitudes of pre-service teachers towards inclusive education seem to be influenced by a number of factors, like child-related factors like severity of disability, behavioral difficulties, teacher-related factors such as gender, experience, beliefs, education, and environmental factors like resources, and support from specialists. Several studies have showed that pre-service teachers tended to have positive sentiments, attitudes and less concerns about inclusive education, but very few studies have been carried out regarding pre-service teachers' readiness to work with deaf students in inclusive settings. The purpose of the present study was to investigate the attitudes and concerns of pre-service teachers about deaf students and their readiness to teach with them in inclusive settings. The participants were 175 pre-service teachers from the department of Primary Education of the University of Patras, Greece, in their fourth year of study. They completed the Sentiments, Attitudes and Concerns about Inclusive Education Scale (SACIE) of Loreman, Earle, Sharma & Forlin (2007), with some modifications in order to be adapted to education of the deaf. Results indicated that pre-service teachers had neutral to positive attitudes towards inclusion of deaf students (subscale mean scores: Sentiments=3.04, Attitudes=2.38, Concerns=2.26). Statistical analysis revealed a number of predictive factors of the inclusion attitudes of pre-service teachers, like academic training, confidence in teaching, interaction with people with disabilities or deaf people, experience, knowledge of legislation, gender and age. The results of this study indicate the need of provision for a more specialized academic training to pre-service teachers, which will include fieldwork in teaching deaf students in inclusive settings, and interaction with them.

Educational inclusion has been promoted as a main practice in special education. The last decades, however, inclusion has aroused controversies about its effectiveness and sufficiency concerning some children with special needs, such as the deaf students.

Powers (2002) suggests that there is not a right answer to the dilemma 'inclusion or special school' for the deaf students, however, special schools for the deaf by providing access to sign language and communication seem to be more appropriate to facilitate future inclusion of deaf students in society. The goal of inclusion remains the same for deaf students; it is the full participation-membership according to Antia, Stinson, & Gaustad (2002), not just the placement in a mainstream class.

One of the indicators of successful inclusion seem to be the teachers' positive attitudes towards students with special needs (Antia et. al. 2002; Avramidis, & Norwich, 2002; Powers, 2002). According to Avramidis and Norwich (2002) there are a number of factors which influence teachers' attitudes such as child-related variables, like the severity of the disabling

condition, teacher-related variables, such as gender, age, years of teaching experience, experience of contact, beliefs, socio-political views, and educational environmental-related variables, such as the support from specialists. This review concludes supporting the priority for pre- or in-service teachers' training in special education in order to modify their attitudes by having more teaching experiences and knowledge (Avramidis & Norwich, 2002).

Attitudes and Concerns of Pre-service Teachers towards Inclusion

Various studies reveal the attitudes of pre-service teachers towards students with special needs, however, there are not many surveys on teachers of deaf students.

The findings from three Queensland universities regarding pre-service teachers' attitudes towards people with disabilities indicated that only four percent of pre-service teachers had undertaken any compulsory courses and only 18 percent had taken elective courses in teaching children with special needs. Pre-service teachers who had at least weekly contact with people with disabilities perceived less discomfort with such interactions than did those who had less contact. (Forlin, Tait, Carroll & Jobling, 1999).

Another study in the UK revealed that the pre-service teachers held positive attitudes toward the general concept of inclusion, but their perceived competence dropped significantly according to the severity of children's needs. Moreover, children with emotional and behavioral difficulties were seen as potentially causing more concern and stress than those with other types of special needs. (Avramidis, Bayliss, & Burden, 2000).

Sharma, Forlin, Loreman, and Earle, (2006) investigated the concerns and attitudes of pre-service teachers in Australia, Canada, Hong Kong, and Singapore regarding inclusive education and their degree of comfort on interaction with people with disabilities. Results indicated significant differences between the students of different cultures, for instance, participants in the western countries tended to have more positive sentiments and attitudes towards students with disabilities, and more concerns than their eastern counterparts. The study also suggested that pre-service teachers have more positive attitudes towards people with disabilities and inclusion, and more confidence in implementing inclusive practice when they have had additional training or experience with people with disabilities.

A similar inter-cultural study of Loreman, Forlin, and Sharma, (2007) examined pre-service teachers' attitudes towards inclusive education in relation to three factors: academic and physical, social, and behavioral. The results showed that pre-service teachers were most positive about including students with social difficulties (e.g. shyness), than those with academic and physical problems, and they were least positive about students with behavioral disabilities (e.g. aggression). These results also indicated that training in inclusive education is as essential as the experience and contact with people with disabilities. Moreover, in the field of education of the deaf, according to Powers (2002) regular classroom teachers have very little knowledge about special education issues and education of deaf students and this is an obstacle to successful inclusion. Knowledge is also related to expectations of teachers of deaf students. Antia et. al. (2002) suggest that teachers tend to have low expectations from deaf students and as a result

they ignore them, they underestimate their potential or they overprotect them and the deaf students do not participate fully in classroom activities.

Eriks-Brophy and Whittingham (2013) examined regular classroom teachers' perceptions of inclusion of deaf students. They measured teachers' attitudes towards deaf students, their skills and knowledge about inclusive education and their readiness and confidence to teach deaf students in inclusive settings. All these factors according to these researchers are important for effective inclusion. The results showed that the teachers' attitudes were positive towards inclusion of deaf students and the participants had confidence in teaching them, but they emphasize on insufficiency of teacher preparation programs to educate them on inclusion of different groups of students.

Another study in Portugal by Freire and César (2003) examined the attitudes and the practices of five regular teachers who had deaf pupils in their classroom. Not having had any prior specialization, teachers had different ideas concerning inclusion, but they mentioned the same difficulties which were related to communication difficulties and lack of pre- or in-service training to teach deaf children.

There is only one study regarding Greek teachers by Lampropoulou and Padeliadu, (1997). This study examined and compared teachers' attitudes towards disability and inclusion of three groups of teachers working in different placements. These three groups consisted of a) teachers of the deaf, b) special education teachers, and d) general education teachers. The results revealed that attitudes of teachers varied, for example, teachers of the deaf had more positive attitudes than the other groups of teachers towards people with disabilities, but their attitudes towards mainstreaming was the most negative. For the teachers of the deaf also, attitudes towards inclusion were related to their knowledge about the pupils' needs and the possible problems and constraints that would occur in general schools. In the contrary, for general education teachers, their years of experience and their age seemed to be important factors related to their attitudes. For example, teachers with more years of experience had more negative attitudes. However, their lack of knowledge and contact with deaf persons seem to explain their positive attitudes towards inclusion of the students mostly for humanistic reasons.

Teacher Preparation about Inclusion

Stella, Forlin, and Lan, (2007) examined the effectiveness of an inclusive education training module in attitude change of pre-service secondary school teachers in Hong Kong. Findings indicated that the students after taking the course had more confidence to include children with special needs in their classroom, they had changed their attitudes and they felt less concerned about inclusive education.

Sharma, Forlin, and Loreman (2008) found similar results in an international study of Australia, Canada, Hong Kong, and Singapore about the attitudes of pre-service teachers on inclusive education after their training. The pre-service teachers seemed to be more positive towards people with disabilities and they felt more comfortable, but their levels of concern about teaching in an inclusive setting remained high in some cases.

In 2007 a scale was developed by Loreman, Earle, Sharma, & Forlin (2007) for measuring sentiments, attitudes and concerns about inclusive

education in pre-service teachers. This scale was a modified version of three other scales, the Interactions with People with Disabilities scale (IPD), the Concerns about Inclusive Education Scale (CIES), and the Attitudes Toward Inclusive Education Scale (ATIES). The scale was based on data gathered from 996 pre-service teachers from five universities who they answered in IPD, CIES and ATIES scales. After the analysis of results, a new scale, the Sentiments, Attitudes and Concerns about Inclusive Education scale (SACIE), was developed, which according to the authors was “*a single brief, reliable, and valid instrument which can be easily used and interpreted*”. In 2011 SACIE was improved in its final version, consisting a 15-item scale and it was validated using 542 pre-service teachers from nine universities in four countries including Hong Kong, Canada, India, and the United States. The aim of SACIE-R scale is to provide valuable information for assisting universities and colleges in preparing more specific training to address the needs of pre-service teachers for working with diverse student populations (Forlin, Earle, Loreman, & Sharma, 2011).

Oswald and Swart (2011) examined the effectiveness of courses about inclusive education for pre-service teachers in South Africa. The SACIE scale was used for the purpose of the study with 180 pre-service teachers participating and pre- and post-test scores were compared. The results showed positive outcomes after attending the courses. For instance, the participating teachers formed more positive attitudes and sentiments about inclusion and they seemed more concerned, confident and comfortable to provide inclusive teaching for any student.

Ahsan, Sharma, and Deppeler, (2012) also examined pre-service teachers' readiness for inclusive education in Bangladesh through measuring their perceived teaching-efficacy, concerns and attitudes towards inclusive education. Using two scales, SACIE and TEIP with 1,623 pre-service teachers they found that variables such as length and level of training, gender, interaction with persons with disabilities, and knowledge about local legislation had significant relationship with participants' perceived teaching-efficacy, attitudes and concerns.

The aim of the present study was to investigate the attitudes and concerns of pre-service teachers about deaf students and their readiness to teach in inclusive settings.

Method

Participants

The participants of the study were 175 pre-service teachers in their last (forth) year of their undergraduate study in the Department of Primary Education of the University of Patras. In order to participate, each student should have attended at least one course in deaf education.

Instrument

The instrument used for this study is the Sentiments, Attitudes and Concerns about Inclusive Education scale (SACIE) in the 19-item form (Loreman, Earle, Sharma, & Forlin, 2007). This instrument has two parts: the first part included questions about demographical variables of the teachers and the second was the SACIE scale.

The first part included the independent variables which possibly influence the teachers' answers: age, gender, the level of interaction with a person with a disability and a deaf person, the level of training about special education, the level of knowledge about Greek legislation and policy concerning special education, the confidence in teaching a deaf pupil, the number of courses about special education and deaf education that have been attended, and the level of experience in teaching deaf pupils.

The second part included the 19 statements of SACIE scale. This scale measured three aspects of teachers' perceptions about inclusion which are the Sentiments subscale (items 1-4), the Attitudes subscale (items 5-12), and the Concerns subscale (items 13-19) in a Likert scale form from 1 (strongly disagree), 2 (disagree), 3 (agree), to 4 (strongly agree). For the majority of items of the scale a higher mean score indicated more positive perceptions towards inclusion, but items 2, 4, and 13-19 must be reverse coded. In addition, a Total score presented more positive sentiments and attitudes towards inclusion and fewer concerns. The Cronbach's α for the subscales and the Total score were $\alpha = .50$, $\alpha = .80$, $\alpha = .74$ and $\alpha = .803$ which were acceptable.

After having the permission to use this instrument, it was translated from English to Greek and then some modifications were made in order to be adapted to education of the deaf. In each item of SACIE scale where the term "children with disabilities" were referred, it had been replaced with "deaf children". Also, some adaptations were made to the demographics section concerning the courses. We decided to include the title of every course about special education and deaf education provided in the curriculum of the university, because it would be easier for the participant to choose which one he/she have attended and additional comparisons could be made between those who have attended only special education courses and those who have attended courses in deaf education.

Procedure

The questionnaires were administered to pre-service teachers during their course in December 2014 with explanations from the researcher during the procedure. Once the questionnaires were collected, data were transferred to SPSS 20 database for analysis.

Results

The participants (175) were mainly female (81%, male=19%) with the majority being 21 years old ($M=21.9$, $SD=2.3$). Many participants also had interactions with people with disabilities (64.6%) and almost half of them had interactions with deaf people (33.2%). The level of knowledge about deaf education tended to be low to average ($M=1.85$, $SD= .65$), which is similar to legislation knowledge ($M=1.71$, $SD= .60$) and level of confidence in teaching which was very low to low ($M=1.69$, $SD= .63$). Moreover, the participants seemed to have poor experience in teaching deaf pupils ($M=1.77$, $SD= .83$). Concerning the courses, almost all the participants have attended at least one course about special education (99.4%), which is compulsory in the curriculum, and 42.3% participants had attended two courses (this is the maximum number of special education courses; one compulsory and one optional). In addition, 12% of participants had attended at least one course about deaf education and 20%

had attended two optional courses, since there are only two offered. Overall, the participants had attended almost 2 courses in special education deaf education included ($M=1.94$, $SD=1.08$).

The SACIE mean Total Score was 2.47 ($SD= .32$) which indicated that pre-service teachers have created neutral to positive attitudes towards inclusion of deaf children. The SACIE mean Sentiments, Attitudes, and Concerns subscale scores were 3.04 ($SD= .41$), 2.38 ($SD= .46$), and 2.26 ($SD= .44$) respectively (see Table 1).

Table 1. Means and standard deviations for scores on the SACIE Scale

Item	M	SD
Sentiments	3.04	0.41
It is rewarding when I am able to help deaf people.	3.56	0.49
I am grateful that I am not deaf.	1.92	0.74
I feel comfortable around deaf people.	3.03	0.64
I am afraid to look a deaf person straight in the face.	3.60	0.59
Attitudes	2.38	0.46
Deaf students who have difficulty expressing their thoughts verbally should be in regular classes.	2.26	0.67
Deaf students who need assistance with personal care should be in regular classes.	2.11	0.72
Deaf students who are physically aggressive towards others should be in regular classes.	2.16	0.65
Deaf students who need an individualized academic program should be in regular classes.	2.21	0.74
Deaf students who communicate with sign language should be in regular classes.	2.40	0.77
Deaf students who are inattentive should be in regular classes.	2.57	0.72
With appropriate support all deaf students should be in regular classes.	3.07	0.71
Deaf students who frequently fail exams should be in regular classes.	2.26	0.69
Concerns	2.26	0.44
I am concerned that my workload will increase if I have deaf students in my class.	2.59	0.78
I am concerned that there will be inadequate resources/staff available to support inclusion of deaf students.	1.71	0.58
I am concerned that I do not have knowledge and skills required to teach deaf students.	1.89	0.72
I am concerned that it will be difficult to give appropriate attention to all students in an inclusive classroom.	2.09	0.68
I am concerned that deaf students will not be accepted by the rest of the class.	2.42	0.72
I am concerned that the academic achievement of students without disabilities will be affected.	2.89	0.65
I am concerned that I will be more stressed if I have deaf students in my class.	2.24	0.76

The bivariate correlations between the variables were explored using Pearson's correlation. Significant correlations have been found between the Total Score and academic knowledge ($r = .32, p < .01$), confidence ($r = .34, p < .01$), special education courses ($r = .23, p < .01$), deaf education courses ($r = .28, p < .01$), and experience ($r = .33, p < .01$).

Multiple regression analysis was conducted in order to determine the degree to which factors were associated with an inclusive disposition among pre-service teachers (see Table 2).

Table 2. Predictors of inclusive disposition

Variable	Model	R^2	F
Sentiments	Academic knowledge, gender, interaction, confidence	0.21	15.58***
Attitudes	Training, age, experience, knowledge of legislation, confidence	0.04	7.25**
Concerns	Confidence, training	0.18	19.26***
Total	Confidence, training, interaction	0.19	13.55***

Beginning with the Sentiments subscale, the combination of gender, interaction, confidence and academic knowledge seemed to predict sentiments among pre-service teachers, $R^2 = .21, F(3,170) = 15.58, p < 0.001$. Gender and knowledge about teaching deaf students ($\beta = .26, p < .001, \beta = .25, p = .001$) were the most significant predictors of positive sentiments towards inclusion. Also, the pre-service teachers who had attended more courses in of the deaf education had more positive sentiments towards deaf students ($\beta = .12, p = .004$).

In the Attitudes subscale, the combination of training (number of courses in special education), knowledge of legislation confidence, age, and experience were the most significant factors, $R^2 = .04, F(1,172) = 7.25, p = .008$. A more detailed analysis of the results indicated that pre-service teachers who have attended more courses in special education have more positive attitudes towards inclusion of deaf students ($\beta = .18, p = .008$), and the same model was also explained by the age of participants ($\beta = .14, p = .004$).

In terms of the Concerns subscale, the factors which were statistically significant were training (number of courses in deaf education) and confidence, $R^2 = .18, F(2,171) = 19.26, p < .001$. Only confidence in teaching deaf students ($\beta = .21, p < .001$) was a significant predictor of inclusive. Also, the pre-service teachers who had attended more courses in deaf education have less concerns towards inclusion of deaf students ($\beta = .10, p = .01$).

Discussion

This study was a first attempt to examine the pre-service teachers' sentiments, attitudes and concerns towards inclusion of deaf students in Greece. In addition, a number of factors seemed to influence their perceptions in order to construct positive or negative attitudes about inclusion.

This study revealed that pre-service teachers in Greece had positive sentiments, neutral to positive attitudes and moderate concerns about inclusion of deaf students. Similar to other studies (Avramidis & Norwich,

2002; Loreman, et al., 2007, Sharma, et al., 2006) factors like training, knowledge of policies or experience and interaction with people with disabilities seemed to reduce anxiety and concerns and enhance confidence in teaching.

These results which were slightly higher than those in other studies could be explained by the nature and the severity of disability. As Avramidis, et al (2000) suggested, the severity of disability could cause less or more stress to teachers and teachers of the deaf seemed to have more positive attitudes (Eriks-Brophy & Whittingham, 2013; Freire & César, 2003; Lampropoulou & Padelidiadu, 1997) maybe because deafness is often referred as an invisible disability and causes mostly communicational obstacles.

Perhaps, these communicational issues are the main reason that demand more specialized training, experience and interaction with deaf people. This study revealed the need for more training by provision of different courses about special education and inclusion in a training program for pre-service teachers. For instance, the study showed that more courses about Inclusion could help pre-service teachers develop more positive attitudes about inclusion of deaf students. In addition, more courses about deaf education are more suitable for reducing concerns and negative sentiments, than building positive attitudes. These implications could be very useful for training programs in universities or other institutes, designed for pre- or in-service teachers and school personnel in order to support inclusive settings.

Although this study was one of the few about inclusive education and teachers' perceptions of the deaf in Greece, a note has to be made that the sample was limited and came from one university which has a specific program about special education and deaf education. For these reasons, the results should be considered carefully. Other future researches could have larger samples from other universities in Greece that could be compared or other materials could be used to investigate different aspects of teacher's perceptions of inclusive education.

References

- Antia, S. D., Stinson, M. S., & Gaustad, M. G. (2002). Developing membership in the education of the deaf and hard-of-hearing students in inclusive settings. *Journal of Deaf Studies and Deaf Education*, 7(3), 214-229.
- Avramidis, E., Bayliss, P., & Burden, R. (2000). Student teachers' attitudes towards the inclusion of children with special educational needs in the ordinary school. *Teaching and Teacher Education*, 16, 277-293. doi:10.1016/S0742-051X(99)00062-1
- Avramidis, E., & Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: a review of the literature. *European Journal of Special Needs Education*, 17(2), 129-147. doi: 10.1080/08856250210129056
- Ahsan, M. T., Sharma, U., & Deppeler, J. M. (2012). Exploring pre-service teachers' perceived teaching-efficacy, attitudes and concerns about inclusive education in Bangladesh. *International Journal of Whole Schooling*. 8(2), 1-20. Retrieved from <http://files.eric.ed.gov/fulltext/EJ975715.pdf>

- Eriks-Brophy, A., & Whittingham, J. (2013). Teachers' perceptions of the inclusion of children with hearing loss in general education settings. *American Annals of the Deaf*, 158(1), 63–97. doi: 10.1353/aad.2013.0009
- Freire, S., & César, M. (2003). Inclusive ideals/inclusive practices: How far is a dream from reality? Five comparative case studies. *European Journal of Special Needs Education*, 18(3), 341-354. doi: 10.1080/0885625032000120224
- Forlin, C., Earle, C., Loreman, T., & Sharma, U. (2011). The sentiments, attitudes, and concerns about inclusive education revised (SACIE-R) scale for measuring pre-service teachers' perceptions about inclusion. *Exceptionality Education International*, 21(3), 50–65. Retrieved from <http://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=1040&context=eei>
- Forlin, C., Tait, K., Carroll, A., & Jobling, A. (1999). Teacher education for diversity. *Queensland Journal of Educational Research*, 15(2), 207-225. Retrieved from <http://education.curtin.edu.au/iier/qjer/qjer15/forlin.html>
- Lampropoulou, V., & Padeliadu, S. (1997). Teachers of the Deaf as compared with other groups of teachers: Attitudes toward people with disabilities and inclusion. *American Annals of the Deaf*, 142(1), 26-33.
- Loreman, T., Earle, C., Sharma, U., & Forlin, C. (2007). The development of an instrument for measuring pre-service teachers' sentiments, attitudes, and concerns about inclusive education. *International Journal of Special Education*, 22(2), 150-159. Retrieved from <http://files.eric.ed.gov/fulltext/EJ814498.pdf>
- Loreman, T., Forlin, C., & Sharma, U. (2007). An international comparison of pre-service teacher attitudes towards inclusive education. *Disability Studies Quarterly*, 27(4). Retrieved from <http://dsq-sds.org/article/view/53/53>
- Oswald M., & Swart, E. (2011). Addressing South African pre-service teachers' sentiments, attitudes and concerns regarding inclusive education. *International Journal of Disability, Development and Education*, 58(4), 389-403. doi: 10.1080/1034912X.2011.626665
- Powers, S. (2002). From concepts to practice in deaf education: A United Kingdom perspective on inclusion. *Journal of Deaf Studies and Deaf Education*, 7(3), 230-243.
- Sharma, U., Forlin, C., & Loreman, T. (2008). Impact of training on pre-service teachers' attitudes and concerns about inclusive education and sentiments about persons with disabilities. *Disability & Society*, 23(7), 773-785. doi: 10.1080/09687590802469271
- Sharma, U., Forlin, C., Loreman, T., & Earle, C. (2006). Pre-service teachers' attitudes, concerns and sentiments about inclusive education: An international comparison of novice pre-service teachers. *International Journal of Special Education*, 21(2), 80-93. Retrieved from <http://www.internationaljournalofspecialeducation.com/articles.cfm?y=2006&v=21&n=2>
- Stella, C. S.C., Forlin, C., & Lan, A. M. (2007). The influence of an inclusive education course on attitude change of pre-service secondary teachers in Hong Kong. *Asia-Pacific Journal of Teacher Education*, 35(2), 161-179. doi: 10.1080/13598660701268585