



Preservice Turkish Teachers' Views and Perceived Competence Related to Inclusive Education

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Abstract

The focus of this study was to examine the influence of special education course on preservice teachers' views of inclusive education. "Scale for view of inclusive education" was applied to 68 pre-service teachers and based on the pre and post-test scores, ten pre-service teachers were selected for identifying their views and perceived competences related to inclusive education. Case study design was used in the study and collected data analyzed by using content analysis. The findings indicated that preservice teachers presented both positive and negative views related to inclusive education while the present inclusive education practices they observed and the fear of unfavorable impact on regular students formed the reasons for negative view of inclusion. The results showed that lack of training in and experience with special needs students caused preservice teachers to illustrate low level perceived competences while experience with students with special needs resulted in high level perceived competences.

Keywords: Inclusive education, Preservice teacher, Students with special needs, Teacher education.

Citation | Tuğba Horzum; Kemal Izci (2018). Preservice Turkish Teachers' Views and Perceived Competence Related to Inclusive Education. *Journal of Education and e-Learning Research*, 5(2): 131-143.

History:

Received: 2 July 2018

Revised: 11 August 2018

Accepted: 31 August 2018

Published: 27 September 2018

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Publisher: Asian Online Journal Publishing Group

Contribution/Acknowledgement: This research is an extension of the report presented at the ICEMST 2015: International Conference on Education in Mathematics, Science and Technology (ICEMST 2015).

Funding: This study received no specific financial support.

Competing Interests: The authors declare that they have no conflict of interests.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study was reported; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained.

Ethical: This study follows all ethical practices during writing.

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1. Introduction

Education of children with special needs has in recent years been among issues that are attached special importance. In this context, use of inclusive education in educational policies is becoming increasingly widespread (Vuran, 2013). Many countries such as Australia, Canada and the USA support the said inclusive education through rules and regulations or government policies. The concept of inclusive education presented in the Salamanca Statement contained the principle of equal access for all students in mainstream classrooms, and the demand for necessary accommodations and support for meeting the diverse needs of all learners, disabled or otherwise (UNESCO, 1994). In Turkey, too, there are detailed regulations for inclusive education of the disabled or if need be, their receiving special education. According to this, Article 42 of the Constitution of the Turkish Republic states that, “No one can be denied of the right to education. The state takes the necessary measures that will render those who need special education due to their handicap useful for society”. On the other hand, Article 6 of the Regulations for Special Education Services, where principles of special education are laid out, emphasizes that children requiring special education should, as far as possible, receive their education with their peers at general education environments (MoNE, 2006). In addition, Basic Act of Turkish National Education 1739 states that all children have a right to education irrespective of their shortcomings. Therefore, it is necessary to make arrangements in educational regulations related to students with special needs and offer backup education services to them. At this stage, individual differences of students who exhibit different developmental qualities from their peers and have different educational needs come into play. Taking individual differences into consideration is thought to be one of the prioritized issues for inclusive education to be successful. However, one of the most important challenges for teachers today involves reaching all students in classroom environments including student groups of increasing diversity (Van De Walle *et al.*, 2012). From this perspective, it can be seen that diversity in education rises to prominence. Yet, “equity does not mean each student should receive exactly the same education; instead, reasonable and appropriate arrangements required to ensure all students’ success and access to knowledge need to be mastered” (National Council of Teachers of Mathematics (NCTM), 2000). Because of being the first degree practitioners of inclusive education, teachers are strategic role players in an inclusive school community (Vaughn and Bos, 1987; Nel *et al.*, 2014). Teachers are people who determine students’ needs in accordance with their characteristics, ages and levels in the education process, identify what kind of shortcomings students have to meet these needs and implement necessary applications according to these needs. It is believed that for inclusive education to attain success, views of teachers and preservice teachers (PTs), who are teachers of the future, are of critical importance. Therefore, this study firstly investigates PTs’ views concerning an effective inclusive education. On the other hand, it is thought that in addition to the views of teachers of individuals with special needs, their perceived competences are also quite important for the success of inclusive education practices. Indeed, studies indicate that one of the most important factors in ensuring success of inclusive education involves teachers’ being willing to accept students with special needs into their classrooms and determined to make inclusive education successful (Kircaali-Iftar, 1992). Therefore, qualities of teachers who are one of the essential elements of the education process due to that fact that they are in constant communication with their students, implement education programs, manage the teaching process and assess both students and education (Vaughn and Bos, 1987) greatly affect the quality of these processes. Consequently, knowing what the teachers to be employed in inclusive education classes know or do not know, how they plan to provide inclusion, and how they evaluate current inclusive education practices can render education of students with special needs more transparent and, if there are shortcomings or problems in learning, then it can help to take steps to overcome these shortages and problems.

Studies in the relevant literature on teachers teaching inclusive education classes and PTs generally focus on perceptions related to inclusive education and inclusion students (ISs) (Brydges and Mkandawire, 2017) conceptions (Fyssa *et al.*, 2014) views (Opdal *et al.*, 2001; Horne and Timmons, 2009; Dalğar, 2011; Sadioğlu *et al.*, 2013; Fyssa *et al.*, 2014; Nel *et al.*, 2014; Bailey *et al.*, 2015; Hu *et al.*, 2017) attitudes (Avramidis and Kalyva, 2010; Rakap and Kaczmarek, 2010; Subban and Mahlo, 2017) and competencies (Mrsnik, 2003; Babaoğlan and Yılmaz, 2010). In those studies, researchers have handled debates about problems experienced in inclusive education, causes of these problems, solution offers for these problems, and causes of failure of inclusive education. According to this, it has been found that teachers/PTs think that they experience/will experience problems in meeting the needs of students with special education (Horne and Timmons, 2009; Avramidis and Kalyva, 2010) as well as in time management in inclusive education (Horne and Timmons, 2009; Sadioğlu *et al.*, 2013) and hence they do not consider themselves efficient in regard to inclusive education (Babaoğlan and Yılmaz, 2010; Sadioğlu *et al.*, 2013). Consequently, educators need expert support or information about inclusive education. Indeed, training offered with respect to inclusive education increase educators’ competencies (Mrsnik, 2003). It has turned out that the topics about which educators needed to receive information are special education counseling, special teaching methods aimed at inclusive education students, instructional design, material support, time management, preparation and use of appropriate methods and techniques to assess achievement, and management of problematic behaviors arising with regard to students attending inclusive education (Opdal *et al.*, 2001; Jordan *et al.*, 2009; Rakap and Kaczmarek, 2010; Sadioğlu *et al.*, 2013; Fyssa *et al.*, 2014; Bailey *et al.*, 2015; Brydges and Mkandawire, 2017). Based on this, it can be said that teachers teaching inclusive classes experience problems in teaching due to shortage of educational materials as well as time constraints in educational practices (McGarvey and Morgan, 1996). However, studies indicate that reasons such as shortage of experienced personnel in the field of special education, teachers’ prejudices against inclusion students, inadequacy of support services in special education, and problems in the preparation and implementation of individualized education programs (IEP) negatively affect success of inclusive education (Batu *et al.*, 2004; Vuran, 2013; Materechera, 2018). The problems mentioned here may lead to unwillingness on the part of teachers to allow ISs into their classrooms. Indeed, one reason why teachers are generally unwilling to include children with disabilities in their classrooms even though most of them agreed with the philosophy of inclusion is lack of training (Jordan *et al.*, 2009; Hui, 2015). Unlike special education teachers, major teachers (in this study, preservice Mathematics and Turkish Language teachers) are not typically trained on how to scaffold learning or to apply universal design for learning principles along with best practices for special education, all considered crucial in inclusive settings (Odom *et al.*, 2004). But according to Lambert (2017)

teachers can change the point of view of students, families and other teachers' understanding of both ability and disability. Therefore, raising the status of the teaching profession can be possible by first knowing the general and special domain characteristics that teachers need to possess, and then gaining of these competencies to PTs and teachers through preservice and in-service training programs (MoNE, 2017). For this reason, it is important that views of PTs, who are at the beginning of their career, concerning inclusive education, be investigated and education be given so as to meet the required preconditions. However, as was mentioned in Ajzen (1991) Planned Behavior Theory, individuals' exhibiting any behavior depends on their attitudes, subjective views and perceived competence. In other words, for PTs to be able to implement a successful inclusive education, they need to possess favorable attitudes and views with respect to inclusive education and feel themselves competent in this regard. Based on this, this study aimed to investigate final-year Turkish and Mathematics PTs' views and perceived competence concerning inclusive education within the scope of "Special Education". Specifically, this article will: (1) explore PTs' views about inclusive education; (2) examine the factors that PTs suggest for effective inclusive education; and (3) investigate PTs' perceived competence related to inclusive education. These results of the study can contribute to our understanding of the views and struggles PTs poses regarding to inclusive education in order to develop and serve effective interventions for PTs to achieve the goals for inclusive education. Besides this article proceeds by providing background on the development of inclusive education in general and in Turkey in particular.

2. Methods

This qualitative study is a case study conducted to implement an in-depth analysis of Mathematics and Turkish PTs' views and perceived competence regarding inclusive education. Case study is a research method that investigates a current phenomenon within its real-life situation and is used in cases where the borders between a phenomenon and the content within which it occurs are not explicitly clear and there exists more than one evidence or data source (Yin, 1984). Since PTs' views and perceived competences related to inclusive education were investigated in this study, the case study method was preferred as more than one data source was collected within the natural borders of the study.

2.1. Participants

The study was conducted on a total of 68 final-year PTs, of whom 33 were attending the Turkish teaching program and 35 were attending primary education Mathematics teaching program, at a state university in the Central Anatolia Region of Turkey. It was ensured while the participants were being chosen that they should be voluntary and receiving the Special Education course. In addition, the scale introduced in the data collection tools section was implemented at the beginning and end of the semester and the pretest-posttest scores thus obtained were compared to determine the participants with whom face-to-face interviews would be held. Based on the pretest-posttest scores, 2 PTs making the most progress, 2 PTs making the least progress and 1 PT in whom no progress was made were determined for each program. In-depth interviews were held with these PTs determined. In this way, it was ensured that maximum diversity would be achieved while selecting the PTs with whom interviews would be held. Real names of the PTs who were included in the study were not used; instead, codes were given to the participants such as H₁, H₂, H₃, H₄, N₁, N₂, L₁, L₂, L₃, L₄ (High, Neutral, Low).

2.2. Data Collection Tools

The Scale: "My Thinking about Inclusion Scale (MTAI)", which was developed by Stoiber *et al.* (1998) and had an internal consistency Cronbach Alpha coefficient of 0.91, was adapted to Turkish by Dalğar (2011) and had a Cronbach Alpha internal consistency coefficient of 0.73. The participants' views about inclusion were determined using this scale in this study. This scale consists of 20 items. There are 10 reverse items (2,6,8,11,14,17,18,19,20) in the scale. Item scores obtained from the data are re-coded according to the reverse items. The scale is a 5-point Likert scale; in which participants express their views concerning the relevant item ranging from 1-Totally agree to 5-Totally disagree. The lowest score that could be received from MTAI is 20, whereas the highest score is 100. A low score obtained from the scale indicates a positive view whereas a high score indicates a negative view. This scale was used at the beginning of the semester to obtain PTs' initial views about inclusive education. At the end of the 14-week semester, it was used as a posttest to determine the change that occurred in PTs' views concerning inclusive education.

Semi-structured Interview: Semi-structured interviews were used as the prior data collection method of the study. The interview questions were developed by the researchers by reviewing the relevant literature. After the interview questions were prepared, an expert in the field was referred to for his opinion concerning the questions and the questions were revised in accordance with the views obtained. The questions asked to the participants during the interviews are given in Appendix 1. Some of the fifteen open-ended questions given here consist of questions intended to reveal the participants' views regarding the inclusion process such as 'Do you think inclusive education should be given? Why?' Some of the interview questions, on the other hand, consist of questions asked to answer the second research question and intended to reveal the participants' views about the implementation of an effective inclusion process. An example of these questions is 'How do you think education of students receiving inclusive education could be improved?' Some of the interview questions, on the other hand, consist of question such as 'Would you like to have ISs in your classroom when you are appointed as teachers? Why?' which aim to determine the participants' perceived competence with regard to the inclusive education.

2.3. Data Collection Process

The data of this study were collected within the scope of the "Special Education" course, which lasted 14 weeks. The Special Education course is one of the compulsory courses in the senior year of the teacher training program. During the period when PTs receive the Special Education course, they closely observe the classes within the scope of the training course titled "Teaching Practice", thereby getting adequate information about inclusion applications

being implemented in reality. At the beginning of the research process, the PTs' views concerning inclusive education were obtained using MTAI. Following the pretest, the PTs were given theoretical information about the concept of special education, family training, inclusion and support special education services, assessment in special education, children with special needs such as visually impaired, hearing impaired, mentally disabled, gifted and finally children with learning difficulty. In addition to this theoretical information, the PTs were provided information about biographies of renowned disabled people and asked to observe at least one IS 2 hours within the 14-week period. In this way, it was ensured that the participants gain an understanding of education of ISs and see the educational environment of ISs. Permission was obtained from the necessary authorities to be able to make these observations. In the 14th week, the PTs made a visit, together with the researchers, who were in charge of the course, to a special education school where students with mental disability received education. They were informed by the school teachers about the classrooms where disabled students received their education and the methods used in their education. After the visit, they had breakfast with the disabled students and chatted with them. At the end of these applications, MTAI was administered to the 68 PTs as a posttest. Then, the PTs' pretest-posttest scores were compared and the students whose views had changed in a positive or negative way or remained unchanged were determined for the interviews from which qualitative data would be collected. After this procedure, semi-structured interviews lasting an average of about 30 minutes were held with 5 Turkish (H_1, H_2, N_1, L_1, L_2), 5 Mathematics (H_3, H_4, N_2, L_3, L_4) PTs. The PTs were informed of the purpose of the study prior to the interviews and they were told that information about them would not be shared with third parties. The questions were generally asked in the order on the interview form. However, in cases when the participants gave the answer to another question that would be asked while they were responding to a question, the order on the interview form was not taken into consideration. Follow-up questions such as "What do you mean by.....? Can you provide more detail in this regard?" etc. were added during the interviews to help the participants enrich their views. In this process, the interviews were recorded with a voice recorder by permission of the participants to prevent data loss.

2.4. Data Analysis

For data analysis, first the voice recordings of the interviews held with the participants were transcribed and transferred to computer environment. Then, voice records were listened to again to check whether or not the transcriptions were accurate, thereby ensuring that they were faultless. A separate file was kept for each question and both researchers read the participants' responses several times at different times. The data arranged in this manner were analyzed using the content analysis method to determine the patterns and the main themes. In this context, while the data were being checked line by line by the researchers separately, first it was decided which research question they responded to and then they were divided into meaningful sections. The codes that were brought together were examined to find their common aspects. Then, the themes and sub-themes were brought together in a single file without the student views through content analysis, taking into account the research problems. After the themes were formed, the researchers came together and compared and contrasted the analyses, debated over the themes about which there were disagreements and finally rearranged the themes in a way they would exhibit agreement. For example, whereas some of the PTs did not express negative views while stating their views concerning inclusion, they did not express clearly positive views, either. This is one of the cases over which the authors had disagreement. When the authors re-examined the PTs' statements in this manner, they arrived at the conclusion that the PTs had positive views under certain conditions such as getting special training. Peer assessment was employed to crosscheck the analyses and an expert in the field examined the themes and sub-themes that were agreed on. The findings were presented without any comments so as to increase reliability of the study.

3. Findings

The findings section is organized into three parts that correspond with the research questions. The first section describes the views of PTs' related to inclusion. The second section addresses the PTs' views on factors for effective inclusion. The third section describes teachers' perceived competence for inclusive education.

3.1. Preservice Teachers' Views of Inclusion

3.1.1. Positive Views

The PTs who had positive views concerning inclusive education proposed some conditions and argued that inclusive education could serve its purpose only under these conditions. One of these is that ISs should be close to the level of the class cognitively. For example; N_1 stated that "*I think inclusive education should be according to the level of deficiency; it would be hard for students with a huge deficiency to do well in inclusion class. If the level of deficiency is socially light, then it would be nice to have them*". L_1 , on the other hand, stated in the following words that disabled, heavily mentally disabled and gifted students should not be included in inclusive education:

Mentally and hearing impaired students should not be incorporated in inclusive education. Mental disability should be slight; it should not be at a level to disrupt the rules of the classes; at least, their levels of perception should be close to other students. I would not like gifted students to be in inclusion classes, either. I would like them to be in a homogeneous class, because better environmental conditions will form there.

Another condition proposed by the PTs is that normal students should not be affected negatively. This condition was explained as follows by L_1 "*Inclusive education should take place if it will not affect the children in the classroom, because it is not just inclusive education being given in a classroom; other children should also be taken into consideration*" and N_1 "*Inclusion should be implemented in a way that will not affect other students negatively*". The last condition proposed by the PTs having positive views was that teachers should have adequate education and experience. In that case, classroom atmosphere will not be influenced negatively and teachers will not suffer from time constraints to catch up with the syllabus. For example, H_4 emphasized with the following words that teachers should be properly equipped and experienced: "*Experienced and well-equipped teachers do not suffer from shortage of time, whereas inexperienced ones may experience really serious problems in inclusive education*". H_1 , on the other hand, highlighted importance of teacher training by saying: "*I think teachers should be informed a little about special*

education". The PTs who reported positive views stated lastly that inclusive education enabled students to socialize and therefore it definitely had to be implemented. For example, N₂ argued that inclusive education helped students to socialize, saying "I favor inclusive education, but there are too many shortcomings and they need to be definitely eliminated because I think this education does not usually fulfill its purpose. What matter is to socialize individuals". Likewise, H₄ stated that ISs should be regained to the society by saying; "As far as I observe, when ISs go out into society, they may cause inconveniences for the society and they may experience problems with regard to sociability. We need to implement social inclusion so as to regain them to society".

3.1.2. Negative Views

The PTs who had negative views concerning inclusive education argued that it was difficult to maintain order in inclusion classrooms, so other students could be affected negatively. In this context, the PTs highlighted problems arising from in-class communication and affecting ISs directly. The most prominent of these problems concerns socialization question which arises when ISs are ostracized by other students. L₃ explained this situation as follows: "ISs are not well taken care of by their teachers; nor have they been adopted by their classmates; they have been excluded and are all alone". On the other hand, N₂ and L₄ stated respectively that differences of ISs are a disadvantage for them, saying "Our point of view of individuals who have a disability or a difference involves ostracizing them. It is in our nature as a society", and "ISs may experience a little exclusion or be unwanted as they are different from other students". Other problems, as they were pointed out by L₁ and H₄, were that "...ISs were shy with regard to in taking the word" and "Their making friends with those who are younger than them". Another problem mentioned by the PTs was that there was noise in the classroom as ISs did not obey the classroom rules. Here, the PTs made reference to classrooms where mentally disabled, gifted and hyperactive students were present. For example, H₃ explained that "If there was a student with an orthopedic disability, classroom rules would not be affected at all, but a mentally disabled student would not much obey the classroom rules as s/he would have difficulty learning". Likewise, L₃ expressed the following view: "I do not think we would have much problem with those with sight or hearing impaired students, but gifted students already know the topic. S/he will start to talk to those around him/her or have difficulty sitting in their chairs, they are hyperactive. After all, we cannot expect them to raise their hands or sit calmly; they will walk around constantly".

Moreover, the PTs stated that inclusive education will be influenced negatively as interest taken in normal students and time allocated for their education will decrease. In this context, the PTs focused on students' behaviors within the classroom. These behaviors involved other students' jealousy of the time spared for ISs and their imitating ISs who did not obey classroom rules. H₃'s statement that "If teachers take special care of students who are different, then other students will be jealous of them" is in support of this situation.

3.2. Preservice Teachers' Views about the Factors for Effective Inclusion

This section presents an overview of the views of PTs about the factors related to effective inclusion and includes classroom environment, out-of-class applications, teachers, family, students and education system.

3.2.1. Classroom Environment

All of the PTs emphasized importance of a classroom culture based on cooperation. The PTs stated that when other students in the classroom are informed about ISs and when a student-on-duty system where they would be able to help ISs without interfering with them, this cooperation would be ensured. For example, N₁ said; "I would create an environment based on solidarity with the students. If an atmosphere of solidarity could be established, other students would not regard it as a problem". Likewise, L₂ pointed that education was necessary to ensure cooperation in the classroom environment, saying "I would first start by educating the students as the whole class will be in the same environment". On the other hand, the PTs maintained that different methods could be followed to ensure a classroom environment based on cooperation. For example, stating that when one deals with students one by one in the classroom environment, then time problems will be experienced and that the teacher focuses on disabled students, H₄ argued that alternative should be offered to other students, saying:

When you deal with ISs one by one, other students may begin to wonder why the teacher is not dealing with them one by one and whether or not they also have to have a disability to be taken care of specially. In this regard, the teacher may talk to other students telling them that he could deal with their problems during breaks or lunch breaks.

Another method is group work, as expressed by L₃ in the following words: "Group work can be done; all the students in the classroom may help the IS one by one". Likewise, N₂ voiced the on-duty student system, saying "An on-duty student system should be established and all the students should be involved in it". Another method to create a classroom environment based on cooperation is to inform other students about ISs according to the kind of their disability. For example, L₄ said, "I would give information to other students about type of the disability of the inclusion. I would describe how they should behave towards them" whereas H₁ explained "I would talk to other students about the disability of my student like they were adults". H₁ argued that problems were experienced in implementing these methods and could be experienced in the future, to, saying, "Of course, students attending middle school may not understand". N₂, on the other hand, maintained that the problem had a social dimension, saying "Given that adults in our country are inclined to label people, it would be really hard to begin with young ones; or we should start to educate adults little by little while we educate young ones thoroughly; such cooperation could be performed".

The second factors which the PTs handled regarding classroom environment concerns physical conditions of the classroom environment. These involve seating arrangement, classroom arrangement, use of heating, light and color and class size. By seating arrangement, the PTs generally meant how ISs should be seated in the classroom environment in relation to the other students and in some cases how other students should be seated in relation to the ISs. According to this, some PTs stated that ISs should be seated, depending on their disability, in the front rows, preferably next to hardworking students or close to the teacher. Taking into consideration a hearing-impaired IS, N₁ explained his view about the seating arrangement in the following words: "If he cannot hear and is

¹The naming process of a disability category

not in a position to use hearing aid, then he should sit near the whiteboard". L₂, on the other hand, expressed his views taking into consideration mentally-disabled students: "If a student has a mental disability, he should sit at the front row closest to my desk. The most hardworking student or the friendliest may sit next to him". Likewise, highlighting the necessity to keep under control those ISs with hyperactivity disorder, L₃ said: "I would sit him right in front of my desk". Taking into account students with physical disability, H₁ maintained with the following words that ISs should be seated at desks close to the teacher:

If they have difficulty walking, I would ensure that they sit nearer to the door. It could also be a better protected place like the front of the teacher's desk so that they would not be hurt while students came in and went out. I would sit them nearer to the door so that they would not experience problems entering and leaving.

Some of the PTs, on the other hand, stated that ISs should sit in the middle part of the classroom. H₃ explained this saying "I would sit him there so that the whole class would communicate with him. If he sits at the front row, he cannot see the other students; if he sits at the back, he cannot interact with the class". N₂ made similar remarks about hyperactive students saying "I would definitely try to sit them in the middle part of the classroom. Then, depending on the situation, I might move them to front rows". Some other PTs argued that if there were more than one ISs in the classroom, they should not sit side by side; instead, a U-shaped seating arrangement would be a better option to help ISs to socialize. For example, L₁ remarked, citing two mentally handicapped ISs he observed in the classroom who were also siblings: "They were sitting side by side. I would prefer them to sit next to different and more active students". Likewise, H₄, who observed disabled students, said: "Seating arrangement should be in the form of U-shape rather than the traditional arrangement". Moreover, the PTs stated that classroom environment could be rendered more active by changing seating arrangement every week and establishing an on-duty student system. For example; when asked how other students in the classroom could be tasked with supporting ISs, H₃ responded saying: "Students could be charged with responsibility by changing their places every week". N₂, on the other hand, argued that inclusive education could be effective by making an arrangement he called student-on-duty system, in which students' places were changed so that at certain intervals they sat by ISs and helped them.

The PTs maintained that effective inclusive education could be given through classroom arrangements, improved desks, whiteboards with improved visual angles and classrooms enriched with materials. N₁ explained with the following words how inclusive education could be improved "By increasing qualities of desks, they can be rendered more orderly. The visual angle of the whiteboard could be enhanced. I would favor use of different materials because students can learn concretely until a certain level". H₄, on the other hand, stated that classroom should be enriched through materials depending on disabilities, saying "When you cannot find materials for normal students, you cannot naturally find materials for ISs. The classroom should be enriched with materials depending on disability". Likewise, H₁ explained this situation via speech disorder as follows: "One needs to consider the type of disability of the IS. For example, we can increase the number of speech materials for those with speech disorder". Another physical condition the PTs referred the use of adequate/appropriate light-heating-color in the classroom environment. N₁ expressed this situation with the following words; "The lighting, temperature and other factors should be taken into consideration; indeed, if these are considered for normal education, then they should be taken into account at a higher level for inclusive education". For example, L₁ emphasized importance of light in classroom environment, saying "Above all, classroom could be airy; the school we went to had a dark and gloomy atmosphere. I do not think a good education can take place there". L₃ explained the importance of colors in classroom environment depending on students' level of development as follows: "There are colors suiting their ages and classroom levels; so walls with lighter shades of colors would be good for them". Taking into consideration visual impairment with regard to importance of light, H₄ observed: "If the student is visually-impaired, I would check the light and make sure that it will not harm him". On the contrary, H₃ tried to explain that color and light were not important for disabled individuals in classroom environment, saying, "I believe that color and light do not have an effect. I have a mentally-disabled elder sister and color has not effect. The more warm-hearted a person you are with is, the more beautiful the color of the environment would seem". The last of the factors related to classroom environment which the PTs referred is that classroom size should be small. For example, H₃ maintained that crowded classroom have a negative effect on even normal students, so class size should be small in inclusive education. Likewise, H₁ emphasized that small classroom size increased the possibility of pay attention to the students on an individual basis, saying "Class size at the school where we did observations was small. As a result, it is possible to take care of with the students individually". The third of the factors which the PTs mentioned with regard to classroom environment concerned creation of a favorable and empathic atmosphere within the classroom. The PTs pointed out here that ISs had to be taken care of, but that paying extreme care should be avoided because in that case students would feel themselves to be different and as a result experience difficulty in socializing. As can be understood from this, the PT emphasizes that students should be treated equally so as to avoid causing jealousy. For example; H₁ argued that while dealing with ISs, their disability should not be emphasized, saying "S/he should be reminded that he is an individual; her/his disability should not be emphasized. If her/his views are respected, then s/he won't refrain from society; instead, s/he will socialize". N₂, on the other hand, observed that "Students interacting with them should be careful about their behavior and take care not to make them feel that they are different. Excessive care may also cause them to feel different". H₂ argued that this excessive care shown towards ISs may lead to emergence of a feeling of jealousy in other students, saying "Children instantly grow jealous of even their siblings at that age. So, if we attach importance to ISs, they will certainly be affected negatively." The PTs also maintained that in order to be able to create a favorable and empathic atmosphere in the classroom, labeling of ISs by other students should be prevented. L₃ and H₄ emphasized that a priority in inclusive education should be prevention of labeling, saying respectively: "First, labeling of that student should be prevented" and "Since students have recently reached puberty, they tend to be sneering and ironic, so at the very beginning this should be prevented". The PTs also stated that ISs should be given opportunities to express themselves and flexible rules unique to ISs should be imposed during the implementation of the classroom rules. H₁ explained this situation, taking into account students with speech disorders, as follows: "If children have a speech disorder, they should be given opportunity to speak frequently to be able to express themselves". H₁ and L₁ stated that classroom rules could be slightly slackened for ISs depending on the situation.

The fourth of the factors which the PTs handled regarding the classroom environment concerned making ISs feel that they are an indispensable part of the classroom. The PTs argued that providing such an environment

would depend on other students' exhibition of favorable and warm behaviors such as loving, embracing and respecting ISs. They emphasized that to this end, ISs should be introduced to their classmates and demands of ISs should be taken into consideration while classroom rules were being established. For example, L₂ emphasized that classroom rules should be established with the students, adding that in the inclusion classrooms ISs should also be involved in the process of establishing the rules, saying *"While classroom rules are being established together with students, I would suggest to them that exceptions would be made to them; after all, I will have informed the class"*. L₁, on the other hand, offered a way by which ISs could embrace their class, saying *"Classroom environment and classmates are introduced"*. Likewise, N₁ stated that it should be ensured that ISs should feel they are loved in the classroom environment, saying *"In order to raise qualified people, additional support is needed not only for ISs but also for other students. This should be predominantly in the social domain. Obviously, I would above all prefer to be loved, respected and embraced. At least, it is important that those children should feel that they are embraced"*.

3.2.2. Practices Outside of the Classroom

The PTs handled factors connected with extracurricular practices under seven headings. The first of these involves providing training for ISs with regard to their overall needs and social rules. Referring to this, H₃ explained that school rules could be repeated by the family, thereby enabling adoption of the rules, saying: *"The family could be told about the classroom rules and thus ISs could be made to adopt the rules"*. Likewise, L₁ stated that *"They should definitely receive extra education outside. At least, they should be taught what they should do within the society and how they could meet their general needs"*. Secondly, the PTs argued that for inclusive education to be effective, ISs should receive their education at special education schools or at rehabilitation centers in accordance with their disabilities. Thirdly, the PTs emphasized that ISs should receive guidance services in groups outside of normal education schools. For example, L₃ said *"They may also receive education at special education schools apart from normal schools"* and L₄ observed *"There might be special support rooms. I really loved the Sevgi School. Such schools could be opened for students in line with their disabilities"*. On the other hand, H₃ made the following observation:

Guidance is offered to students at rehabilitation centers in groups. They both go to normal education schools with normal students and go to rehabilitation centers. They receive education with a group one hour at each session 3 hours a week in total. They receive education there aimed at reinforcement; this could be so, or there is individual education for higher levels at rehabilitation centers; they could also receive that.

The fourth of the extracurricular practices which the PTs referred concerns education that ISs would receive additionally at special support rooms. L₃'s explanation is an example of this: *"There are support rooms. I don't think offering classes in classroom will suffice"*. The fifth of the extracurricular practices which the PTs referred concerns supporting ISs with clinical treatment. For example, H₁ emphasized importance of supporting education with clinical treatment, saying *"As education is a whole, it cannot be given at school or at certain times only. If need be, it should be supported with clinical treatment"*. The PTs also advocated that the number of environments where ISs could socialize should be increased. For example, citing trips and observations made within the scope of the special education course, N₂ stated that *"Places like Down-Cafe there (environments where mentally-disabled individuals were prepared for working life) could be multiplied in Turkey"*. Finally, the PTs reported that leading ISs to branches of art or crafts such as painting, photography or music would ensure success of inclusive education. For example, N₂ argued that ISs could socialize, saying *"These students can be led to art or science. Mentally-disabled individuals could be successful in a branch of art, they could paint beautiful pictures. A visually-disabled person for example could sing on stage"*.

3.2.3. Teacher

Another factor that the PTs handled with regard to inclusive education concerns teachers. According to this, the PTs emphasized that teachers should possess adequate theoretical and practical knowledge or experience about inclusion. For example, the following statement by H₄ is a good example of this: *"After all, a good teacher does not experience much loss of time, s/he has a certain amount of experience, but an inexperienced teacher may have problems"*. The PTs also maintained that inclusive education could be effective if teachers taught their classes in accordance with their students' individual differences, prior knowledge, interests and abilities. For example, H₄ made the following observation: *"You cannot reach all as there are individual differences. If we wish to achieve our goal, we need to proceed in accordance with the interests and abilities of ISs"*. Likewise, N₁ said: *"I would try to approach them in line with their interests. For, everyone's type of interest is different"*. The PTs also emphasized that in inclusive education, teachers should extend the topics they will teach over a period of time, give short and frequent breaks and proceed step by step. For example, H₄ said: *"One needs to proceed in apple-pie order, step by step; progressing efficiently with short breaks would be better"*, citing the example *"For example, students are in the 8th grade but indeed they are at the level of 5th grade. One needs to proceed slowly, beginning with the 5th grade level. The plans could be prepared accordingly"*. Likewise, L₃ explained the situation in the following terms: *"After all, you record in IEP what the child could do, like s/he can add or multiply Also, there are long-term and short-term goals and they need to be implemented in time and in stages"*. The PTs further stated that teachers should make arrangements in accordance with the disabilities of ISs. For example, H₄ referred to arrangements aimed at visual disability, saying *"If visually impaired students are good at the sense of touch, it would be more reasonable for me to proceed via the sense of touch"*. In addition, H₁ observed that *"Short commands could be given to students with mental disability"*, whereas N₂ argued that physically exhausting exercises could be prescribed for students with hyperactivity disorder, saying *"I would bring in dumbbells, for example. In this way, I can both attract attention of the students in the classroom and tire them physically for 2 to 3 minutes"*. Finally, the PTs stated that if teachers deal with ISs while other students are answering questions, this will enable them to use time effectively during classes. Apart from this, the PTs added that teachers need to offer ISs additional classes and activities at school. L₂'s following words are an example of this: *"ISs need additional time. For example, topics could be taught them again while additional classes or activities are being held"*.

The second of the factors related to the teachers concerns teachers' use of different methods and techniques during education. For example, L₄ emphasized importance of different methods and techniques saying: *"I would choose teaching methods different from traditional ones"*. The methods and techniques which the PTs handled during

the interviews involved peer teaching, station technique, case-based teaching, drama, dynamic group works, performance homework, mathematics knowledge contests, educational games, use of reinforces and metaphors and the reward system. According to the PTs, peer teaching should be implemented with the inclusion of friends who ISs liked. The following statement by H₄ explains this situation: *“I support peer teaching. By this means, students socialize. If it implemented on a regular basis, there will be no problem for students, but if a regular pattern cannot be formed, if ISs become a burden for other students, their academic achievement and socialization levels decrease”*. Another technique handled by the PTs is the station technique. Concerning this technique, N₁ said *“If the inclusion student is extremely active, I can use the station technique so that s/he constantly moves around,”* and added that it could be used for students with hyperactivity disorder. The PTs also stated that the case-based teaching could be used by the help of biographies, videos and visuals. For example, H₃ argued that *“Cases in point can be presented, like scientists with dyslexia”* whereas N₁ maintained that *“I would have them watch a film or a section specially prepared for them the disabled using the cases”*. Likewise, L₂ observed that *“I think if videos are used, classes will be more effective and interesting”*. The PTs stated that drama could also be used in the classroom environment and that ISs could be assigned tasks in games and knowledge contests. For example, L₁ said, with respect to students experiencing speech disorder that *“Activities like drama and games in the classroom would be effective in terms of speech and dialogue with people”* whereas N₂ argued with the following words that socialization would be enabled: *“There could be group homework. I would organize activities aimed at increasing interaction within the classroom”*. The other methods that the PTs referred involved dynamic group work and performance homework. L₄ argued that exclusion of ISs could be prevented through group work, while H₃ explained the nature of dynamic group work as follow:

Performance homework and in-class performances; to this end, we could divide classes into five and we could enable students to interact with the rest of the class by changing these groups each time. Other students will also change but I would like them to be within a group with different students as far as possible. If I change the IS, the effect of this would be worse.

The PTs added that use of reinforces, metaphors, materials and reward system could also be effective. This could be exemplified with following statements by N₁: *“Materials should be used in classes. Traditional teaching is performed in classes, and other students do not usually understand because their level is inadequate. Teaching could be made more concrete by using different metaphors”* and H₂ *“I would provide students with constant reinforces. Or, if you do this, I will buy you chocolate or allow you to play football; such rewards could be offered”*.

The PTs emphasized thirdly that individuals who took part in teaching should be engaged in common action and families should be included in this common action. The PTs cited counseling and guidance and counseling teachers, major teachers, Guidance and Research Center (GRC), school administration and families as individuals who took part in education. For example, L₄ listed individuals who took part in education directly or indirectly as follows: *“I have duties concerning ISs, but it is not something that I can handle alone. Everyone around has a part to play, all teachers, the family and connections”*. Apart from this, H₂ stated that cooperation with GRC was needed, saying *“One needs to talk to GRC to obtain information in this regard and then take action”*. H₄, on the other hand, maintained that teachers should act in collaboration with the guidance and counseling teacher at the school, saying *“First, I would learn about ISs’ disabilities and what they knew and what they did not know. Then, I would cooperate with the counseling service or try to get in touch with the counseling teacher at GRC”*.

The PTs also emphasized that teachers giving inclusive education should use classroom space more efficiently. For example, H₄ explains this clearly saying: *“While students at the front rows can hear the teacher, those at the back dawdle, so the teacher needs to walk about the classroom all the time”*. Lastly, the PTs referred some issues which teachers should take into consideration while they are preparing IEPs. These issues involve preparation of IEP in a flexible manner prioritizing short term goals and in accordance with ISs’ readiness levels and prior knowledge. N₁ explained this saying *“One needs to think about what will be done where and according to what level, and then IEP should be prepared, which would be a healthier approach”*. In addition, N₂ stated that IEP should be prepared in a flexible manner, arguing that *“IEP should be in a way that may change in time and during the school year”*. On the other hand, observing that problems are currently being experienced in the implementation of IEPs, H₁ maintained that short term targets should be taken into consideration, saying *“We could arrive at our goals faster if we check every month and set short term goals”*.

3.2.4. Family

A large majority of the PTs reported that families of ISs lacked interest while families of other students were insensitive. Therefore, they argued that all the families whose children received education in inclusion classes should be included in education by means of teachers or the school administration. For example, pointing out that teachers were with ISs for 6 hours at the most, L₄ emphasized in the following words that the effect of families should not be ignored: *“No matter how much information I give to elementary school students about ISs, they spend their time at home after school, so home atmosphere and the impact of families is very important”*. On the other hand, N₂ maintained that other students in the classroom played a key role in inclusive education and added that they should have a positive point of view. However, N₂ argued that this could be achieved by educating the family, saying *“One should begin with the family. If awareness of the family is raised, then the child also becomes aware”*. H₃ pointed out that the school administration should incorporate families into the education process by talking to them one by one, saying *“Parents rather than their children should be informed, telling them “inform your child in this regard, raise their awareness so that they will not label and exclude (ISs)”*.

3.2.5. Student

The PTs also touched upon factors related to ISs for an effective inclusive education. Here, all of the PTs emphasized the type of disability of ISs and the level (degree) of the disability. The PTs pointed out that since the preparations at the beginning of the semester and classroom rules would be affected by students’ type of disability and the level of their disability, one needed to be careful about them. For example, H₁ drew attention to the level of the disability saying *“First, one needs to look at the IS’s level of disability. The course has to be designed according to that”*, whereas L₁ said *“Whatever disability he or she has, we will make our preparations according to it at the beginning of the*

semester". The PTs stated that especially gifted, hyperactive and mentally-disabled students could make inclusive education difficult and whereas students with physical, hearing and visual disability will not generally experience an adaptation problem in the class. For example, H₃ maintained that *"If there is a student with an orthopedic disability, classroom rules will not be affected in any way, but if there is a student with a mental disability, then classroom rules will not generally be obeyed as he or she will have difficulty learning"*. N₂ on the other hand explained the situation as follows: *"Students with hyperactivity disorder affect the class negatively as they are unable to contain themselves. I did not observe any problems with students suffering from learning difficulty, and hearing and visual disability"*.

On the other hand, the PTs stated that depending on students' disabilities and levels of their disabilities, other senses of theirs or appropriate materials should be used. For example, H₄ highlighted use of other senses saying *"I could teach individuals with visual disability certain things by enabling them to use their senses of hearing and touch"*. With regard to students experiencing speech disorder, N₁ argued that materials intended for that disability should be increased, saying *"We could increase materials related to speech"*. L₂, on the other hand, drew attention to the importance of extra time for ISs based on his observation of a student with medium level mental disability, saying *"The student needs extra time"*.

3.2.6. The Education System

The PTs indicated that educational system affected inclusive education. In this context, they argued that life-long government support should be provide to ISs and special education teachers should be appointed to schools which these students attended. Examples of these views come from H₃, who said *"I did not encounter any special education teachers in any of the schools. If there were special education teachers, problems experienced in adoption of ISs and in classroom environment would not exist"* and N₂, who said *"The government itself should look after these students all through their lives"*.

3.3. Preservice Teachers' Perceived Competences related to Inclusion

3.3.1. Positive Feelings of Competence

Some of the PTs who had positive feelings towards inclusive education believed that they could offer inclusive education without receiving help, whereas others stated that they could succeed under certain conditions. For example, with regard to the preparations for the course in inclusion classes, L₃ made the following remarks: *"If I had taught an IS before, I would examine her/his IEP and then decide what I would do this semester, what I would teach and what stage I would reach. I could teach better if I came to classes well-prepared beforehand"*. It was seen that L₃ maintained that he would not need any assistance when he was planning how to implement inclusive education. On the other hand, H₃ expressed his confidence in teaching ISs in his class, saying *"I would of course want an IS in my class; and indeed, more than that, I would like to be the teacher of a special education class"*. Likewise, H₂ stated that he wants to assume whole responsibility, saying *"I would like to have an IS in my class but I would like to deal with that student on my own; that is, I would not want to leave him to other teachers; I would talk to his family and the GRC, I would want to deal with everything about him on my own"*. On the other hand, H₁ pointed out with the following words that he did not want to teach an IS although he was confident that he could give inclusive education: *"If it is possible, I do not want to have an IS"*. In addition to this, H₁ argued that he possessed positive feelings of efficiency in this regard, saying, *"Since an inclusion student is normally different from other students in terms of level, we will need to implement a different program suiting him. This would wear me out, but I am not a one who would ostracize the IS and think negatively about him"*. N₂, on the other hand, observed *"I would spare time for her/him and indeed if possible, I would try not to isolate her/him. For example, I would find a friend would help me with mathematics classes, or each week a different one would help. This would help him socialize"*.

The PTs who linked positive feelings concerning inclusive education to some preconditions stated that if an IS had a low level of disability, they believed they could be successful in inclusive education. For example, L₂'s statement is a good example of this: *"I would like to have an IS if her/his condition is not very severe or if s/he had a slight difficulty in seeing, but otherwise I would grow sensitive, I would not want"*. On the other hand, some PTs stated that they believed they could succeed in inclusive education by receiving help especially from guidance and counseling teachers and GRC. For example, H₂ maintained that he could succeed in inclusive education by adding the assistance he received from GRC to his own competence, saying *"I would like to prepare all kinds of materials that would help her/him understand the lesson; after all, s/he will receive assistance when s/he goes to rehabilitation center. It is not something that I can manage on my own, but I would do my best anyway"*. H₄, on the other hand, said he would have to receive assistance from the counseling service at the school and only then could he be successful, saying: *"I could give inclusive education on condition of cooperation with the counseling service because I cannot decide the state of the ISs or their level of disability by myself"*. Likewise, H₁, H₃, L₁ and N₁ insisted that they would also need to receive help from a guidance and counseling teacher. Some PTs having positive feelings of competence regarding inclusive education pointed out that they had not received adequate education and that they believed they could be successful after they received sufficient education. L₄'s statement in which he said *"I would not want to have an IS with my present level of experience because I am inexperienced. I don't think the education I have received so far on this subject is adequate enough; in the years to come, if I had the ability, I would want to"* is an example of this.

3.3.2. Negative Feelings of Competence

Some of the PTs who had negative feelings of competence with respect to inclusive education specified that they did not think they would be successful whereas others said they would be able to be successful as they had not received adequate level of education. For example, H₄ stated that he would be inadequate in inclusive education saying *"It remains in the background as I think I cannot provide (implement) special education"*. When he was asked whether or not he wanted an IS in his class, L₁ argued that he would not be useful, saying *"I would not want that and neither would I volunteer to have one. I don't think I would be of any help"*.

The PTs who stated that they could not conducted inclusive education as they had not received adequate education highlighted insufficiency of pre-service training and their inexperience. L₃ remarked: *"So far we have*

received Special Education course only in one semester and I don't think it is enough; I believe we need to have more knowledge, because if we don't know anything, how could we be of any help to them?" Likewise, H₂ said: *"We receive Special Education course only one semester and we do not receive in an extended form; since we receive it for short period, we don't know what we can do, so I don't think we will be of any help in this regard"*. L₁, on the other hand, made the following remark: *"We must make our preparation depending on the disability group the student belongs to, but I don't think I could make this preparation"*.

4. Discussion and Recommendations

This article attempted to explore the views and perceived competences of PTs about inclusive education within the education system in Turkey in order to understand their knowledge, perceptions and experiences. Despite the number of participating PTs as a limitation, this study provides some insights for relating inclusive education to teacher training. Results indicate that there is some support for inclusive schools and PTs are also well aware of the insufficiencies in the current system, and what changes need to be taken place at institutional and sociocultural levels to ensure the favor of students with special education needs.

The PTs had both positive and negative views towards inclusive education. The PTs who expressed positive views concerning inclusive education pointed out that inclusive education enabled students to socialize and therefore this education should be given. However, they emphasized that inclusive education attain its goal if conditions such as ISs' being near the class level cognitively, other students' not being affected negatively by inclusive education and teachers' having adequate education and experience were met. In this context, the PTs argued that students with hearing disability, severe mental disability and gifted students should not be included in inclusive education. They thought that classroom atmosphere would improve in these circumstance and they would not experience time constraints to catch up with the curriculum. However, they emphasized that if the conditions were not met, they would not be able to be useful as PTs and that they did not consider themselves competent. Findings of the studies in the relevant literature support this and indicate that PTs thought they did not consider themselves efficient due to such reasons (Babaođlan and Yılmaz, 2010; Sadiođlu *et al.*, 2013) they needed to be informed in this regard (Opdal *et al.*, 2001; Rakap and Kaczmarek, 2010) and that they would experience problems in meeting the needs of students with special needs (Horne and Timmons, 2009; Avramidis and Kalyva, 2010) and managing time (McGarvey and Morgan, 1996; Horne and Timmons, 2009; Sadiođlu *et al.*, 2013).

The PTs who had negative views about inclusive education concentrated on situations where education would go wrong in terms of other students. One of these was that other students would be jealous of ISs as interest and time spent on other students would decrease and also they would imitate ISs who did not obey classroom rules. Other cases which the PTs thought would cause inclusive education to fail involved emergence of problems arising from failure of communication in the classroom like labeling and exclusion of ISs, which has been proved by studies, Brydges and Mkandawire (2017). According to the PTs, these problems affect the atmosphere of the inclusion classroom negatively and prevent ISs from socializing. Therefore, our primary duty as educators should be to guide PTs about how they can eliminate these factors, which lead them to think negatively with regard to inclusive education, and ensure that PTs have positive views about inclusive education by demonstrating how inclusion could favorably affect all students. Unless this is achieved, it is highly likely that PTs having negative ideas about inclusive education will not want to have ISs when they become teachers or create an ineffective inclusion environment. Hence, more courses and in-service training opportunities focused on inclusion need to be provided to teachers, because studies indicate that teachers who have received more courses focused on inclusion and have attended in-service training have more positive ideas with respect to inclusive education (Subban and Mahlo, 2017; Materechera, 2018).

The PTs stated that several factors affected inclusive education. One of these factors involves creation of an empathic classroom culture based on cooperation, which will not prevent other students. Educators have the difficult task of creating a space in which all students can demonstrate and experience their competencies (Brydges and Mkandawire, 2017). The PTs in this study pointed out that group work, on-duty student system and informing could be useful to create a favorable social atmosphere within the classroom. Researchers, too, emphasize that cooperative and group work methods are extremely important in inclusive education and that inclusive education should be intended for all students rather than a special group of students (Messiou, 2017). For, by this means, it all students will be enabled to present themselves, participate in classes and succeed (Thomson and Gunter, 2008). If only students belonging to certain categories are focused on, then problems arising from students falling out of these categories and their parents may be experienced. In addition to creating a favorable classroom atmosphere, the PTs pointed out that physical conditions such as seating arrangement, classroom arrangement, class size and use of heat, light and color also affected inclusive education. Regarding seating arrangement, the PTs expressed their views about how ISs, who are generally few in numbers within the class size, should be positioned in the classroom. Similar results were also reported by other researchers and they argued that, of the physical conditions, it was excessive class size that most affected inclusive education (Hui, 2015). As Batu and Kircaali-Iftar (2007) pointed out that if the class size in classes where inclusive education was more than the physical environment allowed or the teacher could handle, it would negatively influence the level of success of inclusion. In addition to this, the PTs stated that ISs should- if there was traditional seating arrangement- be seated, depending on the type of disability, near the teacher, in the front or middle rows or near the classroom exit, but subject to change. The main reason for this idea of the PTs could be that when teachers failed to reach all students, they might have asked hardworking students to help them individuals with special needs. Unfortunately, in many cases, the classmates are unwilling or unable to offer assistance out of dislike or for fear of risking their own performance if they spent too much of their time helping others (Brydges and Mkandawire, 2017). On the other hand, the PTs argued that U-shaped seating arrangement should be preferred in the name of socialization of ISs in classrooms where traditional seating arrangement did not exist. Moreover, some of the PTs expressed their ideas about how other students should be placed relative to IS. According to this, the PTs stated that the seating arrangement of the students should be changed every week and classroom atmosphere should be enlivened through student-on-duty system. These statements by the PTs concerning seating arrangement could be seen as an indication that they

would act in accordance with the needs of ISs. Since positioning of ISs at the back would affect their development negatively (Sadioğlu *et al.*, 2013) absence of such a view was interpreted to be a positive point of view.

The PTs pointed out regarding the classroom arrangement that effective inclusive education could be offered with improved desks, whiteboards with enhanced angle of view and classrooms enriched with materials. Studies in the relevant literature, on the other hand, argue that ISs require much more customized classroom technology and material support (Sadioğlu *et al.*, 2013; Fyssa *et al.*, 2014; Brydges and Mkandawire, 2017). In addition to all these, the PTs pointed out that use of adequate and appropriate heat, light and color in classroom environment was important.

The PTs also maintained that teachers should take care of individual needs of ISs and make them feel that they are an indispensable part of the class but at the same time they should avoid demonstrating excessive interest in them because in such a case these students would feel different or other students might be jealous of them and consequently they might experience difficulty in socialization, so students should be treated equally and fairly. In this context, they proposed that while classroom rules were being established, ISs should be provided with opportunities to express themselves in the name of equality and flexible rules unique to ISs should be set up in the name of ensuring justice while classroom rules were being implemented. These ideas by the PTs indicate that they saw ISs as part of the class (Vuran, 2013).

According to the PTs in this study, extracurricular activities are also important for an effective inclusive education. To this end, creation of environments where ISs can socialize is of vital importance. The PTs pointed out that these environments could be provided through efforts of families and the state. According to this, families should give education that will take into consideration general needs of their children, who are ISs, as well as social rules and classroom rules. Moreover, the PTs argued that in addition to inclusive education, ISs should receive additional education appropriate for their disability as well as guidance services with groups at special education schools, rehabilitation centers or support rooms and if need be, they should be supported with clinical treatment. From this perspective, it could be said that when they teach at ISs, the PTs will need counseling regarding special education (Sadioğlu *et al.*, 2013). The PTs also pointed out that canalizing ISs to branches of art or craft such as painting, photography or music would contribute to their socialization.

The findings of the study suggest that the success of the inclusive education policy in Turkey mostly depends on the teachers' ability to adequately respond to the classroom and community-level needs of students with disabilities. According to the PTs, teachers should possess adequate levels of theoretical and practical knowledge and experience about inclusion. They stated that to this end, teachers teach their classes in accordance with the individual differences, prior knowledge, interests and abilities and use materials that were appropriate for their disabilities and levels. Likewise, researchers also pointed out that instead of giving didactic information to ISs; teachers should provide them with educational support, teach in line with their needs (Ajuwon, 2008; Ferguson, 2008) and use materials suitable for their disabilities (Brydges and Mkandawire, 2017). Furthermore, the PTs stated that teachers should spread over a period of time the topic they would teach, giving short and frequent breaks, proceeding step by step; provide ISs additional teaching hours as well as additional activities, and make better use of time and classroom space. In this context, the PTs explained that it was of vital importance that predominantly short-term objectives should be taken into consideration in the preparation of IEPs, in whose preparation it seems problems are being experienced, and they should be flexible. These ideas of the PTs can be interpreted to indicate that when they become teachers, they will be able to make lesson plans that will meet ISs' needs and facilitate their learning. The PTs also maintained that teachers' use of different methods and techniques such as peer teaching, station technique, case-based teaching, drama, dynamic group work, performance homework, mathematics knowledge contests and educational games play a key role in the implementation of an effective inclusive education. As Vuran (2013) had pointed out, all students should have the chance to learn, play and participate in educational and social activities together in inclusion classes. The PTs stated that another role of the teachers was bringing together guidance and counseling teachers and major teachers, who took part in the teaching process, as well as personnel at GRC, school administrations and families. According to this view, greater engagement with civil society and disabled persons' organizations through awareness programs may prove beneficial in helping to shape attitudes towards persons with special needs (Vuran, 2013; Brydges and Mkandawire, 2017). Thus, teachers have a powerful role in shaping how students, families and other teachers understand both ability and disability (Lambert, 2017). Another factor that the PTs referred for an effective inclusive education was that families of ISs were caring whereas families of other students were sensitive. Therefore, the PTs maintained that it was important to include the families of all students attending inclusive education should be included in the education by school administrations and teachers. Indeed, it is well-known fact that educators need family support during the inclusive education (Sadioğlu *et al.*, 2013) and that a positive attitude on the part of school administration will be reflected positively on all school personnel, students and families (Vuran, 2013). As matter of fact, as the PTs pointed out, a positive point of view towards ISs on the part of other students will be possible through education of their families, with whom students spend more time that in their schools. In addition, teachers' interaction and cooperation with families is also important (Vuran, 2013). The PTs also emphasized that types and levels of ISs' disabilities were of critical importance in the effectiveness of inclusive education. In this context, they argued that gifted students, hyperactive students and students with severe mental disabilities might render inclusive education difficult whereas students with physically, visually and hearing disabilities would generally not experience an adaptation problem in the classroom. Likewise, results of other studies indicate that one of the factors shaping PTs' attitudes and views concerning inclusion is the type of ability (Messiou, 2017).

The PTs stated finally that education system is of huge significance for an effective inclusive education. In this context, they proposed that lifelong state support should be given to ISs and special education teachers should be appointed to schools which these students attend. This is similar to the situation that the education systems in many countries exhibit poor infrastructure and a host of other related issues (Brydges and Mkandawire, 2017). Indeed, special education teachers are not always appointed to educational institutions ranging from kindergartens to high schools in Turkey where ISs are found. However, studies indicate that ISs demand authorities to appoint special education teachers to support their education (Brydges and Mkandawire, 2017).

Some of the PTs who had a positive feeling of competence towards inclusive education pointed out that they could offer a successful inclusive education without receiving help whereas others stated that they could do this under certain conditions. These conditions involved presence of students with slight disabilities in inclusion classes, possibility of receiving help from guidance and counseling teachers, GRS and receiving adequate amount of education. These results demonstrate that the PTs need expert support and being informed through in-service and pre-service education (Sadioğlu *et al.*, 2013; Bailey *et al.*, 2015). As Mrsnik (2003) pointed out, education concerning inclusive education increases educators' competencies. On the other hand, some of the PTs argued that they did not believe they can be useful whereas others maintained that they could not receive adequate education due to the insufficiency of pre-service education and so they would not be successful owing to their inexperience. One reason why teachers are generally unwilling to include children with disabilities in their classrooms even though most of them agreed with the philosophy of inclusion is lack of training (Jordan *et al.*, 2009; Hu, 2010). Consequently, as Fyssa *et al.* (2014) said, if educators are guided and supported through careful and well-planned training courses, then it can be anticipated that their views can change positively and as a result of that, remarkable improvements in their practices can be achieved.

The number of PTs is small and the study represents Turkish PTs' perspectives of inclusion, thus it makes no sense to make any general inferences. Future studies should endeavor to use more representative samples and cultural comparative approaches in order to allow statistical generalization of the findings. Furthermore, preservice and inservice teachers' real teaching practices can be observed in order to elicit their success of inclusion, the factors supporting and limiting their success and the needs to help them during the process of successful inclusion. In addition, after necessary support is given to teachers and students and physical arrangements are made at schools here inclusive education is implemented, views of teachers, students and families can be obtained and thus effectiveness and efficiency of applications can be investigated.

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