

ISSN: 1300-7432

**TIJSEG** Turkish International Journal of Special  
Education and Guidance & Counselling



Turkish International Journal of Special Education and Guidance & Counseling

**Turkish International  
Journal of  
Special Education  
and  
Guidance & Counselling**

*ISSN: 1300-7432*

**JUNE 2020**

**Volume 9 - Issue 1**

Prof.Dr. M. Engin DENİZ

**Editor in Chief**

Prof.Dr. Ferda AYSAN

Prof.Dr. Hasan AVCIOĞLU

Prof.Dr. Hakan SARI

Prof.Dr. Nerguz BULUT SERİN

**Editors**

Copyright © 2020

Turkish International Journal of Special Education and Guidance & Counseling

All rights reserved. No part of TIJSEG's articles may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the publisher.

Published in TURKEY

Contact Address:

Prof. Dr. M. Engin DENİZ - TIJSEG Editor in Chief

## Message from the Editor

I am very pleased to publish first issue in 2020. As an editor of Turkish International Journal of Special Education and Guidance & Counselling (TIJSEG) this issue is the success of the reviewers, editorial board and the researchers. In this respect, I would like to thank to all reviewers, researchers and the editorial board. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to Turkish International Journal of Special Education and Guidance & Counselling (TIJSEG), For any suggestions and comments on TIJSEG, please do not hesitate to send mail.

Prof.Dr. M. Engin DENİZ  
Editor in Chief

### **Editor in Chief**

PhD. M. Engin Deniz, (Yıldız Teknik University, Turkey)

### **Editors**

PhD. Ferda Aysan, (Dokuz Eylül University, Turkey)

PhD. Hasan Avcıoğlu, (Cyprus International University, North Cyprus)

PhD. Hakan Sarı, (Necmettin Erbakan University, Turkey)

PhD. Nerguz Bulut Serin, (European University of Lefke, North Cyprus)

### **Linguistic Editor**

PhD. Nazife Aydınöğlü, (Girne American University, North Cyprus)

PhD. Uğur Altunay, (Dokuz Eylül University, Turkey)

PhD. İzzettin Kök, (Girne American University, North Cyprus)

PhD. Mehmet Ali Yavuz, (Cyprus International University, North Cyprus)

### **Editorial Board**

PhD. A. Rezan Çeçen Eroğlu, (Muğla University, Turkey)

PhD. Ahmet Rifat Kayış, (Kastamonu University, Turkey)

PhD. Adnan Kulaksızoğlu, (Fatih University, Turkey)

PhD. Ahmet Ragıp Özpölat, (Erzincan University, Turkey)

PhD. Alim Kaya, (Eastern Mediterranean University, North Cyprus)

PhD. Betül Aydın, (Marmara University, Turkey)

PhD. Christina Athanasiades, (Aristotle University of Thessaloniki, Greece)

PhD. Ferda Aysan, (Dokuz Eylül University, Turkey)

PhD. Gürçan Seçim, (Cyprus International University, North Cyprus)

PhD. Hakan Sarı, (Necmettin Erbakan University, Turkey)

PhD. Hasan Avcıoğlu, (Cyprus International University, North Cyprus)

PhD. Hasan Bacanlı, (Gazi University, Turkey)

PhD. Melek Kalkan, (Ondokuz Mayıs University, Turkey)

PhD. Muhammad Sabir Farooq, (Nankai University Tianjin P.R China)

PhD. Mustafa Koç, (Sakarya University, Turkey)

PhD. Müge Akbağ, (Marmara University, Turkey)

PhD. Nejla Kapıkıran, (Pamukkale University, Turkey)

PhD. Nerguz Bulut Serin, (European University of Lefke, North Cyprus)

PhD. Olena Huzar, (Ternopil National Pedagogical University, Ukraine)

PhD. Partow Izadi, (Lapland University, Finland)

PhD. Rengin Karaca, (Dokuz Eylül University, Turkey)

PhD. Seher Balcı Çelik, (Ondokuz Mayıs University, Turkey)

PhD. Süleyman Eripek, (Okan University, Turkey)

PhD. Tevhide Kargin, (Hasan Kayoncu University, Turkey)

PhD. Thanos Touloupis, (Aristotle University of Thessaloniki, Greece)

PhD. Uğur Sak, (Eskişehir University, Turkey)

PhD. Yaşar Özbay, (Gazi University, Turkey)

PhD. Zeynep Hamamcı, (Gaziantep University, Turkey)

### **Journal Cover Designer**

Eser Yıldızlar, (University of Sunderland, England)

Vol 9, No 1 (2020)

## Table of Contents

### Research Articles

Message from the Editor

*Prof.Dr. M Engin Deniz (Editor in Chief)*

DETERMINATION OF SCHOOL ADMINISTRATORS 'AND TEACHERS' VIEWS ON THE QUALITY OF EDUCATION IN SPECIAL EDUCATION INSTITUTIONS

*Yazgülu DEMİR, Başak BAĞLAMA*

MATHEMATICAL THINKING DEVELOPMENT STAGES OF A GIFTED 5<sup>TH</sup> GRADE STUDENT ABOUT PYTHAGOREAN THEOREM

*Esra AKARSU YAKAR, Süha YILMAZ*

EDUCATIONAL PRACTICES AND CHALLENGES OF STUDENTS WITH HEARING IMPAIRMENT IN ARBA MINCH COLLEGE OF TEACHERS EDUCATION, SOUTH ETHIOPIA

*Tesfaye BASHA, Tadesse ENGIDA, Muluken TESFAYE*



## DETERMINATION OF SCHOOL ADMINISTRATORS 'AND TEACHERS' VIEWS ON THE QUALITY OF EDUCATION IN SPECIAL EDUCATION INSTITUTIONS

Yazgülu DEMİR

Department of Special Education, Near East University Institute of Educational Sciences, Nicosia-North Cyprus

Orcid: <https://orcid.org/0000-0002-8092-0362>

[yazgulu.okuloncesi@gmail.com](mailto:yazgulu.okuloncesi@gmail.com)

Başak BAĞLAMA

Assist.Prof.Dr., Department of Special Education, Near East University Institute of Educational Sciences, Nicosia-North Cyprus

Orcid: <https://orcid.org/0000-0001-7982-8852>

[basak.baglama@neu.edu.tr](mailto:basak.baglama@neu.edu.tr)

Ahmet YIKMIŞ

Assoc.Prof.Dr., Department of Special Education, Faculty of Education, Abant İzzet Baysal University, Bolu-Turkey

Orcid: <https://orcid.org/0000-0002-1143-1207>

[yikmis\\_a@ibu.edu.tr](mailto:yikmis_a@ibu.edu.tr)

**Received Date:** 08-03-2020

**Accepted Date:** 15-05-2020

**Published Date:** 30-06-2020

### Abstract

Aim of this research is to determine the views of school principals and special education teachers on the quality of education provided in special education institutions in Turkish Republic of Northern Cyprus. Semi-structured interview technic as a qualitative research method was used in this research. It was aimed to obtain information about the views of the school principal and the special education teachers about the educational quality provided in the special education institutions. Interview questions of the study were formed with comprehensive literature review and expert views from special education field were received. Descriptive and content analysis were made after the data obtained in the research. Themes and sub-themes were created based on the analysis of the data. Results showed that school principals and special education teachers indicated school management, personnel qualification, physical conditions of schools, number of students in the class, individual characteristics of students, curriculum, early diagnosis and placement and guidance services are the factors which determine the quality of education. School principals provided many suggestions by expressing what they see as incomplete and stated that the quality of the education given in special education institutions can be increased with these suggestions. When teachers' views on the quality of education provided in special education institutions are analyzed, it is determined that there are many points to be developed. Many suggestions have been made about these points to be developed by teachers and it has been stated that the quality of the education given in special education institutions can be increased. The results obtained from the research were discussed in light of the literature and recommendations for future educational practices and policies were presented.

**Keywords:** Special education institutions, special education, school managers, teachers

### INTRODUCTION

The main purpose of special education is to provide the skills necessary for students with special needs to live as independently as possible in society (Ergül, Baydık and Demir, 2013). Programs should be prepared considering the special requirements of students with special education needs, necessary precautions should be taken to ensure that they can continue their lives in a quality way and they aren't excluded from the society, and educational activities can be organized according to students with special needs. For this reason, the aim of the education of children with special needs is to help them to increase their knowledge and skills by providing special education and to make them more comfortable in using and experiencing the environment in which they live (Kınık, 2018).



As age, development level, general health status, general ability, the socio-cultural conditions in which they live are the factors that affect students' learning; these characteristics should be taken into consideration while organizing the education for the students (Senemoğlu, 2013). These individual differences between students require schools to make various arrangements. According to the researches on the subject, these regulations may be different according to the students with significant deficiencies in certain areas, and separate regulations are needed for these students (Talas, 2016; Diken, 2017).

We can define special education students as individuals who have low individual and educational qualifications and who develop less than expected from their peers for different reasons. Therefore, in order to continue their lives in a quality way and to perform their social and physical skills at the highest level, education and training programs are the special works given in application environments (Yanık, 2018).

Family members who have decisive effects on the development and education of children with special needs should be informed about these issues and should receive education within the framework of a certain program. A positive link should be established between the family and the school. The main purpose of these trainings is to raise the awareness of families in all areas of child development. These trainings will contribute to the family as well as the child (Bedel, 2017). Special education services have a very important place in terms of socialization of disabled people who need this education, to express themselves more freely in society and to become more independent (Orhan and Genç, 2015).

Special education institutions operate in order to eliminate or to minimize the effects of speech and language development difficulties, voice disorders, mental, physical, social, emotional or behavioral problems of individuals with special needs and to maximize their abilities, to develop basic self-care skills and independent life skills and to ensure their adaptation to society (Law on Special Education Institutions, 2007).

Today, the development of human rights and democracy is reflected in the education systems. New developments have been achieved with particular emphasis on individual differences and with the aim of delivering education to all individuals. It is seen in the studies that special education and inclusive education have been given importance in TRNC especially in recent years (Kanat, 2015).

It should be ensured that individuals with special needs receive unrestricted education and educational environments should be created where they can perform at their highest level. Therefore, the education of disabled people should not be restricted for any reason and equal education opportunities should be provided with their peers (Görgülü, 2016). Therefore, the ability of individuals with special needs to develop themselves and participate in active working and social life is the first and last important condition of ensuring that they can continue their lives without being dependent on others. For this reason, it should be ensured that these individuals have access to qualified, public schools which will be organized in accordance with their individual capacities and enable them to realize themselves and be placed in the right education programs regardless of their specific requirements and degree of exposure (Dalgı, 2009). From this point of view, the problem of the research is to determine the opinions and suggestions of school administrators and teachers regarding the quality of education given in special education institutions.

In the TRNC, the efforts to increase the programs to the standards of the developed countries and to the modern level in recent years and to allocate the largest share in the budget can be said as the main basis of





this idea. However, despite the financial opportunities, education and education system is seen as the main problem which is seen as the most deficient and discussed most by the society (Kanat, 2015).

Although there have been significant developments in the TRNC regarding the education of students in need of special education in recent years, it is seen that there are limited number of academic studies on this issue especially in TRNC. Therefore, the opinions of administrators and teachers working in the field of special education and special education institutions are of great importance to increase the quality of education. Therefore, this research is important in terms of contributing to the field. At the same time, it will be important to determine the positive and negative aspects of the current education system as it will contribute to the determination of the views of the administrators and teachers regarding the quality of the current education given in the special education institutions in our country, and it is important in terms of making necessary improvements for the future. This research is also important in terms of being a scientific resource for future studies. In this context, this research is expected to shed light on the special education practices in TRNC and the researchers working in this field.

The general purpose of this study is to determine the opinions and suggestions of school administrators and teachers regarding the quality of education given in special education institutions in TRNC. For this general purpose, the answers for the following questions were sought:

1. What are the opinions of school administrators and teachers working in special education institutions regarding the quality of education given in special education institutions?
2. What are the opinions of school administrators and teachers working in special education institutions regarding the physical conditions of special education institutions?
3. What are the opinions of school administrators and teachers working in special education institutions regarding the class size in special education institutions?
4. What are the opinions of school administrators and teachers working in special education institutions regarding the individual characteristics of students?
5. What are the opinions of school administrators and teachers working in special education institutions regarding the guidance activities in special education institutions?

## METHOD

### Research Model

In the research, semi-structured interview technique which is one of the qualitative research methods was used. Qualitative research is a research that uses qualitative data collection methods such as observation, interview, document analysis and it's a qualitative process that aims to present perceptions and events in a realistic and holistic way in the natural environment (Yıldırım and Şimşek, 2011).

Interview is seen as the most used data collection tool in qualitative research (Yıldırım and Şimşek, 2006). Interviewing can be defined as a communication process that takes place between at least two people and continues orally. (Büyüköztürk, 2012). In a semi-structured interview, the researcher prepares the interview questions in advance and rearrange questions to give people limited flexibility (Candaş-Karababa, 2009).

### Working Group



The study group consisted of 7 school administrators and 26 teachers working in special educational institutions in the Turkish Republic of Northern Cyprus in 2017-2018. The personal information of the administrators and teachers participating in the research is given in Table 1 and Table 2.

**Table 1.** Demographic characteristics of managers working in special education institutions

Code Name of Manager and Teacher	Age	Gender	Department	Incumbency in Special Education
M1	37	Male	Pre-school	8
M2	29	Male	Pre-school	2
M3	39	Male	Special Education	6
M4	26	Female	Special Education	3
M5	29	Male	Psychology	3
M6	31	Male	Pre-school	4
M7	36	Female	Pre-school	2

**Table 2.** Demographic characteristics of teachers working in special education institutions

Code Name of Manager and Teacher	Age	Gender	Department	Incumbency in Special Education
T1	24	Female	Special Education	2
T2	29	Male	Special Education	4
T3	26	Female	Special Education	2
T4	28	Female	Special Education	3
T5	32	Female	Special Education	4
T6	21	Female	Special Education	1
T7	23	Female	Special Education	2
T8	22	Female	Special Education	1
T9	22	Female	Special Education	1
T10	28	Male	Special Education	5
T11	24	Female	Pre-school	2
T12	25	Female	Pre-school	3
T13	30	Female	Special Education	2
T14	31	Female	Pre-school	2
T15	29	Female	Special Education	4
T16	22	Female	Special Education	1
T17	26	Female	Pre-school	2
T18	23	Female	Special Education	1
T19	29	Female	Pre-school	3
T20	28	Female	Pre-school	1



---

T21	22	Female	Special Education	1
T22	24	Female	Pre-school	2
T23	28	Female	Special Education	3
T24	30	Female	Pre-school	4
T25	26	Female	Pre-school	1
T26	23	Female	Special Education	2

---

### Data Collection Tools

Within the scope of the research, the Manager and Teacher interview form was prepared and used for the purpose of the research. In the information form of the administrators and teachers, there are questions about gender, age, department of graduation, incumbency in special education, quality of education given in special education, physical conditions, class size, individual characteristics and guidance activities. Semi-structured interview form was used as data collection tool. While preparing the interview forms, draft forms were created by using the literature. The opinions of two special education experts were taken regarding these draft interview forms. For the clarity of the interview questions organized after the opinions of the special education experts, opinions were taken from the Turkish language specialist / Turkish teacher. Finally, a pilot scheme was conducted with one manager and two special education teachers in order to determine whether the questions in the interview forms serve the purpose and understandable. After these interviews, expert opinions were taken again and the interview forms were finalized. There are 8 open-ended questions in the interview form of the administrators and teachers.

### Data Collection

Necessary permission was obtained from TRNC Ministry of National Education in order to be applied to administrators and teachers in the target population after the semi-structured interview forms, which are data collection tools, are ready for implementation. After obtaining the necessary permissions, the application was realized in the spring semester of 2017-2018 academic years.

They will be asked to fill out the interview form and answer the open-ended questions consisting of eight questions during the data collection process. All interview forms will be kept in a sealed envelope and interviews will be recorded by voice recorder and will be kept by the research team until the completion of the study for 2 years. They will then be deleted from all our databases. All interviews will be recorded with anonymized information and nicknames will be used for all participants at every stage of the study.

Interviews with administrators and teachers in the study group were recorded by voice recorder. When the data were given, the administrators and teachers were expected to participate voluntarily and to answer the questions sincerely. At the same time, the time, place and venue of the meeting were discussed in advance with the administrators and teachers on the date they were suitable. Written and audio forms were used during the interview and the interview time was limited to 25-30 minutes. The interview records in the voice recorder were analyzed and encoded with the data obtained. All records were transcribed after the interviews.

### Data Analysis

After the data obtained in the research were written, themes and sub-themes were created as a result of content analysis. Category is the classification of the concepts obtained as a result of the analysis under a certain theme (Yıldırım and Şimşek, 2013).



Content analysis was used for data analysis. Yıldırım and Şimşek (2011) state that the main purpose of content analysis is to reach the concepts and relationships that can explain the collected data. To this end, content analysis consists of four stages: 1. coding of data, 2. finding themes, 3. editing codes and themes, 4. defining and interpreting the findings.

## FINDINGS

### Findings on the Opinions and Suggestions of the Managers on How to Improve the Quality of Education Given in Special Education Institutions

#### Opinions and Suggestions of Managers related with Management in Special Education Institutions

When the codes related to the Management theme in Special Education Institutions are examined, it is seen that the opinions of the managers about the management of special education institutions are not very detailed. One of the managers coded M2 gave opinions and suggestions for the problem of executives / law / regulation / principle. M1, M3, M5, M6 coded managers gave opinions and suggestions for cooperation and communication. M4 expressed an opinion on student focus. M7 coded manager made opinions and suggestions about democratic and proper management. The codes that emerge in the theme of management in special educational institutions are as follows:

- Problem of law / regulation / principle  
*M2. The regulation of special educational institutions should be dealt with in a transparent constitution that is independent of the competence of its principals.*
- Cooperation and communication  
*M1. I would recommend getting teachers' ideas in special education management.*  
*M3. The management process in special education institutions may be with the board, with the manager in charge. The support of teachers and families is important for school facilities. The director should establish dialogue between institutions and individuals. The teacher's demands and changes must be met and motivated.*  
*M5. The operation goes very well here. It is systematic. Nobody does a job on their own. Everyone is helping each other, guiding. In this sense it is good. It's what it should be in every school.*  
*M6. Every school must have a psychologist. We need a doctor we can connect with and direct the children to. I also think that every school needs a physiotherapist and a language therapist.*
- Learner centeredness  
*M4. Environments where students may face fewer obstacles should be prepared.*
  - Democratic and appropriate management  
*M7. The management of our school is progressing well. Our courses are conducted within a program. It is progressing within our individualized training programs and trainable programs. Every training that children receive is in the form of a file. A rough assessment is taken before the course is given. A suitable course program is prepared for him.*

#### Manager's Opinions and Suggestions on Personnel Equipment in Special Education Institutions

M1, M2, M4, M5, M6 stated that they mostly found the personnel equipment adequate under the theme of in-service training for different special education groups. M7 and M3 stated that they found the personnel equipment sufficient under the theme of practice. In these statements, it is stated that the education given by teachers who have graduated from special education department is qualified. However, in order to further improve the quality, they gave opinions regarding the following codes:

- In-service training for different special education groups: Managers stated that in-school and out-of-school seminars were important issues for the staff.



*M1. I think the level of knowledge of the personnel working in special education institutions for different special education groups is not sufficient. Further training, seminars and courses should be organized to improve the quality of education.*

*M2. In order to improve the quality of education and to improve the existing conditions for the purpose, it is very important to improve the quality of education given in special education institutions in order to determine the needs of teachers and to determine the problems of the teachers.*

*M4. We receive in-service trainings within the school. There are in-service trainings outside the school, too. The trainings we have determined from time to time are given and participation is ensured. We both increase our own qualifications and increase our intra-group qualifications.*

*M5. Our school provides continuous training to increase the academic equipment of its staff. We also have training abroad. Trainings are attended and attendance is provided. The assistant teacher is also equipped. Seminars should be organized regularly.*

*M6. In-field information is required. Seminars need to be organized.*

- Implementation: It is considered important for the quality of education that the personnel working in special education institutions develop themselves by implementation.

*M7. In order to provide services in accordance with the purpose of special education institutions, the personnel, especially the teachers who haven't graduated from the relevant department of universities, should obtain and apply specific information appropriate for the general special education or disability type.*

*M3. Personnel working in special educational institutions should be given opportunities to gain experience.*

### **Manager's Opinions and Suggestions on Physical Conditions**

M4, M5 coded managers were interviewed about the appropriate educational environment and the theme of regulations for different special education groups was interviewed with managers coded M1, M2, M3, M6, M7. These managers mostly gave positive opinion about the physical conditions of the special educational institutions. The majority stated that there are ramps in schools. However, it was stated that the physical conditions of special education institutions could be arranged according to different special education groups.

The resulting codes related to the theme “Physical conditions”;

- Appropriate Education Environment

*M4. Our school is single storey. There are ramps in the class entrances. We have wheelchair students. There is a need for ramps due to the lack of wheelchairs of some students with walking problems, due to the babies carried on lap, and due to the families with baby strollers.*

*M5. There is a ramp at the entrance to the school. Since there are individuals with disabilities and wheelchair bound persons, there is a need for a ramp. Every region of this institution is suitable for disabled people.*

- Regulations for different special education groups

*M1. Physical conditions can also be arranged in general education institutions for students with physical disabilities. Tablet applications can also be made for students with dyslexia.*

*M2. The plans and projects of the building of special education institutions should be arranged considering the characteristics of disabled individuals and their education. Environments in which the disabled individual can move freely and live independently should be established.*





*M3. It should be organized according to the needs of the students, and the places should be prepared with plenty of material and cleared from obstructions. Audio and visual laboratories should be prepared for the hearing impaired and visually impaired.*

*M6. If we have more students than our capacity, we need a larger school. Our classes should be larger and more qualified in terms of material. Because it becomes routine if we do not change certain materials on a regular basis. (We sometimes need to change the materials).*

*M7. If it is a two-storey school with unfavorable physical conditions, I would recommend that the children with physical disabilities should be educated on the first floor and the children with mild mental disabilities should be educated on the second floor.*

### **Executive Opinions and Suggestions on Classroom Size**

M1, M4, M6 stated that there is an appropriate educational environment. Regarding special arrangements for different special education groups and levels, it was stated by M3, M2, M5, M7 that the class sizes of special education institutions are appropriate. However, it has been seen that special education institutions have made suggestions for regulation by considering the obstacle groups related to class sizes. The disability group of a student has emerged as the determinant of the class of study.

The resulting codes for the theme “class sizes” are:

- Suitable classes

*M1. Class sizes are ideal in special educational institutions. I can't say that class sizes create a problem in special educational institutions.*

*M4. Our school has a classroom of two and there are two teachers. We have a class of four with two teachers. We change that class according to the child's needs. Our different classes are with a teacher for eight students. So we divide the classes according to disability groups.*

*M6. It is enough to have two teachers for 10-12 children. Our number of teachers is also appropriate.*

- Special arrangements for different special education groups and levels

*M3. The physical age of the students in the special education institution is taken into consideration when classifying. Children with the same disability group but with too many age differences can be together in the same class and this can be prevented.*

*M2. Training should be increased according to disability groups and children should receive individual training*

*M5. Every child has a different disability. There are individuals with physical disabilities, developmental disorders, and their classes should be separated. Class size may be 4.*

*M7. Each child is different in character and not suitable for group education. Some children need individual work. When these children are involved in group training, they do not receive very efficient training. Because they don't get much more than dealing with other kids. Two students are suitable for one teacher. For those with only mild disabilities, a teacher may be assigned to 10 students. Students with severe disabilities are given one-to-one lessons.*

### **Executive Opinions and Suggestions on Students' Individual Characteristics**

Regarding the theme of individual education program M1, M2, M3, M7 coded managers and regarding the theme of activities appropriate to the individual characteristics M4 and M6 coded managers mostly stated that the individual characteristics of the students were given sufficient importance and there were many activities to improve the students themselves. M5 did not make a suggestion. In particular, it is stated that individual training programs are sufficient. In addition, it was suggested that social activities such as sports and music provided in special educational institutions should be provided in public schools



and it was stated that social development is a very important factor for every child. The resulting codes for the Individual Characteristics theme are:

- Individual training program

*M1. I find the special education program sufficient. IEP should be prepared for all students. I think that's enough.*

*M2. Special education programs are taught according to the curriculum. I think that the programs are appropriate enough. We have teachable and educable programs.*

*M3. A program and physical environments should be prepared in a way that prevents the student to a minimum and student-centered studies should be conducted.*

*Y7. Every child has a program. The courses are given according to the level of the child. There are social skills, self-care skills, business skills files.*

- Activities suitable for individual characteristics

*M4. We should realize the individual characteristics and make an activity towards the individual characteristics of each student. Just as individuals without disabilities have different abilities, others also have different abilities. Children should be directed according to their interests, abilities, and social skills.*

*M6. Scouting, theater, music, painting groups is available. We strive for children not only academically but also for their social development. Whatever the child is concerned, most should stand on that activity.*

### **Executive Opinions and Suggestions for Early Diagnosis and Placement**

M1, M2, M5 coded managers stated that Parenting Education is the most important thing in special education and M3, M4, M6 coded managers stated that early diagnosis is often the most important thing in special education. M7 did not make a suggestion. It has been shown that better results can be obtained with early diagnosis. When the opinions of the managers on the theme of Early Diagnosis and Placement are examined, it is seen that the managers agree on the importance of early diagnosis and placement. Managers stated the importance of Parenting Education and diagnosis in the childhood in the early diagnosis of individuals with the need of special education. The emerging codes for the Early Diagnosis and Placement theme are:

- Parenting Education

*M1. Families should be made aware of special education and the importance of early diagnosis should be explained.*

*M2. In order to make an early diagnosis, the families of the children must first accept the situation. In order for the child to receive better education and to make these diagnoses early, the interviews with families should be arranged and the family should be able to accept this situation quickly.*

*M5. Family acceptance is more important than early diagnosis. After the first step, early diagnosis provides comfort for us. Early diagnosis is very important. In cases where the family does not accept, early diagnosis can be very difficult.*

- Early diagnosis

*M3. If the tendency of children can be diagnosed at an early age, it should be done by state force at the age of 0.*

*M4. Early diagnosis is insufficient in our country. Our school covers individuals between the ages of 0-35. Therefore, we have both infants and older individuals. Early diagnosis starts with psychiatrist and pediatrician. We are experiencing a deficiency in this process. Every school must have a pediatrician. The pediatrician should be able to recognize and direct them. We notice*



*many children too late. We realize the academic retardation of our children, especially those with mild mental disabilities, too late.*

*M6. We don't recognize children early and we lose that child in education. Families cannot easily accept. The families of many students who have been attending here for a long time still cannot accept the situation.*

### **Manager's Opinions and Suggestions on Guidance Activities**

When the opinions of M4, M5, M6, M7 coded managers regarding the communication with family and when the opinion of M2 coded manager regarding the theme of guidance teacher quality are examined, it is seen that the guidance service should be in contact with the families and that there should be sufficient and educated guidance teachers in the guidance services. M1 and M3 did not make any suggestions. Emphasis is placed on the duties of the guidance service to inform families and not to plan activities for individuals. The resulting codes for the Guidance Activities theme are:

- Communication with the family

*M4. Apart from the task of the teacher, the guidance service also has a separate task, such as touching the family.*

*M5. We also have a family counseling service. Interviews with families should be provided and families should be able to get support.*

*M6. In the guidance service, both the family and the teacher must be in continuous communication.*

*M7. Guidance services can be more concerned with families. Sexual education seminars and special education seminars should be organized for families. Participation of the families in the seminars should be increased. Guidance services are therefore important.*

- Quality of guidance service

*M2. Guidance services should function effectively in school. It is a service that every school should have, it should be easy to access and equipped with information. Both the teacher and the family should be able to provide convenient transportation in every way.*

Findings on Teachers' Opinions and Suggestions on How to Improve the Quality of Education in Special Education Institutions

### **Teachers' Opinions and Suggestions on Management in Special Education Institutions**

When the codes related to the Management theme in Special Education Institutions are examined, it is seen that teachers make many opinions and suggestions about the management of special education institutions. Most of the teachers considered the current management of special educational institutions as inadequate and made recommendations on laws / regulations / principles, expertise in the field, student focus and the use of social media and websites. Some teachers considered the current management of special education institutions as "democratic and appropriate management." The codes that emerged in relation to the management theme in special educational institutions are as follows:





- Problems related with Law / Regulation / Principle
- Expertise
- Cooperation and Communication
- Student Orientation
- Use of Social Media and Website
- Democratic and Appropriate Management,

### **Problems related with Law / Regulation / Principle**

Regarding the issue of law / regulation / principle, it was seen that during the interview conducted with T1, T2, T3, the teachers emphasized the legal part of the management while evaluating the management related to special education. Regarding the expertise in the field, it was seen that teachers emphasized the legal part of the management while evaluating the management of special education in the interview held with T4, T9, T14, T16, T17, T21, T22, T23, T25. In the interview conducted with T2, T8, T10, T11, T12, T18, T19 in terms of cooperation and communication, it was observed that teachers emphasized the Legal part of the management while evaluating the management related to special education. In the interviews conducted with T2, T20 on student focus, T18 on Social Media and Web Site Use, and T6, T7 on Democratic and Appropriate Management Form, it was seen that teachers emphasized the legal part of management when evaluating the management related to special education. T5, T13 did not make any suggestions. In order to increase the quality of education in special education institutions, it was stated that the problems related with laws, regulations and principles in the management of special education institutions should be eliminated.

*T1. Since there is no special education services law in the TRNC, I cannot make a comment about the law and its functioning, so I do not have any information about the functioning of special education institutions and organizations.*

*T2. My views on this issue are negative since I have witnessed that the operation of the management is not in compliance with the regulations and the regulations are not applied any way.*

*T3. The functioning of the administration can be more comprehensive, the principles can be revised, I think it is necessary to make a few radical changes to improve the quality of education.*

### **Being an Expertise in the Field**

While evaluating the management in special educational institutions, the teachers gave opinions and suggestions about the necessity and importance of the selection of the managers from the experts. The opinions and suggestions of the teachers on this subject reveal that managers to be experts in their field are important issues that can improve the quality of education in special education institutions.

*T4. I think that by increasing the qualifications of the people in the management, we can improve the quality of the operation, at least more experienced managers in terms of special education should be able to do this job.*

*T9. I think there are deficiencies in the functioning of special educational institutions. I think school principals should be graduates of special education departments.*

*T14. Management should be composed of more conscientious and knowledgeable people.*

*T16. I think that the board of directors and members of the board of directors in special education institutions should be experts in the field of special education or at least those who have received seminar certificates on this subject.*

*T17. Persons on the board of directors of special educational institutions must have received specialist or seminar certificates.*



*T21. I do not like the functioning of the management of special educational institutions. For this purpose, in-service trainings and studies should be provided to managers. In addition, care should be taken to ensure that administrators are special educators.*

*T22. The operation is not done correctly, expert educators should be placed in the field and I think that care should be taken in this regard.*

*T23. Administrators should not have to attend classes. If the manager is out of the field, there should be vocational in-service trainings related to the field and the manager should follow and update his / her professional studies.*

*T25. In special education, managers should always be selected from graduates of special education department. The importance of this is that special educators have a better understanding of the disability groups of children and it is important to have special educators in the administration for increasing the quality of education.*

### **Collaboration and Communication**

Collaboration and communication within the institution and with the family is one of the emerging codes of contact with management in special educational institutions. The teachers interviewed stated that, while evaluating the management related to special education, cooperation and communication within the institution and with the family in management could increase the quality of education.

*T2. In special education, the manager must cooperate with the teacher. Since I attach great importance to Parenting Education in this process, I want decisions taken and followed together.*

*T8. It is important that the staff in the administration are in active communication and exchange of information with the education staff in order to ensure the effective management of the school.*

*T10. In special educational institutions, the management process should be carried out in a collaborative and disciplined manner. Activities, lessons, etc. should be in a planned schedule.*

*T11. In special education institutions, the management is carried out in accordance with the joint decisions of the owner manager and assistant managers. If these decisions come from a single authority, healthy results cannot be achieved. Therefore, I think that the quality of education will increase more if some decisions are taken jointly by exchanging ideas and making observations.*

*T12. It is important for the management staff to actively communicate and exchange information with the education staff for the school administration to run effectively.*

*T18. I think there is lack of management in special educational institution and families should participate more intensively in this process.*

*T19. Management of special educational institutions is inadequate. We can make everyone more active and useful by involving everyone in collaboration.*

### **Student Orientation**

Teachers made their opinions and suggestions about a student-oriented management. It was stated that giving importance to student needs and providing materials could increase the quality of education.

*T2. I would like to have sufficient material support for the teacher. I think that teaching in this way can be more active with result-oriented success.*

*T20. Unfortunately, special educational institutions do not spend enough time on the needs of students.*

### **Social Media and Website Usage**

It was recommended by teachers to use social media and web site effectively in order to increase the quality of education in management in special education institutions.



*T18. In addition, management should implement social media and websites more actively in their programs.*

### **Democratic and Appropriate Management**

A few of the teachers interviewed evaluated the current management of special educational institutions as "democratic and appropriate management." They did not make any management recommendations to improve the quality of education.

*T6. I think the functioning of the administration is very good and I do not recommend a change, there is a very democratic management at school.*

*T7. I find the current management of the school appropriate and I cannot propose a change; I think this management is very good.*

### **Opinions and Suggestions of Teachers on Personnel Equipment in Special Education Institutions**

T4, T5, T18 stated that they found the personnel equipment sufficient in relation to the theme of Personnel Equipment in Special Education Institutions. T1, T2, T3, T6, T8, T9, T12, T13, T14, T20, T25, T26 stated that they found the personnel equipment sufficient for the theme of In-Service Training for different Special Education Groups. Regarding the theme of Implementation, T10, T11 and T21 stated that their personnel equipment is sufficient. T11 stated that he found the personnel equipment sufficient for the cooperation theme. T7, T15, T16, T17, T19, T22, T23, T24 did not make any suggestions. In these statements, it is stated that the education given by teachers who have graduated from special education department is sufficient. However, there are also opinions that consider the existing personnel equipment quite adequate.

*Ö4. I think that the quality of the education they provide is good, since the teachers are generally field-based. To improve this quality, the teacher can improve himself/ herself further.*

*Ö5. I find special education institutions adequate and I think that the level of education of the employees is high and they have enough information.*

*Ö18. I think special education teachers are well equipped.*

The codes for the theme of personnel equipment working in special educational institutions are as follows:

- In-service training for different special education groups
- Application
- Cooperation

### **In-service training for different special education groups**

Under the theme of Personnel Equipment in Special Education Institutions, it is seen that teachers' views are mostly related to in-service training code for different special education groups. Most of the teachers stated that the staff working in special education institutions do not have sufficient knowledge about different special education groups. In order to increase the quality of education, they stated the necessity of in-service trainings. It has been expressed that the quality can be increased by organizing seminars on different disability groups in schools with the participation of staff.



*T1. The staff of the TRNC have the knowledge level of individuals who need different special education in practice, but I think there are deficiencies in practice since they cannot observe different cases and obtain different experiences.*

*T2. I find the professional skills of the people working in special education institutions insufficient. It is not enough for the personnel working in special education institutions to be graduates of the field. They can develop themselves and the families of children with special needs by receiving training for different disability groups.*

*T3. In order to increase the quality of the training, staff should attend seminars and conferences on various and necessary subjects.*

*T6. The knowledge level of the staff is quite good. Of course, it is very difficult for them to be fully informed in every disability group, so I recommend in-service training.*

*T8. All training and management personnel should be trained to increase their knowledge of their profession at regular intervals*

*T9. I think that the staff is insufficient and that the teachers who will work with these different disability groups will become more useful in the education of individuals with different disabilities through seminars and group trainings.*

*T12. All education and management personnel should receive regular training to increase their knowledge in their profession.*

*T13. I find working staff well equipped, but for children in need of special education, seminars can be organized in schools with a lack of special educators.*

*T14. Since the level of knowledge of the staff is inadequate and they do not improve themselves, courses should be organized and students should be trained.*

*T20. The level of knowledge of the staff is lacking and they do not improve themselves, so courses should be arranged.*

*T25. The knowledge level of the teachers to different special education groups is sufficient. In order to improve and improve the quality, special education seminars are held.*

*T26. In short, there are not many competent teachers; seminars should be organized for teachers to be more competent.*

### **Performing an application**

Teachers expressed their views on the importance of the implementation of the personnel working in the special education institutions in order to increase the quality of education.

*T10. I think that the staff should do enough to have enough equipment. Practice is very important in special education.*

*T11. The staff must constantly conduct research and make observations.*

*T21. Certificate programs should be issued. I think the seminars should be implemented in universities and that internship hours should be increased and should be held in different institutions. I think every school should be implemented without being subject to a single school.*

### **Collaboration**

A few of the teachers interviewed stated that there should be cooperation among the personnel working in special educational institutions.

*Ö11. Personnel are required to follow a collaborative and shared approach with different areas. Otherwise, the quality of the trainings will not increase and will always remain in the same place.*



## Teacher Opinions and Suggestions on Physical Conditions

T2, T4, T16, T17 reported an insufficient education environment. T1, T7, T10, T11, T12, T15, T19, T21, T23, T24 gave opinions about the arrangements for different special education groups. T9 talked about the regulations based on teachers' opinions. The interviewed teachers mostly gave negative opinions about the physical conditions of special education institutions. It was suggested that the physical conditions of special education institutions should be arranged according to different special education groups and teachers' opinions. T3, T5, T6, T8, T13, T14, T18, T20, T22, T25, T26 did not make any suggestions.

The resulting codes for the theme “Physical conditions” are:

- Inadequate educational environment
- Regulations for different special education groups
- Regulations based on teacher opinions

### Inadequate educational environment

The physical conditions of special education institutions were evaluated as insufficient. It is stated that the physical conditions directly affecting the quality of education are not suitable for special education and they should be changed. It is stated that the physical environment is important for the student.

*T2. Since the physical equipment of the institutions is of very poor quality and the material usage of the classrooms is colorless and without hardware, unfortunately, the training at the desk may restrict the education after a while. When rich stimulant materials are used in the physical environment provided to the child, the child learns better in that environment. I can say that the physical environment relieves the personal spirit.*

*T4. I think that physical conditions are not suitable for special education at all. The school buildings' equipments need to be improved completely.*

*T16. Physical infrastructure in special educational institutions is quite inadequate. This needs to be made more accessible. I believe that it will be better if the infrastructure is enriched and a different educational environment is created.*

*T17. I think that physical conditions are inadequate in special education, it needs to be more accessible.*

### Regulations for Different Special Education Groups

The interviewed teachers stated that the physical conditions of special education groups were not directed towards different special education groups. It has been strongly suggested that the physical conditions of special education institutions should be arranged for different special education groups. It was stated that the physical conditions of special education institutions should be suitable for children who need special education, not for children who develop normally. The arrangements that can be made on issues such as stairs, heat, light are specified.

*T1. Each individual is special and each individual has a different requirement. Therefore, since the performance and disability status of each individual with special needs will also vary, adjustments can be organized for this particular situation.*

*T7. The physical conditions of all special educational institutions should be continuously updated according to the students and adapted to the recent conditions.*

*T10. I think that physical conditions should be based on the physical characteristics of the student. Some institutions are not sufficiently equipped due to these conditions. Factors such as light and sound are very important in the education of a child with special needs.*

*T11. The physical conditions of special education institutions should first of all be regulated according to the basic needs, physical characteristics and numbers of individuals in need of special education. For*





*example, there should not be too many stairs and hilly grounds in institutions where the number of visually impaired individuals is high.*

*T12. Physical conditions should be designed taking into account all diagnostic groups.*

*T15. I think there's more physical disability. In general, they are making arrangements to support a number of disability groups, but what percentage of it really supports these individuals is controversial.*

*T19. Unfortunately, I find physical conditions insufficient. Generally speaking, schools are designed for children with normal development.*

*T21. I do not find the physical conditions to be very adequate, because there is no assessment based on disability groups. For example, it is very important for the child to be on the first floor in a special education institution for a child with physical disability. I think that more attention should be paid to physical conditions. In my proposal, the physical conditions for each group should be planned and I recommend that the equipment in the class be technological.*

*T23. Arrangement of physical conditions should be done considering the needs and desires of the students. Physical disability, attention deficit, and common developmental disorder are factors that need to be considered for the regulation of physical conditions.*

*T24. Physical conditions are not suitable for special education. Considering the special situation of the students, buildings and equipment should be built accordingly.*

### **Regulations Based on Teacher Views**

It is also considered that physical conditions should be regulated depending on the teachers' views under the theme of physical conditions.

*T9. For individuals within the institution, physical conditions should be regulated by taking the opinions of their teachers. Different regulations may be required for each school.*

### **Teacher Opinions and Suggestions about Class Size**

Regarding the theme of suitability of classes, T6 and T7 stated that the class sizes in special education institutions should be determined according to student characteristics. Regarding the high class size, T3, T5, T10, T14, T20, T24, T26, stated that class sizes should be determined according to student characteristics in special education institutions. Regarding the special arrangements for different special education groups and levels, T1, T4, T8, T9, T11, T12, and T22 stated that class sizes should be determined according to student characteristics in special education institutions. Although it is stated that there are schools with appropriate class sizes, it has been observed that there are proposals for regulations regarding class sizes in special educational institutions. T2, T13, T15, T16, T17, T18, T19, T21, T23, T26 did not make any suggestions. The disability group and level of education of a student emerged as the determinant of with how many people and in which class the student will study.

The resulting codes for the theme “class size” are:

#### **Available Classes**

- High class size
- Special arrangements for different special education groups and levels

#### **Available Classes**

It has been stated by several teachers that the number of students in the classes of the special educational institutions they work with is appropriate.

*T6. Class sizes are appropriate; I think that children get appropriate education without any problems.*



*T7. Class sizes are appropriate, there are no problems related with this topic. I think this classroom arrangement is fine.*

#### Excessive Class Size

It was stated that there was redundancy in class sizes in special education institutions. It was emphasized in the statements as this was a factor that reduced the quality of education.

*T3. I find the class sizes a little too much. When the number of students is a bit too big, the efficiency of the course decreases, the time allocated to the students becomes shorter, so the class size should be small.*

*T5. Class sizes may be reduced. There should be minimum 3 and maximum 5 students.*

*T10. I find the class size a bit too much in terms of class sizes and individual characteristics of the students in the class. Since the children are more distracted than normal, attention should be paid to this issue.*

*T14. Class sizes are too crowded, so teachers are not enough and class size needs to be reduced. The crowds of class sizes are disadvantageous for both the teacher and the student, and for this the class sizes need to be less and the teachers more.*

*T20. Class sizes are too crowded, so teachers are not enough and need to be reduced.*

*T24. I think classes should be for two. I emphasize that this should be arranged according to disability groups and the students should be educated in a quality environment.*

*T26. When setting up class sizes, it is more appropriate to assign a teacher to two students.*

#### Special Regulations for Different Special Education Groups and Levels

As in other themes, teachers emphasized that there were not enough regulations regarding different special education groups under the theme of class size. In order to increase the quality of education, it was stated that there should be special arrangements for different special education groups and levels in the planning of class sizes.

*T1. ... since the state has no chance of giving one-to-one education, individuals with special needs at different levels can be in the same class. What is important here is that the levels and disability groups of children with special needs in the classroom should be at the same level. If each one performs at a different level, it will be difficult for the teacher to intervene.*

*T4. If groups with similar disability types are formed in the same class, the quality of education will increase.*

*T8. Class sizes should be determined according to the individual characteristics and needs of the students in the class.*

*T9. In order to increase the quality and speed of education, the same disability groups and the students at the same level should be in the same group. This will lead to saving time and improving quality.*

*T11. Class sizes should first be determined and adjusted according to the individual characteristics of the students.*

*T12. According to special education groups, class sizes should be determined according to the individual characteristics and needs of the students in the class.*

*T22. There is no problem with class sizes but should be placed according to the appropriate qualification type.*

#### Teachers' Opinions and Suggestions on the Individual Characteristics of Students

When the views of teachers about T4, T5, T8, T19's Individual Education Programs and Activities theme are examined, it is seen that the individual characteristics of the students are not given enough importance



and they make suggestions about this issue. When the opinions of the teachers on the theme of Expert Support of T14 are examined, it is seen that the individual characteristics of the students are not given sufficient importance and they make suggestions about this issue. T20 stated that the individual skills of the students were not given sufficient importance in relation to the theme of Social Skills Education and made recommendations on this issue.

T1, T2, T3, T6, T7, T9, T10, T11, T12, T13, T15, T16, T17, T18, T21, T22, T23, T24 and T26 did not make any suggestions. They have made suggestions for the education appropriate to the individual characteristics of the students in the teachers' different special education groups. Some teachers stated that individualized education programs were prepared for each student in special education institutions and the necessary importance was given to individual characteristics. The resulting codes for the Individual Properties theme are:

- Individual training programs and activities
- Expert support
- Social skills training

### **Individual Training Program and Activities**

It was seen that the teachers in the interviews emphasized programs and activities appropriate to the individual characteristics in special education. In order to increase the quality of education in special education institutions, it was stated that the programs and activities should be in accordance with the individual characteristics.

*T4. I think that if the activities are designed considering the needs of the students, more quality activities will emerge.*

*T5. Individual education programs are sufficient when they are conducted in accordance with the characteristics of the student.*

*T8. The activities aimed at the student should be aimed at supporting and improving all areas of the student's development. Individual features should be considered when planning these activities.*

*T19. ... Individualized curriculum plans should be prepared in accordance with the student; individual characteristics should be supported in accordance with a common goal by revealing his/her abilities.*

### **Expert support**

Some of the teachers stated the necessity of a program suitable for individual characteristics and stated the importance of realizing these programs with expert trainers in their fields. It is stated that there are deficiencies in this subject and expert support is necessary to increase the quality of education.

*T14. Activities appropriate to the individual competence and social skills of the students have to be done with expert trainers in their fields and unfortunately there are deficiencies in this regard.*

*T20. Activities appropriate to the individual abilities and social skills of the students should be carried out with expert trainers in their fields. There are deficiencies in this issue and I suggest that seminars should be held.*

### **Social Skills Training**

Social skills training, which is very important in special education, is one of the codes that appear under the theme of individual characteristics. Teachers stated that knowing individual characteristics is important in social development and in social skills training.





*T20. Individual characteristics should be taken into account and social skills need to be emphasized more. In addition, I would like to say that children can improve their social skills by conducting more activities.*

*T25. I think that conducting more energetic activities such as out-of-school activities are appropriate for children's social development.*

### **Teachers' Opinions and Suggestions on Special Education Programs**

When the views of T4, T16, T17, and T25 on the theme of Individual Education Programs are examined, it is seen that most of the teachers make opinions and suggestions for the development of special education programs. S8, S10, S11, S12, S24, S26 gave opinions and suggestions for the development of special training programs on the theme of Cooperation. T1, T2, T3, T5, T6, T7, T9, T13, T14, T15, T18, T19, T20, T21, T22, T23 did not make any suggestions. Teachers stated that education programs should be individualized and programs should be developed in terms of program elements (acquisition, content, teaching-learning process, evaluation). However, there is a teacher who states that the programs are prepared according to the students. The resulting codes for the Training Programs theme are:

- Individual training programs
- Cooperation

### **Individual Training Programs**

Teachers interviewed often proposed changes to the current training programs. It was stated that the necessary arrangements should be made by individualizing the training programs. In addition, for a more qualified education, it was emphasized that the elements of the curriculum should be appropriate to the student characteristics.

*T4. It is a right approach to proceed within the framework of a specific special education program, but it is necessary to design content and activities according to the needs of the students.*

*T16. Special training programs should be individualized. I think that appropriate programs should be prepared for each student; course contents should be individualized and visually improved.*

*T17. Special training programs should be individualized. The contents of the course should be simplified and visually diversified. I think that the teacher should arrange a program for the student to understand it better.*

*T25. I say that the special education program should be organized according to the level of disability of children. In order to increase the level of education, content and activities need to be organized according to the current situation of the children in order for these programs to be more effective.*

### **Collaboration**

While some of the teachers emphasized individualized education programs in special education, they expressed the need for cooperation in the preparation of these programs. During the preparation of the programs, it was stated that experts and teachers from different fields should work in cooperation.

*T8. While preparing special education programs, opinions should be taken from different disciplines and appropriate programs should be prepared by making interdisciplinary consensus.*

*T10. When preparing special training programs, they should receive support and opinions from each training program. It should be noted that cooperation in special education is very important.*

*T11. Special education programs should be prepared in cooperation with many different fields and exchanged views. Considering that different people or different institutions can use these programs, flexible programs should be prepared as a result of observations.*



*T12. While preparing special education programs, opinions should be taken from different disciplines and appropriate programs should be prepared for interdisciplinary consensus.*

*T24. If possible, there should be studies in the field for the preparation of the program. Academics are far from the field and the programs have to be prepared by people who are related to the field. I emphasize that programs should be organized according to the development level of children in terms of content acquisition effectiveness.*

*T26. The academic committee that develops the program should have experts from different branches. In order to increase the quality of education, it is necessary to plan and implement the opinions of all experts in special education institutions. In order to gain any skill, the content effectiveness and evaluation part should be carried out by a team.*

### **Teachers Opinions and Suggestions for Early Diagnosis and Placement**

Early identification of individuals in need of special education is an important issue for their development. It is seen that S2, S5, S10, S19 agree on the importance of early diagnosis and placement in relation to the theme of Parenting Education. T1 and T23 agree on the importance of early diagnosis and placement under the theme of Early Diagnosis. Under the theme of Teacher Education, T14 and T17 seem to agree on the importance of early diagnosis and placement. The teachers made opinions and suggestions about Parenting Education and early diagnosis in the early diagnosis of individuals in need of special education. T3, T4, T6, T7, T8, T9, T11, T12, T13, T15, T16, T18, T20, T21, T22, T24, T25, T26 did not make any suggestions. It was stated that families play an active role in the early diagnosis process and that they should be made aware. It is stated that the need for special education of their children can be noticed first in the family. In addition to Parenting Education, teacher education was also seen as important in the early diagnosis process. The emerging codes for the Early Diagnosis and Placement theme are:

- Parenting Education
- Early diagnosis
- Teacher Training

### **Parenting Education**

It is important to raise the awareness of families about early diagnosis. Teachers mostly made their opinions and suggestions on the trainings aimed at raising the awareness of the families.

*T2. Early diagnosis in special education can save the child from many problems. Seminars can be given in advance, Parenting Education programs, parent school programs can be prepared, and children can be evaluated whether they have any developmental problems.*

*T5. Early diagnosis is very important, so families should be informed and necessary support should be provided in order to ensure early diagnosis.*

*T10. The diagnosis evaluation process should be explained to the families in appropriate and proper language by appropriate programs by the expert people.*

*T19. Early diagnosis is very important. Unfortunately families are very important here; early diagnosis begins with the awareness and acceptance of families.*

### **Early diagnosis**

The contribution of early diagnosis by teachers to the development of individuals was emphasized. In the case of early diagnosis, it was stated that individuals' development accelerated and their problems decreased.



*T1. There is no need to emphasize the importance of early diagnosis and diagnosis of children with special needs. "Because early diagnosis is very important. Therefore, if the child's problem is identified early, he / she can be placed in the education program of the type that suits his / her needs at an early age. We know that early education accelerates the development of children even more and the situation of eliminating the existing situation increases. Therefore, with the systematic support given in the first years of life, I think that all capacities of individuals with special needs can be revealed and prepared the necessary infrastructure for basic education.*

*T23. The education should start with the cooperation of the hospital report from the birth of the child and a special education program should be started in preschool education. Diagnosis is very important and it is very important for the child to be made early.*

### **Teacher Training**

Another important point in early diagnosis is the awareness of teachers about this issue. The interviewed teachers stated that first the family and then the teachers would realize the individuals with special needs.

*T14. Early diagnosis requires the sacrifice of parents and teachers. Early diagnosis is of great importance for students with special needs, as in all areas, and I recommend that the needs to be met continuously.*

*T17. Diagnosis and intervention are important in special education. Since the diagnosis and placement is very important, the knowledge level of the teachers should be very good on this subject and lessons should be given if necessary.*

### **Teacher Opinions and Suggestions on Guidance Activities**

When the opinions of T5, T10, T12 and T26 regarding family communication theme are examined, it is seen that guidance service should be in contact with families and that there should be sufficient and educated guidance teacher in guidance services. T13, T14 and T19 stated that the guidance service should be in contact with families and that there should be sufficient and educated guidance teacher in the guidance services. T1, T2, T3, T4, T6, T7, T8, T9, T11, T15, T16, T17, T18, T20, T21, T22, T23, T24, T25 did not make any suggestions. The guidance service focuses on the task of informing families and planning activities for individuals. The resulting codes for the Guidance Activities theme are:

- Communication with the family
- Lack of guidance teacher

### **Communication with the Family**

It was stated by some teachers that the guidance service should be in contact with the family and families should be informed by the service. It was stated that the education of individuals in need of special education should be planned with the family.

*T5. ... The guidance service should support not only the child but also the family, and contribute to the family's acceptance of the process. The family should be made aware and the programs should be organized for the child with the support of the family.*

*T10. In order to actively use the guidance services, some changes must be made and the family should participate these activities.*

*T12. Guidance service should organize the leisure activities of the individual, inform the family about problem behaviors and play an active role in guiding them.*

*T26. Guidance service is a very important unit for getting to know the family and getting to know the individual. Guidance service is important in order to communicate with children more easily and to give direction to the family.*



## **Lack of guidance teacher**

Some of the interviewed teachers stated that there are not enough trained guidance teachers in the guidance service.

*T13. I find the number of guidance teachers inadequate, this number should be increased.*

*T14. There should be expert guidance teachers. Orientation of guidance counselors in each institution plays an important role in many areas.*

*T19. Guidance is not enough; they are inadequate both in number and in information.*

## **DISCUSSION**

As a result of the research, the interviewed managers stated that the quality of education was adequate in the special education institutions, while the teachers showed that the quality of education was insufficient. It has been stated that there are many points that need to be regulated in order to increase the quality of special education. However, in another study, similar results were obtained with literature. The findings of the research and the issues that are important for increasing the quality of education in special education institutions have been determined through interviews with managers and teachers. Themes and codes were determined as the elements determining the quality of education. School management, personnel equipment, physical conditions of schools, class sizes, individual characteristics of students, educational programs, early diagnosis and placement, guidance services are the factors that determine the quality of education.

According to the results of the research, administrators gave superficial opinions instead of giving detailed information about management in special educational institutions. It was stated by most of the managers that personnel equipment, physical conditions and class sizes are suitable for qualified education. It was stated that the individual characteristics of the students were given importance. Parenting Education was emphasized in early diagnosis and placement it is stated that guidance activities are important for family relations. According to another researcher, teachers talked about uncertainty about whether education should be done individually or in groups. At this point, it can be said that the uncertainty in legal regulations causes problems in practice. In addition, teachers mentioned the boredom of students in individual education. In some schools, they stated that there was not much different education from the normal classroom because the group education was conducted with a large group (Pemik, 2017).

The education of students with special needs in TRNC is provided by special education institutions. In the 573 of the Decree Law on Special Education (1997, Article 19) Special Education Institutions are defined as daytime education institutions that are opened to provide special education to individuals in need of special education, to prepare them for work and profession or to develop basic vital skills of those who cannot benefit from formal education programs and to meet their learning needs. These institutions are in the form of daytime education institutions, boarding special education institutions, inclusive schools, public and special institutions, and special education and rehabilitation institutions under the Ministry of National Education (Baykoç and Dönmez, 2010).

Legal services and educational services provided in special education institutions are the basic education services in this field. In particular, educational services starting at an early age to provide independent living and social life skills to individuals with special needs are extremely important.



The fact that the managers and teachers working in the field of special education have sufficient knowledge, skills and equipment related to vocational knowledge and special education has a positive effect on the quality of the education provided. However, considering the fact that some of the administrators and teachers working in special education institutions have graduated from a bachelor's degree program outside the special education field and that teachers' work in this field with short-term training opportunities, the quality of education case becomes important. The short duration of the courses and trainings taken by such teachers in order to work in the field of special education, and the lack of adequate application activities affect the quality of the education in this field negatively. In addition, it is stated in the explanations of the administrators and teachers that the teachers who have graduated from special education department have various deficiencies in the field of vocational and field knowledge and that studies should be conducted for these teachers.

It is aimed that individuals with special needs can work in cooperation, adapt to their environment, grow up as a productive and happy citizen and live independently in society, to develop basic life skills for them to become self-sufficient, and to prepare them for higher education, business and occupational fields and life by using appropriate educational environments and special methods, personnel and tools in line with their educational needs, competencies, interests and abilities (MONE, 2010).

Although the actual number of individuals with special needs is not known in TRNC, it is seen that the education and rehabilitation services provided are quite inadequate. However, it is stated that the quality of education in these schools is not at the desired level. Significant results have been obtained in studies conducted to identify and solve problems in special education institutions.

In the study conducted by Korucu (2005) in order to determine the problems in institutions providing special education and rehabilitation services according to the opinions of managers, teachers and parents, it was reported that the communication between the institutions did not occur at the expected level and that the corporate management had problems in the trust of the personnel and the management mutually, the state's money for each disabled child was not paid to the special education and rehabilitation centers on time due to the bureaucratic formalities, there were significant gaps in the legal arrangements regarding the functioning of the institutions, and the institutions could not get help in the supervision they needed by the institutions they were affiliated with, for this reason, the supervisory team has important deficiencies regarding the implementation of special education, although family participation is very important in special education activities, it is not realized at the expected level, the staff and the management of the institution do not know the importance of in-service training very well, there are difficulties in developing the staff and difficulties in finding qualified personnel.

In the study conducted by Altinkurt (2008) in order to reveal the problems experienced in special education and rehabilitation institutions and to find solutions for these problems, it was reported that special education and rehabilitation centers had difficulty in finding physiotherapists and special education teachers in some branches.

In the study conducted by Aydın and Şahin (2002) in order to compare the inclusion practices with the special education services regulation, it was observed that different applications were made in the subjects stated in the regulation on the availability of inclusion classes, implementation of individualized education plans, teacher-family cooperation, taking measures for the social acceptance of disabled students and determination of individual needs. According to the research, it was stated that sufficient importance was given to individual characteristics and many activities were prepared for students to develop themselves.





In particular, it was emphasized that individual training programs are sufficient. They stated that cooperation and communication with the family and the school management could increase the quality of education.

In a study conducted by Kargin et al. (2003) in order to determine the opinions of administrators, teachers and parents about inclusion practices, it was reported that the knowledge of managers, teachers and parents about inclusion education was not sufficient, the physical conditions and materials of the classes were not at the desired level, support training services were inadequate, and classroom teachers did not receive adequate training on inclusion education. According to the research, they mostly gave negative opinion about the physical conditions of special educational institutions. It was suggested that the physical conditions of special education institutions should be arranged according to different special education groups and teachers' opinions.

As a result of the study carried out by Demirtas (2006) in order to determine the opinions of provincial national education administrators about inclusive education, it was reported that the administrators found that the existing legal arrangements for inclusive education were sufficient and that they did not have information about the problems in inclusive schools and that managers have the opinion that inclusive education is beneficial to teachers, students with special needs and children with normal development. It was seen that the teachers that interviewed were emphasizing the legal part of the management while evaluating the management related to special education. In order to increase the quality of education in special education institutions, it was stated that the problems related with laws, regulations and principles of the management of special education institutions should be eliminated.

In the study conducted by Bilen (2007) in order to determine the opinions of the classroom teachers about the problems faced in the inclusive practice, the lack of appropriate physical conditions of the schools and classes, the lack of adequate support of the guidance service, the lack of qualified personnel in the special education field, and the lack of qualified personnel in the in-service trainings. And lack of proper communication with families have been reported to be among the major problems. According to the research, it is stated that their physical conditions should be suitable for children who need special education, not for children with normal development, and it is seen that there should be sufficient and educated guidance teachers in guidance services. The guidance service is focused on informing families and planning activities for individuals.

As a result of the study conducted by Babaođlan and Yılmaz (2010) in order to determine the competence of classroom teachers in inclusive education, it was reported that classroom teachers do not receive adequate training in inclusive education and therefore they considered themselves inadequate. Most of the teachers stated that the personnel working in special education institutions do not have sufficient equipment for different special education groups. In order to increase the quality of education, they stated the necessity of in-service trainings. It has been expressed that the quality can be increased by organizing seminars on different disability groups in schools and the participation of staff.

As a result of the study conducted by Gökdere (2012) in order to compare the attitudes and anxiety levels of the classroom teachers and prospective classroom teachers about the inclusive education, it was seen that there were differences between the attitudes of classroom teachers and classroom teacher candidates due to their professional experience and knowledge level. At the same time, it was reported that increasing the level of knowledge of teachers towards inclusion could be effective in achieving the purpose of inclusion. In special education institutions, the teachers recommended that the managers use social media



and web site effectively in order to increase the quality of education. They stated that organizing seminars frequently for a better education is important in terms of knowledge level.

As a result of the study conducted by Güzel (2014) in order to determine the problems faced by primary school teachers who educate inclusive students in his/her class, it was reported that the most common problems experienced by teachers in inclusive training were insufficient physical structure of the school, crowded classrooms and not distributing mainstreaming students equally to the classes, not preparing IEP or not having sufficient information about IEP and lack of in-service training, the lack of guidance and other studies needed for inclusive training in the school, lack of communication with families and lack of sufficient information about their children. According to the study, physical conditions were considered insufficient. It is stated that physical conditions directly affecting the quality of education are not suitable for special education and need to be changed. It was seen that they emphasized programs and activities appropriate to individual characteristics. In order to increase the quality of education in special education institutions, it was stated that the programs and activities should be in accordance with the individual characteristics. It was stated that the guidance service should be in contact with the family and families should be informed by the service. It was stated that the education of individuals in need of special education should be planned with the family.

However, it was given to guidance counselors to coordinate efforts to adapt to changing conditions in schools and to keep the school management, teachers, students and families informed of these changing living conditions, developments and changes in close coordination. The aim of carrying out the studies in cooperation is to increase the living conditions and the level of education at the highest level and to ensure these developments through education (Kılınc, Bulut and Yenen, 2016).

## CONCLUSION and SUGGESTIONS

In this research, it was determined that besides the positive opinions of school administrators and teachers working in special education schools in TRNC about the quality of education given in special education institutions, there were some points that need to be improved and the quality of the training given in many educational institutions could be increased in the matters that were deemed incomplete by the managers.

When the opinions of the teachers on the quality of the education given in the special education institutions were analyzed, it was determined that there were many points to be developed. Considering the results of the research, the following suggestions were made:

- In-service training should be given importance in order for the managers and teachers of special education institutions to have sufficient experience in the field of special education and to be able to follow the developments in the field of special education in the World closely.
- Measures should be taken to ensure the safety of buildings due to physical problems in special education institutions, schools with gardens and adequate play areas should be allocated to special education, the needs of institutions such as elevators, stairs, classrooms, toilets should be provided, social activities units, painting and music room, sports hall should be opened, emergency evacuation should be made in case of danger, personnel working in special education institutions should be given training for first aid applications.
- In-service training should be provided for teachers working in special education institutions for individualized training programs.
- The Ministry of National Education should make legal arrangements in order to eliminate the problems related to the management processes of special education institutions, should take measures for the professional management of special education institutions, and should attach importance to the concepts of special education expertise, special education manager and special education inspectorate mentioned in the previous legislation and proposed in the education councils.



- In this research, data were obtained by using qualitative research method. In similar studies to be conducted in the future, researches can be conducted using a quantitative or mixed research model to support qualitative data.
- Similar studies can be carried out by including families with children with special needs and the differences between them can be determined.
- The opinions of the branch teachers working in special education institutions regarding the quality of the education given in special education institutions can be taken.

## REFERENCES

- Ada, Ş. & Ercoskun, M.H. (2009). Okul müdürlerinin klasik ve neo-klasik yönetim yaklaşımlarını uygulama biçimleri [Principals' application style of classical and neo-classical administration approaches]. *Atatürk University Journal of Social Sciences Institute*, 13(2): 171-182.
- Akçamete, G., Aslan, B. & Dinçer, Ç. (2010). Uygulama öğretmenlerinin mentörlük becerilerinin değerlendirilmesi [Evaluation of practice teachers' mentoring skills]. *International Teacher Training Policies and Problems Symposium*, 2, 16-18.
- Altinkurt, N. (2008). Özel eğitim ve rehabilitasyon merkezlerinde yaşanan sorunlar ve çözüm önerileri [Problems experienced in special education and rehabilitation centers and solution suggestions], Unpublished Master's Thesis, Dokuz Eylül University, İzmir.
- Avcıoğlu, H. (2012). Zihin engelliler sınıf öğretmenlerinin araç-gereç kullanımına ilişkin görüşleri [Intellectual disability class teachers' opinions on the use of materials]. *International Journal of New Trends in Arts, Sports & Science Education (IJTASE)*, 1(2), 118-133.
- Aydın, B. & Şahin, R. (2002). *Kaynaştırma programının uygulandığı okullardaki uygulamalarla özel eğitim hizmetleri yönetmeliğinin karşılaştırılması [Comparison of the regulations in special education services with the applications in the schools where the mainstreaming program is applied]*, 11th Special Education Congress, 145-152, Konya: Education Publishing
- Babaoğlu, E. & Yılmaz, Ş. (2010). Öğretmenlerinin kaynaştırma eğitimindeki yeterlilikleri. *Kastamonu Eğitim Dergisi*, 18 (2), 345-354
- Dalgı, Ö. (2009). Okullarda kaynaştırma eğitimi uygulanan ve uygulanmayan okul idarecileri ve öğretmenlerin kaynaştırma eğitimine yönelik tutumlarının belirlenmesi [Determining the attitudes of school administrators and teachers towards inclusive education with and without inclusive education]. Unpublished Master's Thesis, Near East University Institute of Educational Sciences Educational Management Supervision and Planning, Nicosia, North Cyprus.
- Diken, İ. H. (2017). *Özel eğitime gereksinimi olan öğrenciler ve özel eğitim [Students in need of special education and special education]*. Ankara: Pegem Academy
- Diken, İ. H. & Batu, S. (2010). *Kaynaştırmaya giriş [Introduction to Mainstreaming]*. Ankara: Pegem Academy
- Doğu, M. B. (2017). Okul öncesi eğitimde sınıflarında kaynaştırma öğrencisi bulunan öğretmenlerin karşılaştıkları sorunlar [Problems faced by teachers with inclusive students in their classes in preschool education]. Unpublished Master's Thesis, Pamukkale University, Denizli.
- Ee, J. & Soh, K. C. (2005). Tecaher perceptions on what a functional curriculum should be for children with special needs. *Nanyang Technological University the International Journal of Special Education*, 20(2) , 51-55.
- Eripek, S. (2008). *Özel eğitim [Special education]*. Eskişehir: Anadolu University Publishing.
- Gökdere, M. (2012). Sınıf öğretmenleri ile sınıf öğretmeni adaylarının kaynaştırma eğitimine yönelik tutum, endişe ve etkileşim düzeylerinin karşılaştırılması incelenmesi [A comparative study of the attitudes, anxiety and interaction levels of primary school teachers and primary school teachers towards inclusive education]. *Educational Sciences in Theory and Practice*, 12(4), 2789-2806
- Görgülü, M. (2016). Özel eğitim kurumlarında çalışan yöneticilerin okulu yönetme yeterlikleri [Competence of school administrators working in special education institutions]. Unpublished Master's Thesis, Yeditepe University Institute of Educational Sciences Education Management and Supervision Department. Istanbul.





- Güzel, N. (2014). Kaynaştırma öğrencisi olan ilköğretim öğretmenlerinin kaynaştırma eğitimine ilişkin yaşadıkları sorunlar (Beykoz ilçesi örneği) [Problems experienced by primary education teachers who are mainstreaming students on mainstreaming education (Beykoz district example)]. Unpublished Master's Thesis, Yeditepe University, Institute of Social Sciences, Istanbul.
- Kanat, H. (2015). Kaynaştırma öğrencisi olan sosyal bilgiler öğretmenlerinin yaptıkları eğitim-öğretim faaliyetlerine ilişkin görüş ve önerileri [Opinions and suggestions of social studies teachers who are inclusive students regarding their educational activities], Unpublished Unpublished Master's Thesis, Gazi University, Institute of Educational Sciences, Ankara.
- Kargın, T., Acarlar, F. & Sucuoğlu, B. (2003). Öğretmen, yönetici ve anne-babaların kaynaştırma uygulamalarına ilişkin görüşlerinin belirlenmesi [Determining the opinions of teachers, administrators and parents about inclusive practices]. *Ankara University Faculty of Educational Sciences Journal of Special Education*, 4(2), 055-076.
- Kılınç, H.H., Bulut, A. & Yenen, E.T. (2016). Ortaokul 8. sınıf öğrencilerinin okul rehberlik servisine yönelik görüşleri [Views of middle school 8th grade students about school guidance service]. *Academic Social Research Journal*, 4(23),65-77.
- Kınık, B. (2018). Montessori temelli bireysel eğitim programının özel eğitim gereksinimi olan çocukların problem çözme becerilerine etkisinin incelenmesi [Investigation of the effect of Montessori based individual education program on problem solving skills of children with special educational needs], Unpublished Master's Thesis, Bolu, Abant İzzet Baysal University, Institute of Educational Sciences, Department of Primary Education, Preschool Education, Bolu.
- Klose, L. M. (2010). Special education: A basic guide for parents. Texas State University-San Marcos. National Association of School Psychologists.
- Korucu, N. (2005). Türkiye’de özel eğitim ve rehabilitasyon hizmeti veren kurumların karşılaştığı güçlüklerin analizi: Kurum sahipleri, müdür, öğretmen ve aileler açısından [Turkey in special education and rehabilitation services for analysis of the challenges facing institutions: Institutions owners, principals, teachers and parents in terms of], Unpublished Master's Thesis, Selcuk University, Institute of Social Sciences, Konya.
- Lambert, E. G., Hogan, N. L. & Jiang, S. (2008). Exploring antecedents of five types of organizational commitment among correctional staff it matters what you measure. *Criminal Justice Policy Review*, 19 (4), 466-490.
- Newman, W. L. (2003). *Social research methods: Qualitative and quantitative approaches*. Pearson education.
- Orhan, S. & Genç, K.G. (2015). Engellilere Yönelik Ülkemizdeki Özel Eğitim Hizmet Uygulamaları ve Örnek Ülke Karşılaştırması [Special Education Service Practices in our Country for Disabled People and Comparison of Sample Countries]. Retrieved from: 18.12.2018. DOI: <http://dx.doi.org/10.21560/spcd.35323>
- Pemik, K. (2017). Özel yetenekli öğrencilere destek olmasında verilen eğitime ilişkin okul yöneticilerinin ve öğretmenlerin görüşleri [Opinions of school administrators and teachers regarding the education given in supporting special talented students]. Unpublished Master Thesis, Istanbul Marmara University Institute of Educational Sciences Istanbul.
- Senemoğlu, N. (2013). *Gelişim öğrenme ve öğretim: Kuramdan uygulamaya [Development learning and teaching: From theory to practice]*. Ankara: Yargı Publishing.
- Şahin, A. (2011). Öğretmen algılarına göre etkili öğretmen davranışları [Effective teacher’s attitudes according to teacher’s perceptions], *Journal of Ahi Evran University Kırşehir Faculty of Education*, 12(1), 239-259.
- Talas, S., Kaya, F. & Yıldırım, N. (2016). Destek eğitim odaları ve öğretmenler üzerine betimsel bir çalışma: Tokat ili örneği [A descriptive study on resource room and teachers: Tokat sample], *Journal of European Education*, 6(3), 31-42.
- Yanık, F. (2018). Özel eğitim öğretmenlerinin yöneticilerine yönelik algıladıkları etkili liderlik özellikleri ve okula bağlılık düzeylerinin iş motivasyonlarıyla ilişkisinin incelenmesi [Examining the relationship between special education teachers' effective leadership characteristics and school loyalty levels perceived for their administrators], Unpublished Master's Thesis, Istanbul Kültür University Institute of Social Sciences. Istanbul.
- Yıldırım, A. & Şimşek, H. (2013). *Sosyal bilimlerde nitel araştırma yöntemleri [Qualitative research methods in the social sciences]*, Ankara: Seçkin Publishing.
- Yıldırım, D. S. (2009). Özel eğitimde kullanılan alternatif programlar (Montessori yaklaşımı) [Alternative programs used in special education (The Montessori approach)], *Turkish Science Research Foundation Journal of Science*, 2 (1), 107-116.



## MATHEMATICAL THINKING DEVELOPMENT STAGES OF A GIFTED 5<sup>TH</sup> GRADE STUDENT ABOUT PYTHAGOREAN THEOREM

Esra AKARSU YAKAR

PhD., Ministry of National Education, Kocaeli-Turkey

Orcid: <https://orcid.org/0000-0002-4090-6419>

[es.akarsu@gmail.com](mailto:es.akarsu@gmail.com)

Süha YILMAZ

Prof.Dr., Dokuz Eylul University, Buca Faculty of Education, Izmir-Turkey

Orcid: <https://orcid.org/0000-0002-8330-9403>

[suha.yilmaz@deu.edu.tr](mailto:suha.yilmaz@deu.edu.tr)

**Received Date:** 24-02-2020

**Accepted Date:** 17-05-2020

**Published Date:** 30-06-2020

### Abstract

The Pythagorean Theorem is one of the 8th grade achievements in the MEB (2018) curriculum. The theorem is a conceptual structure in which students have difficulty in understanding and practicing. In this context, it is aimed to get information about the mathematical thinking stages of a gifted 5th grade student. The mathematical thinking development stages of the student were examined in terms of KISS (conceptual operational symbolic process) theory. The research is case study. Yigit, who was diagnosed in the field of general mental ability and trained in science art center, was identified as the participant of the study. The name Yigit was used as an alias. Yigit is studying in the 5th grade Turkey's state school located in a province in the western region. A clinical interview was conducted with the student. This interview lasted 30 minutes. A verbal case for the Pythagorean Theorem was presented to the student. It was expected to he could developed a process of thinking towards obtaining the theorem from this verbal case. As a result of the interview, Yigit was able to draw the desired shape by following the instructions in the verbal case given. He understood that the Pythagorean Theorem was a conceptual structure obtained by the characteristics of the right triangle. He was able to develop a thinking process for symbolically showing theorem. Generalization was able to do. According to KISS theory, the process and the concept could reach the dimension of thinking together.

**Keywords:** Gifted student, Pythagorean theorem, Mathematical thinking.

### INTRODUCTION

Gifted students can be described as individuals with special academic skills, leadership qualities and creative thinking (Davis and Rimm, 2004; Gardner, 1993; Guilford, 1967; Kirk and Gallagher, 1989; Renzulli, 2003; Sternberg, 2003). Gardner (1993) sheds light on giftedness with different areas of intelligence defined in multiple intelligence theory. However, not all intelligent individuals need to be gifted. Intelligence, talent and creativity can be considered as a whole (Karabey and Yürümezoğlu, 2015). Giftedness in mathematics can be defined as individual talent that manifests itself in mathematics (Krutetskii, 1976). Krutetskii (1976) describes these capabilities as the acquisition, processing and retention of mathematical information. Individuals with mathematically gifted abilities demonstrate their mathematical thinking skills with extraordinary speed and accuracy. In addition, these individuals can see the different relationships between the concepts (Heid, 1983). Individuals with mathematical giftedness focus on how and why a problem is solved rather than how it is solved (Sheffield, 1994). Heinze (2005) stated that gifted individuals understand quickly and make explanations more effectively than other individuals. According to Sheffield (1994), gifted individuals need to be further explored during mathematical thinking and problem solving and given opportunities in this sense in solving complex problems.

Mathematical thinking skills gain importance when examining the characteristics of individuals with mathematical giftedness. Mathematical thinking involves skills such as reasoning, modeling, prediction and proof against a problem situation (Tall, 2002). Gray and Tall (1994) explained the development of mathematical thinking with procept theory. Procept is a combination of process and concept words in English. Akarsu Yakar (2019) stated that it is appropriate to use KISS (conceptual operational symbolic process) instead of procept considering the processes contained in the word



procept in his/her research<sup>1</sup>. Gray and Tall (1994) explained mathematical thinking as a symbolic representation of the concept formed as a result of operation and process. In terms of KISS, mathematical thinking takes place in three stages. These stages are operation, operational process and conceptual operational symbolic process (Akarsu Yakar, 2019). If the individual realizes a concept in the learning process without realizing it, it shows the operation stage. When it starts to move to the comprehension stage in the operational process as it repeats the process, when he expresses the concept symbolically as a result of this stage, he realizes thinking in the conceptual operational symbolic process stage. The process in which the individual begins to grasp the stage as he / she repeats the process, and when he/she expresses the concept symbolically as a result of this stage, he/she realizes thinking in the conceptual operational symbolic process stage. When the studies examined in terms of KISS theory are examined (Chin and Tall, 2002; Kidron, 2008; Watson, Spyrou and Tall, 2003), it is seen that it is generally carried out on the basis of algebra, linear algebra and analysis since it includes symbolic expression process. In this research, Pythagorean Theorem is discussed and KISS theory is examined in the context of geometry. Pythagorean Theorem is one of the eighth grade achievements in MEB (2018) curriculum. Theorem is a conceptual structure that students have difficulty in understanding and applying. In this sense, this study is thought to be important in terms of demonstrating the applicability of KISS theory in the field of geometry. When the literature is examined, the researches related to mathematical giftedness are mostly related to problem solving and creative thinking (Altıntaş and Özdemir, 2012; Baltacı, 2016; Çıldır, 2017; Doğan and Çetin, 2018; Karabey, 2010; Koshy, Ernest and Casey, 2009; Leikin, Koichu and Berman, 2009; Sriraman, 2003; Van Garderen, Scheuermann and Jackson, 2013; Yazgan Sağ and Argün, 2016). In this research, the development of mathematical thinking of a gifted student is examined in terms of KISS theory. This is thought to be important for the originality of the study.

## METHOD

### Research Design

The research was conducted on the basis of qualitative research design. The case study was determined as the qualitative research design. The reason for choosing this pattern is to reveal the existing mathematical thinking skills of the gifted student.

### Working Group

A 5<sup>th</sup> grade gifted students studying in Turkey's western region is located in a school is identified as a participant in the research. The reason why the 5<sup>th</sup> grade student was chosen by the researchers was that he had not learned the Pythagorean Theorem before and that he had the opportunity to examine the mathematical thinking processes that emerged in the process of creating a concept he did not know in detail. This student is given the nickname Yigit. Yigit's gifted diagnosis was made in the field of general mental talent and he is studying in science and art center. He has a basic knowledge of algebra and the concept of variable.

### Data Collection Tools

In this study, an activity developed by Akarsu Yakar (2019) is presented to the student to form Pythagorean Theorem. It was expected to form the concept in this activity.

### Data Collection

In this activity, first of all, some instructions were given to draw a figure to help him in the process of creating Pythagorean Theorem. According to these instructions, when you combine two squares perpendicular to each other with a third square, a right triangle will form. When he connects the areas of these squares and the edge lengths of the right triangle, he reaches the Pythagorean Theorem. The

<sup>1</sup> KISS consists of the initials of the conceptual operational symbolic process words in Turkish.



reason why Pythagorean Theorem was chosen in the research is that it is both a subject of geometry and it includes the ability of symbolic expression in the stages of KISS theory in the concept formation process. A 30-minute clinical interview was conducted with the student.

### Data Analysis

The data were analyzed with descriptive analysis method. In the analysis of the data, the framework developed by Tall (2008) is considered. Thus, the process of forming the Pythagorean Theorem was examined in terms of KISS.

## FINDINGS

In this research, the stages of mathematical thinking developed by Yigit, a 5th grade student with a gifted diagnosis, for Pythagorean Theorem were examined in terms of KISS theory. Yigit was able to draw the shape that he should draw in the process of creating Pythagorean Theorem correctly in his first attempt by following the instructions in the activity.

**Yigit:** First, I made the frames. I made those two upright. I combined the other square and the corners. I have met the last condition.

**Researcher:** What is the remaining part?

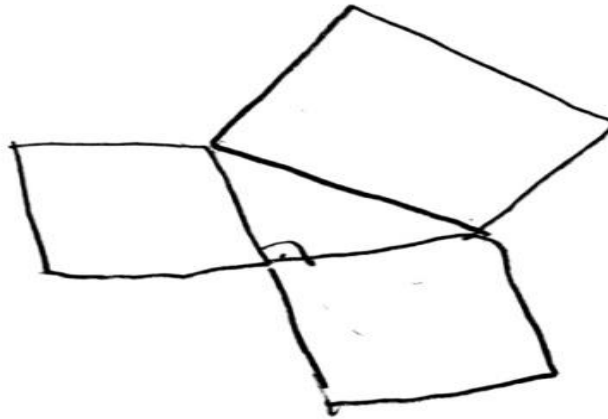
**Yigit:** Triangle.

**Researcher:** Can you explain how a triangle is?

**Yigit:** Right triangle.

**Researcher:** Why the right triangle?

**Yigit:** Because two squares are perpendicular to each other. This triangle is adjacent to them.



**Figure 1.** Figure drawn by Yigit in accordance with the given instructions

In the course of the interview, when the researcher asked what one side length of one of the squares perpendicular to one another was 3cm and the other one was 4cm, Yigit said that he could find a triangle using a ruler.

**Researcher:** If one of the squares perpendicular to one another had a side length of 3 cm and the other one had a side length of 4 cm, what would be the side length of the third one?

**Yigit:** I draw. It's 5 cm.



(The first time he drew, he didn't say it was a right triangle.)

**Researcher:** How do I know that there is a right triangle?

**Yigit:** A parallel angle of 90 degrees. No, no parallel. Perpendicular.  
(He showed up straight.)

**Researcher:** How do you find the areas of the quadratic regions?

**Yigit:** 3 cm square area 9, 4 cm square area 16, 5 cm square area 25.

**Researcher:** Is there a relationship between them?

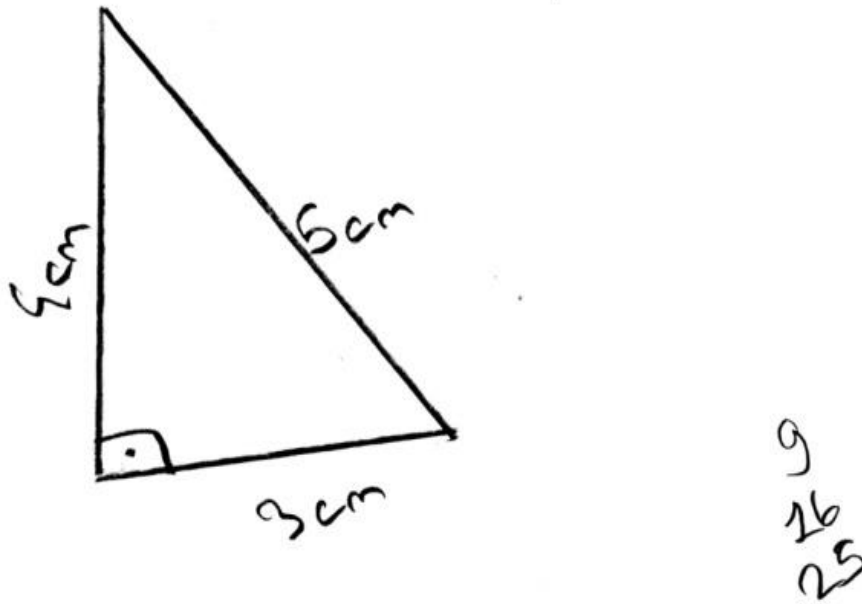
**Yigit:** They are all square root.

**Researcher:** What is square root?

**Yigit:** None. It's a square. The square of 5 cm 25. The square of 4 cm 16.

**Researcher:** Is there a relationship between the areas of the quadratic regions?

**Yigit:** The sum of 9 and 16 is 25.



**Figure 2.** Solution process for Yigit's process

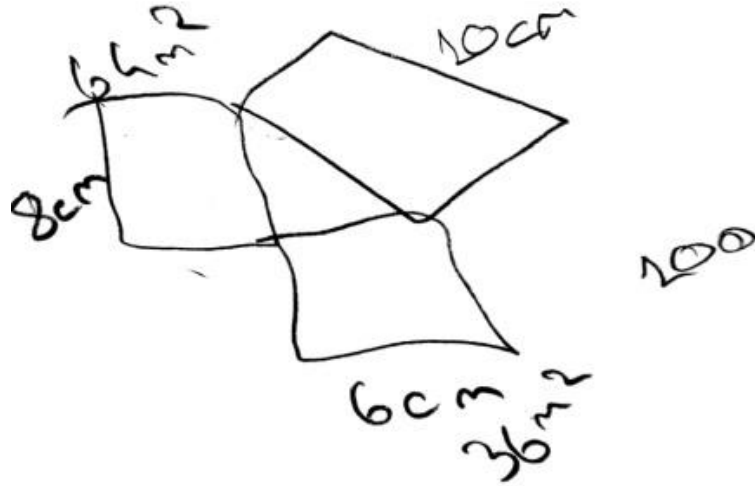
The process of the interview so far shows the operation stage according to KISS theory. During the operation, the individual needs to follow only the given instructions without knowing what he or she is doing in the process of creating the concept. Yigit also showed this process. In addition, Yigit made some mistakes in terms of language use and corrected these mistakes. Different edge lengths were asked in the following process and it was expected to realize the thinking process in the operational process stage.

**Researcher:** If one of the squares perpendicular to one another had an edge length of 6 cm and the other one had an edge length of 8 cm, what would be the edge length of the third one?

**Yigit:** I would find your areas. 64 and 36 squares. The sum of the two is 100. Hmm, 10 cm.

**Researcher:** Why 10 cm?

**Yigit:** Because 100 is 10 squares.



**Figure 3.** Solution process of Yigit for operational process

As it can be seen, Yigit, instead of drawing the figure, applied the process he realized during the operational process stage and expressed the result correctly. After the operational process phase, the interview for the process of creating the expected concept is as follows:

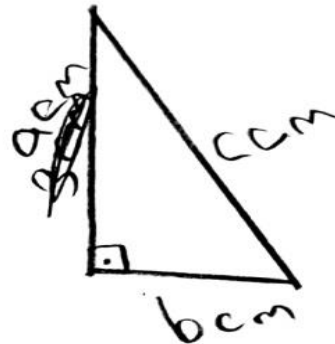
**Researcher:** So, if you think of this solution method in terms of the side lengths of the right triangle, how do you connect?

**Yigit:** Area of 3. Area of 4. Area of 5. So the edges have squares.

**Researcher:** Can you express that?

**Yigit:** In the right triangle, the sum of the squares of the perpendicular edge lengths was equal to the square of the other side length.

**Researcher:** Draw a right triangle. If one of the perpendicular edges is a cm, the other is b cm and the third side is c cm, how do you symbolically express what you say?



$$a^2 + b^2 = c^2$$





## Figure 4. Symbolic expression of Yigit for Pythagorean Theorem

As a result of the interview process, Yigit was able to express Pythagorean Theorem verbally and symbolically. He was able to demonstrate the conceptual operational symbolic process in terms of KISS.

## DISCUSSION, CONCLUSION AND SUGGESTIONS

In this research, it is aimed to examine the development stages of mathematical thinking developed by a gifted 5th grade student in the process of concept formation for Pythagorean Theory in terms of KISS theory. KISS theory includes the operation, the operational process, and the ability to symbolically express the concept formed as a result of the process. Therefore, the student is presented with an activity that is expected to show these stages. As a result of the research, it was seen that the student can show all stages. Yigit was able to draw the desired shape by following the instructions in the given verbal situation. He was able to express the figure accurately and quickly. This is expected. Because gifted individuals show their mathematical thinking skills at extraordinary speed and accuracy (Heid, 1983).

Yigit showed the operation which is the first stage of KISS theory by fulfilling the requirements of him and arithmetically revealing the processing skill. Then he repeated the skill he showed in the first stage with different number values and this time he began to give meaning to his operation. Yigit, who fulfilled the requirements without re-drawing and reasoned in finding results, was able to show the operational process. He was able to express the conceptual structure formed as a result of the operational process verbally and symbolically. Thus, he reached the final stage of KISS theory, the conceptual operational symbolic process stage. He understood that Pythagorean Theorem is a conceptual structure obtained by the properties of the right triangle. He was able to develop a process of thinking to symbolically represent the theorem. He was able to generalize. In future researches, the developmental stages of mathematical thinking in terms of KISS theory of gifted students at different grade levels can be examined.

Yigit made some mistakes in explaining his statements. Although one of these errors verbally stated that he had drawn a right triangle, he did not visually show that the shape he had drawn was a right triangle. He showed that there is a right triangle under the direction of the researcher. In addition, while explaining that the triangle is a right triangle, he stated that a parallel angle is 90 degrees. He immediately realized his mistake; however, this suggests that some preliminary learning may have made him mistake. Because, while taking the square of the length of the value of square roots, he said. Yigit is also studying at the science and arts center. Here, a different program is applied outside the school curriculum. He anticipates some issues. This preliminary learning is thought to cause him to confuse concepts. Therefore, it is thought that it is important to ask students to explain their statements in the lessons in order to prevent possible mistakes.

KISS theory has generally been studied on algebra, linear algebra and analysis (Chin and Tall, 2002; Kidron, 2008; Watson, Spyrou and Tall, 2003). In this research, it has been shown that it can work on geometry. Geometry includes in itself symbolization processes. In other researches in this sense, KISS theory can be examined on different topics of geometry.

## REFERENCES

- Akarsu Yakar, E. (2019). Ortaokul öğrencilerinin matematiksel düşünme süreçlerinin ve matematiksel dil becerilerinin matematiğin üç dünyası kuramsal çerçevesi açısından incelenmesi [Examining the mathematical thinking processes and mathematical language skills of secondary school students in terms of the theoretical framework of the three worlds of mathematics]. Unpublished doctoral dissertation, Dokuz Eylül University, Institute of Educational Sciences, İzmir.



- Altıntaş, E. & Özdemir, A.Ş. (2012). The effect of teaching with the mathematics activity based on purdue model on critical thinking skills and mathematics problem solving attitudes of gifted and non-gifted students. *Procedia - Social and Behavioral Sciences*, 46, 853- 857.
- Baltacı, S. (2016). Examination of gifted students' probability problem solving process in terms of mathematical thinking. *Malaysian Online Journal of Educational Technology*, 4 (4), 18-35.
- Chin, E.T. & Tall, D. (2002). Proof as a formal procept in advanced mathematical thinking. *International Conference on Mathematics: Understanding Proving and Proving to Understand*, p.212-221. National Taiwan Normal University, Taipei, Taiwan.
- Çıldır, M. (2017). An investigation into the creative problem solving skills of gifted students, *Journal of Gifted Education and Creativity*, 4(1), 1-12.
- Davis, G. A. & Rimm, S. B. (2004). *Education of the gifted and talented*. Boston, MA: Pearson Education Press.
- Doğan, A. & Çetin, A. (2018). Üstün yetenekli öğrencilerin matematik problemi çözme tutumuna ve süreçlerine yönelik algılarının incelenmesi [Investigation of the perceptions of gifted students on the problem solving attitudes and processes]. *Cumhuriyet International Journal of Education*, 7(4), 510-533.
- Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences*. New York: Basic.
- Gray, E. & Tall, D. (1994). Duality, ambiguity and flexibility: A proceptual view of simple arithmetic. *The Journal For Research in Mathematics Education*, 26 (2), 115-141.
- Guilford, J. P. (1967). *The Nature of Human Intelligence*. New York: McGraw-Hill.
- Heid, M.K. (1983). Characteristics and special needs of the gifted student in mathematics. *Mathematics Teacher*, 76, 221–226.
- Heinze, A. (2005). Differences in problem solving strategies of mathematically gifted and non-gifted elementary students. *International Education Journal*, 6(2), 175–183.
- Karabey, B. (2010). *İlköğretimdeki üstün yetenekli öğrencilerin yaratıcı problem çözmeye yönelik erişim düzeylerinin ve kritik düşünme becerilerinin belirlenmesi [Determination of access levels and critical thinking skills of gifted students in primary education for creative problem solving]*. Unpublished doctoral dissertation, Dokuz Eylül University / Institute of Educational Sciences, İzmir.
- Karabey, B. & Yürümezoğlu, K. (2015). Yaratıcılık ve üstün yetenekliliğin zekâ kuramları açısından değerlendirilmesi [Evaluation of creativity and giftedness in terms of intelligence theories], *Journal of Buca Education Faculty*, 40, 86-106.
- Kidron, I. (2008). Abstraction and consolidation of the limit procept by means of instrumented schemes: the complementary role of three different frameworks. *Educational studies in mathematics*, 69, 197-216.
- Kirk, S. A. & Gallagher, J. J. (1989). *Educating exceptional children*. Boston, MA: Houghton Mifflin.
- Koshy, V., Ernest, P. & Casey, R. (2009). Mathematically gifted and talented learners: Theory and practice. *International Journal of Mathematical Education in Science and Technology*, 40(2), 213–228.
- Krutetskii, V.A. (1976). *The psychology of mathematical abilities in school children*. Chicago, IL: University of Chicago Press.
- Leikin, R., Koichu, B. & Berman, A. (2009). Mathematical giftedness as a quality of problem-solving acts. R. Leikin, A. Berman ve B. Koichu (Editörler), *Creativity in mathematics and the education of gifted students* (115–128). Rotterdam: Sense Publishers.
- MEB (2018). *Mathematics curriculum (primary and secondary school)*. Ankara: Ministry of National Education.
- Renzulli, J. S. (2003). Conception of giftedness and its relationship to the development of social capital. N. Colangelo ve G. A. Davis (Editörler.) *Handbook of gifted education* (75–87). Boston MA: Allyn and Bacon, Inc.
- Sheffield, L. J. (1994). *The development of gifted and talented mathematics students and the National Council of Teachers of Mathematics Standards* (No. 9404). DIANE Publishing.
- Sriraman, B. (2003). Mathematical giftedness, problem solving and the ability to formulate generalizations: The problem-solving experiences of four gifted students. *Journal of Secondary Gifted Education*, 14(3), 151–165.
- Sternberg, R. J. (2003). Giftedness according to theory of successful intelligence. N. Colangelo ve G. A. Davis (Editörler) *Handbook of gifted education* (88-99). Boston MA: Allyn and Bacon, Inc.
- Tall, D. (2002). *Advanced mathematical thinking*. USA: Kluwer Academic Publishers.





Tall, D. (2008). Developing a theory of mathematical growth. *ZDM Mathematics Education*, 39, 145-154.

Van Garderen, D., Scheuermann, A., & Jackson, C. (2013). Examining how students with diverse abilities use diagrams to solve mathematics word problems. *Learning Disability Quarterly*, 36(3),145-160.

Watson, A., Spyrou, P., & Tall, D.O. (2003). The relationship between physical embodiment and mathematical symbolism: The concept of vector. *The Mediterranean Journal of Mathematics Education*, 12, 73-97.

Yazgan-Sağ, G. & Argün, Z. (2016). Üstün yetenekli öğrencilerin matematiksel problem çözme durumlarındaki motivasyonel öngörülerini [The motivational forethoughts of gifted students in mathematical problem situations]. *Kastamonu Education Journal*, 24(3), 811-828.

TIJSEG



## EDUCATIONAL PRACTICES AND CHALLENGES OF STUDENTS WITH HEARING IMPAIRMENT IN ARBA MINCH COLLEGE OF TEACHERS EDUCATION, SOUTH ETHIOPIA

Tesfaye BASHA

Hawassa University, Department of Special Needs and Inclusive Education, Ethiopia

Orcid: <https://orcid.org/0000-0003-3750-9671>

[tesfayask@yahoo.com](mailto:tesfayask@yahoo.com)

Tadesse ENGIDA

Arba Minch University, Department of Special Needs and Inclusive Education, Ethiopia

Orcid: <https://orcid.org/0000-0002-9296-3394>

[engida\\_t@yahoo.com](mailto:engida_t@yahoo.com)

Muluken TESFAYE

Arba Minch University, Department of Special Needs and Inclusive Education, Ethiopia

Orcid: <https://orcid.org/0000-0002-5608-6726>

[muletesfa2020@gmail.com](mailto:muletesfa2020@gmail.com)

**Received Date:** 20-03-2020

**Accepted Date:** 28-05-2020

**Published Date:** 30-07-2020

### Abstract

This study was aimed at assessing educational practices and challenges of students with hearing impairments in Arba Minch College of Teachers' Education in SNNPR, Ethiopia. In order to obtain a comprehensive understanding academic practices and challenges and ways of improving that impede students with hearing impairments in integration setting. Qualitative research approach of case study design was used to analyze the data. Purposive sampling was employed to select a total of 28 participants; 6 students with hearing impairments, 4 hearing peers, 12 instructors, 4 department heads and 2 college deans. The qualitative data were obtained via interviews, focus group discussion and observation. The finding revealed that there is high communication barrier between teachers and students with hearing impairments. This communication barrier contributed for poor academic performances. The findings of the study revealed that, there is academic achievement gap between students with hearing impairments and hearing students. In addition, limitations of sign language skills, lack of planned financial fund and material support, absence of sign language interpretation, lack of hearing aids were the identified practice and challenges of students with hearing impairments. The study suggested that college administration and teachers can play a critical role in enabling students with hearing impairments to become meaningful participants in education system and society.

**Keywords:** Educational practices, Challenges, Integration, Hearing impairment

### INTRODUCTION

Education is a fundamental human right and one of the main instruments of development in reducing poverty and improving the socioeconomic conditions of a country. The right to education is universal and it extends to all children, youth, and adults with disabilities (UNICEF, 2011). Accordingly, the Ethiopian Constitution (1994: Art. 41 and 91) also states the universal right to education and emphasizes the need to allocate resources and provide assistance to disadvantaged groups. In particular, the Constitution sets out the State's responsibility for the provision of necessary rehabilitation and support services for people with disabilities. The Ethiopian Education and Training Policy document (1994), states that the provision of education to all children is mandatory and special education and training will be provided for people with disabilities in particular and special needs group in general.

According to the academic journals of language and culture of Ethiopian sign language journal entitled "Ethiopian sign language and accessibility for the deaf community" indicated that deafness and hard of hearing are among the many types of disabilities that a number of world population might be a victim of



it at any age (Chimid, Wakuma, & March, 2014). In spite of the common recognition of Human and educational rights of citizens, students with hearing impairments were practically considered mentally and educationally deficient due to their inability to hear and to use spoken language. Bench (1992) also noted that it had been argued that hearing loss leads to problems of adjustment in children because problems with communication produce barriers to social development which are difficult to overcome. Moreover, Guest (2016) identified challenges of students with hearing impairment including classroom acoustics; lighting; language deficiencies; practical shortages; lip-reading/residual hearing; inadequate awareness and knowledge; social concerns; collaboration; shortage of adaptations curriculum and instruction and lack of resources.

In Ethiopian higher education, colleges and universities, students with hearing impairments were treated through the provision of cluster programs. Very few students with hearing impairments receive higher education with great challenges and they encountered academic, psychological, social and emotional and learning difficulties for the long term if it is untreated (Carrington & Robinson, 2006). Addis Ababa University admits these students under linguistic department in the field of sign language and deaf culture study for the last ten years. However, there were not considerable statistical data on the academic admission of students with hearing impairments in Arba Minch College of Teachers Education. Therefore, based on the aforementioned review work this study intended to assess the educational practices and challenges of students with hearing impairments in integrated classroom of the teachers' education college.

### **Statement of the Problem**

The purpose of this study was assessing the educational practices and challenges of students with hearing impairments in Arba Minch College of Teachers Education. The main rationale that initiates to conduct on this problem was the encountering poor academic performance and challenges facing by students with hearing impairment in the college. Based on the researchers' four years observation and experience in the study area; there are absence of skilled manpower and assistive devices, absence of care taking stakeholders and professional assistance, lack of material provisions and application of modern science and technology are some factors that influence the academic performance of students with hearing impairments. The continuity of this problem may lead problem to cope up with the courses offered, low self-esteem and confidence. According to Tesfaye (2002) as cited in Mohammed Ahyte (2013), the biggest challenge facing these individuals are lack of acceptance and wrong attitudes and perception by their own parents, the society and different professionals in the field.

Moreover, different empirical evidences explored in the current study can share an instructor role in the practice and challenges of students with hearing impairments in integrated education and also the limitations of knowledge, positive attitudes, skills and confidences of instructors to the educational practices of integration. Therefore, the reason that initiated the researchers to conduct this study is that the relevant academic carrier and professional experience achieved by the researcher helped to see the gap between educational practices along with challenges and academic performance of students with hearing impairments in the college. In addition, the study gives emphasis on providing relevant recommendations that in turn help students to improve academic performance in particular and to reduce the challenge of students with hearing impairments.

### **Basic Research Questions**

1. How is the academic condition of students with hearing impairments look like?
2. What are the major challenges of students with hearing impairments in the study area?



3. What would be done to overcome barriers of students with hearing impairments?

## METHODS

### Design of the Study

The study was carried out by case study design of qualitative research methods. Creswell (2012) explains a qualitative approach is an appropriate method to study a research problem when the problem needs to be explored: when a complex, detailed understanding is needed; when the researcher wants to write in a literary, flexible style; and when the researcher seeks to understand the context or setting of participants. The researchers employed a series of cases with students with hearing impairments to elaborate their practices, needs and challenges and relevant to their academic performance.

### Participants

Target populations of this study were all students with hearing impairments (hard of hearing and deaf) in the college. The other key participants were department instructors who teach these students, concerned department heads (Special Needs and Inclusive Education, Amharic/Ethiopian language, Mathematics and Integrated Science and Psychology), academic dean & students' dean and hearing peers in the same classroom were the main participant of the study.

### Sampling techniques and Size

One of non-probability sampling techniques; purposive sampling method was employed to select 6 students with hearing impairments, 4 hearing peers, 12 instructors, 4 head of the departments and 2 College deans.

### Instruments

Semi structured interview questions were designed and employed to collect data from selected students with hearing impairments, hearing peers, and deans. Through focus group discussions additional data were collected from department heads and instructors by making two groups. Moreover, to get data related to their academic performance and their condition in different situation document review and observation were done respectively.

### Data Analysis

The collected data via interview, focus group discussion, observation and document analysis analyzed by narrative, quotations, descriptions and thematic analysis techniques

## RESULTS

In the first part of this session demographic information of students with hearing impairments, instructors, hearing peers', head of the departments and college deans presented respectively. Following background information, the qualitative data gathered through interview and focus group discussion are presented. These results are also complemented by data obtained from observation and document review.

**Table 1.** Demographic Information of students with hearing impairments

Cases	Sex	Age	Hearing Loss	dB	Age of onset	Dep't	Acad. Year	Parental Edu. Level	Parent Eco. level
AZ	M	24	HH	51.65	AB	SNIE	2nd	Illiterate	Poor

DB	M	22	PD	111.7	BB	SNIE	3rd	Grade 12	Poor
EZ	M	21	PD	108.3	BB	Math	3rd	Diploma	Medium
ML	M	20	PD	107.8	AB	SNIE	3rd	Illiterate	Poor
MT	F	21	PD	95.85	AB	SNIE	3rd	Illiterate	Poor
YB	F	22	PD	100	AB	Amharic	3rd	Illiterate	Medium

*M= Male, F=Female, HH= Hard of Hearing, PD= Profound Deaf, SNIE=Special Needs and Inclusive Education, PL=Post Lingual, PRL= Pre-Lingual*

**Table 2.** Demographic Information of Peers of students with hearing impairments

Year level	Sex			Age	
	M	F	T	15-20	21-25
Year II	1	-	1	1	-
Year III	1	2	3	-	3
Total	2	2	4	1	3

*M= male, F=Female, T= total*

**Table 3.** Demographic information of college deans, Department heads, instructors and supportive staff

Participants	Sex			Age			Educational level		
	M	F	T	30-40	41-50	Above 50	MA	Degree	Diploma
Deans	2	-	2	-	1	1	2	-	-
Dep't Heads	3	1	4	2	1	1	4	-	-
Instructors	9	3	12	7	3	2	9	3	-

*M= Male, F= Female, T= total, MA= Master degree*

### The Academic Condition of Students with Hearing Impairments

In line with interview and focus group discussion questions and inspection of the researchers here detail background and educational condition of each case are presented:

**AZ's** interview reports on academic background revealed that:

*“My father brought me to regular school. My parents encouraged me to continue my education. I before this school I didn't joined any special schools or units. I started to use sign language, finger spelling, and lip-reading in this college after sign language course I and II. Since I have no knowledge of sign language, little by little I started to practice sign language. However, I am good in academics. When the lesson delivered orally, I was unable to understand. In the meantime, instructors helped me in writing and follow up my lessons in giving due attention. Although, I tried to be involved in different activities like classroom tasks and home works”*

The interview report finding revealed that this hearing impaired student till he reach to college level he passed a lot of challenges without sign language skill. Through his natural abilities reached the higher education.

When asked similar question **DB's** reported that:

*“When I was seven years old, I entered Arba Minch Special needs school. I had hearing test in the Evangelical Church of Mekane Yesus Hosanna School for the Deaf by age of eight. The hearing test result indicated that I am profoundly deaf. After grade six I returned to my birth place Derashe district there I joined Ediget special unit in regular primary school. Completing primary and Senior Secondary Schools in Gidole town I joined Dilla college of teacher education. And then, I transferred to this Arbaminch teacher education college.”*

In addition he added that:

*Currently, in the college I got similar identify groups I can interact more with students with hearing impairments and less with some hearing classmates. Out of the classroom, most of hearing peers do not understand me, this caused for pain. My families encourage me to participate in all aspects of life social and environmental activities. I am positive in accepting advice and showing a little progress in different classroom activities when compared the present circumstances with the previous” I have been participating every year in drama during disability day’s celebration with hearing colleagues.*

The interview reports showed that he passed a lot of ups and downs in school life, like communication barriers, unfriendly environments and facing the challenges which comes from hearing peers and teachers.

The third student with hearing impairment **EZ**’s also reported that:

*“First I went to Arba Minch special needs school, after a year I got the opportunity to join Evangelical Church of Mekane Yesus Hossana school for the deaf. There I attended from grade one to 10. At college, I got some assistance from my colleagues. In class career I perform tasks very well when told to do. In the college, I have good interaction with my hearing classmates, and deaf college colleagues.”*

Furthermore he explained that:

*Moreover, I had a good relationship with everybody in the college, since I had a good attitude for myself. I prefers sign language, lip-reading and finger spelling for communication. I participate in group activities as much as possible. There was common understanding and cooperation among my classmates and this makes me very pleased. Most of the time I passed my spare time studying at home and searching hearing impaired friends. In some cases, I had willing to communicate with the hearing students in written form.*

The study result indicated that the interview participant has a positive self-esteem and attitudes towards others. This helped to understand his surrounding environment in positive ways and he simplified the challenges he is facing

**ML**’s regarding academic background stated as follows:

*“I have been in the regular education for two years. In that setting I was not able to understand lessons well and group discussion as well. So, I was not happy, therefore my parents brought me to Botire Special Needs education unit after grade two seeking support from Special needs teachers. But from grade 4 to 10, I attended regular classes without appropriate support. This led me to poor academic achievements.”* Now, in college I am facing similar challenges.

The fifth HI student **MT**’s about academic background addressed that:

*“My mother taught me some letters in both Amharic and English. I joined the nearby special needs school in Arba Minch town. My mother brought me when I was seven years old to this school. The presence of sign language interpreter in the classroom contributed to know the subjects very well. In the school and out of the school compound I can’t communicate with others in oral language. But when I am with deaf classmates and my teachers I used sign language. I prefer sign language and finger spelling at school and oral language at home. In free time I have involved in every routine household tasks and I was not segregated from participating in school activities.”*

The last respondent **YB**’s also displayed that:

*“I was a student in regular primary school when I lost my hearing. My families play a great role to my education. My father brought me to Arba Minch special needs education. I had the ability to*





*understand verbal expression through reading facial expression and I tried to respond orally. As you can see from college document my personal file disclosed that I am one of the medium achiever in academic performances.*

The obtained brief information from hearing peers interview indicated that:

*“Students with hearing impairments were not excluded from higher education so far. To some extent they were equal access and reasonable accommodation provision and get the required knowledge and skills for social survival and employment just like hearing individuals. Majority of informant hearing students disclosed that hearing impaired students were need love, cooperation, intimacy to be involved in different aspects of their college life”*

When the educational practices of students with hearing impairments revealed by the college deans, instructors were not come with an alternate explanation by using sign language when students with hearing impairments were confused to understand and failed in academic achievement. Since they hadn't enough sign language skill training for communication, the enrollment rate of students with hearing impairments was less than 0.5%, because of less awareness. When we see their enrollment in the last three years; in 2016/2017 they were five in number, in 2017/2018 they were only one and in this year 2018/2019 no students with hearing impairments were enrolled”. This indicated that still a lot expected from society to bring HI (hearing impairment) to schools.

The focus group discussion of instructors and head of the departments forwarded that there is no support provision; except seating them in front of other students and speaking loudly. They didn't get additional financial and material support from the college as resources for them. In our comparison special needs/inclusive education department tried to enable students with hearing impairments to have clear social contact with others. They were commonly agreed on that, no practices of providing interpretation services, unable to communicate with them during the teaching learning process and unable to plan appropriate activities. Integration hinders hearing student's education, rather than helping. In college, Instructors are not well trained to teach the diversity of needs and to reduce confusions some among learners either using sign language. Instructors use the same curriculum to trainees with disabilities with out adaptations and don't provide extra class and time. Instruction adaptations are not a common activity in the institution. Teaching aids or materials are not used by instructors for teaching and learning processes. Moreover, these students less participated in group discussion. They did not get appropriate support as a result they can get better results in their academic performance.

These students could equally attend education in integrated settings with some exceptions. They couldn't always deserve an intensified support and follow up from instructors. Integration with hearing students in the same class could help to remove negative social stigma and discrimination that hinder hearing students' education.

The researchers' observation and document review disclosed that; AZ during school and free time has intimate relations with other students with hearing impairments to learn more about sign language. DB used gestures and handwriting methods for communication purposes with the college community. Thus, in such situation DB was able to receive and respond. Instructors pointed out that EZ was quite good in his academic performance and in the classroom, properly perform his tasks. ML was active during classroom activities. Instructors noted that MT performs tasks and becomes involved and participating in activities with both hearing and deaf peers. YB seems like hearing in the classroom. They enjoy equally with hearing individuals in co-curricular. Documents from registrar revealed that mean average CGPA of the six students with hearing impairments 2.51 and the mean average results of none hearing

impaired were 2.75. When the mean average CGPAs results compared of students with hearing impairments were less than that of hearing. Detail comparison of the two group's academic performance is presented in the table below.

**Table 4.** Students with hearing impairment & hearing Students four semesters average score

No	Name	Degree of Hearing Loss			Character	Average GPA of HI	Average (x GPA of Hearing sts	Acad. Year
		Right Ear	Left Ear	Average				
1	AZ	50	53.3	51.65	HH	3.42	2.80	2 <sup>nd</sup> SNIE
2	DB	110	113.3	111.65	TD	2.65	2.75	3 <sup>rd</sup> NSIE
3	EZ	103.3	113.3	108.3	TD	2.28	2.77	3 <sup>rd</sup> Math
4	ML	118.8	96.7	107.75	TD	2.06	2.75	3 <sup>rd</sup> SNIE
5	MT	120	71.7	95.85	TD	2.30	2.75	3 <sup>rd</sup> SNIE
6	YB	100	100	100	TD	2.37	2.87	3 <sup>rd</sup> Amharic

*TD= Totally deaf HH= Hard of hearing, HL= Hearing level*

### Educational Challenges of Students with Hearing Impairments

Regarding the challenges according to AZ's interview report disclosed that 'he felt discomfort and kept silent when he lost to understand the lesson. He put himself inferior to other members of the classmates as being different. In such situation, he feels that he was the one that was to hear. He was delighted to be with every member of the college community, but sometimes he complained about his deafness. He felt as if he lost many things. In such events, he didn't take part in the class with the hearing peers. In addition, he has shortage of interaction with his classmates, instructors, and administrator, but through louder voice he could communicate. Sometimes he asked unrelated questions because of communication barriers to the lesson, the instructors tend to ignore instead of correcting the mistakes.'

The other student DB had no more faced challenges in his academic career related to his deafness, but sometimes misunderstanding of instructors hurts him. The third case EZ reported that:

*'I had not good exposure to interact with persons outside the classroom. Hearing people undermine me and insult on me during classroom group discussion. They call me 'dudda' (meaning dumb or mute). At a time; I became offended and revealed a sense of inferiority. However, my overall impression about the hearing is not bad. Nevertheless, I didn't categorize all the hearing with judgmental remarks. I do not feel to regret about their misconception about the deaf 'deafness is not an insult.' He puts; 'I am deaf, so I am available in the college, I felt that I am equal to everybody. But when I was out of the college, I felt inferior to the hearing. It seemed that I was unable to adjust myself to the new environment and academic performance'.*

Practical observation of the researchers also assures that, he was non-interactive in the classroom tasks, he not provided responses, had a communication barrier. Out of the classroom, he frequently showed his interaction and physical contact with the same identity groups of deaf peers.



ML also indicated that:

*“I had no noticeable interaction with hearing students in the classroom. This happened, particularly, when I was with hearing persons without ability to sign. The hearing person’s responses not clear for me. I often perceived that my parents feel a lot. Their feeling that I am separated from mutual interaction of family as regards of my deafness. But if I fail to understand them, they became irritated. I feel that my deafness makes me different.”*

He also revealed that:

*“The instructors advise me when I sometimes get frustrated due to the lack of normal interaction with hearing peers and persons. In the college, most of the time I feel that I do not have good feelings on any hearing persons. Sometimes hearing peers threw me small stones from the back, considering that they were seeking my attention to communicate with them, but I was discomfort by their acts. I simply keep on walking, I fear that they could hurt me, and I simply ignore for their acts”*

The fifth case MT disclosed that:

*“I worried when I didn’t get my peers’ ideas and when they don’t communicate in sign language in the classroom during the teaching and learning process. Concerning my classroom and social interaction in the classroom there were problem of group discussion with hearing peers and social contract limited only to my family. In the meantime, my family didn’t allow me out to meet hearing peers for an academic career. Because they worry about me as I could face problems. In addition, I have challenges to interact with hearing administrators who are not communicating with sign language.*

Similarly, YB revealed challenges as follows:

*“I felt extremely dislike in the classroom for some instructors who consider me as I am dependent on others. my inclination toward the lip or speech reading instead of using simultaneously with other approaches provided her with interaction problem, so I was in problem, most instructors didn’t understand my understanding of lip reading, this leads me in a disadvantageous position. But during classroom interaction unmet, I showed signs of frustration about my deafness.” In the classroom, she was not fully participating because some instructors didn’t properly treat her. Since the instructors doubt about her deafness, consequently they have avoided, no one can support her individually. She stated about hearing peers. In her summary “sometimes I felt, the hearing didn’t accept me. I observed that, they have their own code. They tease at me. This event seemed to have incomplete interaction.”*

Regarding hearing peer’s common narratives and reports the major challenges of students with hearing impairments in this college is communication barrier. The other challenges forwarded were inappropriate sitting arrangements and lag behind in academics and limitation in access information. Moreover, a problem of understanding hearing peers, problems of lip reading and an academic gap. Furthermore, feelings of uncomfortable in the classroom during lecture, note taking, absence of limitation of provision resource material, lack of hearing aids and noticeable problems of not participating actively in classroom discussions.

Responses of college deans on challenges indicated that there is no interpreter that could help them during the teaching and learning process. Lack of interpreter created the gap in academic achievement between



children with normal hearing and hearing loss. Students with hearing loss are not tested by an audiologist. No hearing aids. There is no organized fund or materials from the respected department for the hearing impairment. The College didn't provide appropriate support to them. The reason is not lack of resource however, lack of concern and awareness. Other challenges students with HI facing are listening problem, what their teachers speak in the classroom, in different meetings and celebrations. Because of communication barriers students with hearing impairment isolated from hearing students in group works and different cooperative leanings. Since college community couldn't communicate with hearing loss peers using sign language they feel alone, sense of exclusion and discrimination.

Focused group discussion of department heads of the selected departments and instructors pointed out that seating arrangement and interpretation services the main problems when deaf students attending in regular settings. Instructors weren't given orientation on how to assist their hearing impaired students. Students often tend to feel uncomfortable in the classroom when drawn attention to their hearing problems. Most of the instructors they don't have interest to support in providing information before hand lecture. In the school career students miss many academic opportunities due to their hearing problems.

### **Mechanisms to Overcome Educational Barriers**

According to hearing peer's suggestion "to make integration more effective for the future working on the challenges and the way of coping up to achieve valuable skills with knowledge for employment and social survival equal to the hearing learners need. Improving capacity and access to information of educators could overcome resistance to integration. Making comfortable and conducive classroom for teaching learning process is vital. In order to be successful in classroom, students need to learn how to communicate and work with their peers, regardless of any barriers that might face. Developing social acceptance and capacitating institute community for meaningful social interaction. Improving guidance & counseling services and resource center services is also very important."

Responses from college deans also indicated that for the future the colleges plan to enhance the education of students with hearing impairment by establishing well equipped disability centre, appropriate sign language skill training for instructors, diagnosis services of hearing, provision of hearing aids for students with hard of hearing, appointing interpreters and focusing on awareness raising to all college communities.

Head of the departments and instructors also suggested that developing strategic plan, improvement of service delivery to minimize scarcities of resource center equipment, employing sign language interpreter, multi-professional services, fulfilling teaching materials, hearing examination and hearing aid provision, adjusting sitting arrangement, making classrooms more inclusive through group discussion, awareness raising and sign language training are expected means to overcome the problem.

## **DISCUSSION**

### **The Academic Condition of Students with Hearing Impairments**

The major findings on educational condition of students with hearing impairments get the chance to go to special needs schools or units; they prefer lip reading and gesture in the classroom. Students with hearing impairments students displayed that when the lessons were delivered orally without using blackboard or white board majority of them unable to understand the instructions. According to MoE, (2012) assigning appropriate professionals to teach the courses and continuously upgrading those to do their job more



competently were sounded. Therefore higher education institution needs reforming. 50% of them have intention of participating in all aspects of life, such as academic, social and emotional.

Most of them passed their spare time studying at home and searching hearing impaired friends. The finding revealed that students with hearing impairments need to share information with their non-hearing peers. A majority of interviewer states that practices of students with hearing impairments in the college indicate that; they perform tasks in classroom similar to that of their peers and participate in group activities as much as possible; both findings of Gathoo (2006) revealed that; students with hearing impairments can face problems to: access, participation and equity, quality, relevance and management. In connection with this idea, there is a still a gap which needs further investigation. The finding from students with hearing impairments and other participants disclosed that there were not excluded from higher education enrollment; but scholars Knoors and Hermans (2010) concluded that deaf students in regular learning environments often feel themselves excluded and isolated from classroom communication and interactions.

The interview finding indicates that there were no key practices of financial and material support provisions in the college. In line with interview and MoE documents participants confirms that appropriate allocation of financial and material support provisions. Based on observation minimal resource center service is seen. Scholars (Carrington and Robinson, 2006) shows that resource center was a pedagogical center, which is equipped with specific materials and assistive devices as well as staffed with professionals to give support to special needs education learners, teachers and neighboring schools. Therefore; to fill the gap equipping resource center with specific materials and assistive devices as well as staffed with professionals were expected.

The finding from interviews and observation indicates that Inclusion of students with hearing impairments into classroom benefit instructor as well as regular students. According (Tirusew, 2005) inclusive education overcome attitudinal barriers and foster positive attitudes by promoting the value of appreciating differences, common sympathy, tolerance and helpfulness among all kids. Thus, from participants' findings and research findings inclusive education benefits instructors. In contrary to this some studies conducted in developing countries (Mushoriwa and Gasva, 2008) which found negative attitudes by regular teachers and pupils towards inclusion. Also Booth, Booth & Ainscow (2003) found in the Netherlands that many students with hearing impairment who had been included in regular classes wanted to go back to their special schools after suffering stigmatization and isolation.

In the college integration of students with hearing impairments should be the educational rights. Also international policy documents revealed that “the right to education is universal and it extends to all children, youth, and adults with disabilities (UNICEF, 2011).” Therefore attending in integrated classroom for SWHIs should be the educational rights.

The finding from interviews and observation displayed that SWHIs in education couldn't equally attend in integration setting. In contrary to this, The Ethiopian Education and Training Policy document (TGE, 1994) states that the provision of education to all children was mandatory based on their abilities and needs in equal bases. Therefore; schools have to work for equal needs of education in integrated settings.

The finding from observation indicated that students with hearing impairments are better in academic performances in regular classroom. Scholars (Biklen, 1992) found that being integrated into regular classes could play a critical role in advancing better academic performance for children with disabilities





would do better when they sense that they were accepted and valued by their ‘normal’ peers.” Therefore based on findings inclusion could overcome discrimination, exclusion and negative social stigma.

The finding disclosed that students with hearing impairments when placed in regular classrooms, instructors willingness were decreased, this made poor performances in their academics. According to Florian (2004), findings; many schools resist the pressure to become inclusive, because they were concerned that doing so would have a negative impact on the academic progress of other students and lower academic standards. Therefore changing negative attitudes of instructors is the most important things.

The finding of the interview results revealed that instructors used the same curriculum without adaptation. hearing impaired students follow the same curriculum as their hearing counterparts with little or no improvement. In that, the needs of many students with hearing impairment implies that there should be profound changes in the curriculum, methodology and organization of the schools in order to accommodate the needs of all learners (Cawthon et al., 2011). The study results concluded that the curriculum should be inclusive with profound changes and the instructors should adapt curriculum and evaluation methods of hearing impairments. In addition to teaching methodology, organization of the schools system should accommodate the needs of all learners.

### **Educational Challenges of Students with Hearing Impairments**

Students with hearing impairments in integration classroom showed that signs of frustration when their needs remained unmet as the lack of hearing aid provision. According to Guest (2016) schools are not capable of supplying their deaf or hard-of-hearing students with the proper technology that could significantly increase the learning, development process. Therefore students with hearing impairments need proper technology supports.

Students with hearing impairments interview results revealed that they were worried when they didn't understand classroom conversation and feeling disappointed when some instructors deliver the course orally. This can be a challenge in an environment where essential information is delivered entirely by word of mouth. Communication difficulties and adjustments lead to anxiety in performing in front of others. Therefore, to overcome barriers such as anxiety and communication difficulties instructors ought to use total communication or interpretation services to minimize frustration of the learning.

The interview responses of students with hearing impairments revealed that there is no hearing test equipment and provision of hearing aids. The researcher work experience also confirmed that there are no audiometer and hearing aids in college to support students with hearing problems.

Finding from all respondents disclosed that students with hearing impairments are academically lagging behind when compared with their hearing peers counterparts because of limitation access to information and problems of sign language knowledgeable instructors This contributed for lower academic performances. Cawthon et al. (2011) in his research found that in all integrated schools in average, children with hearing difficulties had a lower grade point average than their school mates. In addition, Ministry of Education the academic performance of children with hearing impairment is lower than those without hearing impairment (MOE 2013). Other scholars such as John & Sylod (2013) pointed out that, the level of achievement is related to parental involvement and the quantity, quality, and timing of the support services children receive. However, Therefore, based on findings the gap in academic





achievement between children with normal hearing and those with hearing loss usually widens as they progress through school.

The majority of participants interview responses revealed that there is no multi-disciplinary services in the college. As MoE (2012) document confirmed that there is acute shortage of professionals, and support staff in SNE/IE at all levels. Many scholars agreed that multi-disciplinary team professionals support determine the child's eligibility for special education service.

The finding from students with hearing impairments interview and classroom observation revealed that majority of instructors didn't facilitate lip-reading skills for deaf learners. Guest (2016) indicates that "teachers often hypothesize that their deaf students are skillful of lip-reading" – which can be true – but it is essential to keep in mind that only 30-40% of spoken English are distinguishable on the lips. In addition scholars like (Ysseldyke & Algozine, 1995) revealed that "teacher should speak clearly and naturally without exaggerating lip movements or volume." Therefore, during teaching and learning process lip reading require not exaggerated lip movement and volume with clear articulation and slowly.

The study indicated that instructors were not considering seating arrangements and how to assist of their hearing impaired students. Deaf and hard-of-hearing students need full visual access, so the best seating arrangement for full participation, engagement and access by these students is to arrange desk in a "U" shape" (Guest, 2016). The interview response from students with hearing impairments and observation confirms that adjusting seating arrangements in front row of a classroom helps their learning.

The interview results of students with hearing impairments indicated that they miss many opportunities due to language barrier. According to Tirussew (2005) deaf people have missed many opportunities due to the fact that they were being left out because of the gap that language barriers created. Therefore, the findings addressed that attention must be given to minimize language barrier through sign language training.

Interview responses of students with hearing impairments disclosed that instructors couldn't incorporate visual and kinesthetic activities in teaching and learning process. The classroom observation also confirms that sign language limitation in teaching and learning process highly prevailed. Participants of this study were worried about signs language shortage for classroom use. This study also revealed that there is a communication gap between the deaf and their instructors. Therefore, visual teaching materials with sign language in teaching and learning process very important to better academic performances.

### **Mechanisms to Overcome Educational Barriers**

The major findings of the study revealed that to overcome educational barrier improving peer interaction, changing attitudes of teachers and peers, increasing supports from counselors, provision of appropriate teaching materials, creating friendly learning environment, and facilitating classroom arrangements.

Furthermore, enhancing academic performance, provision of sign language interpreter, sign language skill development among instructors and establish the disability centre to support with necessary materials. In addition, in order to reduce the challenges testing hearing level and provision of hearing aids are helpful to provide appropriate intervention. Improving access to information, developing social interaction, improving resource center services and zero rejection are supportive for academic achievements. Developing individualized educational program in the college also helpful for their survival in education. Adaptation of



the curriculum, improving evaluation and teaching methods could improve the learning condition of the hearing impairments.

The finding discloses that there were no strategic plans in the college to improve service delivery. According to (Ysseldyke & Algozine, 1995 as cited in MoE, 2013) a document illustrates that the issues in deaf education are very complex, and the population is far from homogeneous. Flexible delivery of teaching materials via electronic media is also particularly helpful for students who have difficulty accessing information in the usual ways. For deaf students new technology and the internet in particular, could be used to bridge many gaps. There is no strategic plan of the college to improve service delivery, so it needs attention. There were scarcity of resource center equipment, facilitating rehabilitation and other services. Therefore, majority of participants and observation reflected that fulfilling services as well as materials might create a safe learning environment for students with hearing impairments.

## CONCLUSION

This study explored the educational practices and challenges of students with hearing impairments in Arba Minch College of Teacher Education, Gamo zone SNNPR. The study assessed their educational practices and challenges in inclusive education settings. In addition, it provided information to address quantitative approach with a research interview questions. It produced data that could inform decision makers, teachers, department heads, deans, college of education administrative staffs and higher institution about current status of students with hearing impairments practices and challenges.

Regarding academic practices of students with hearing impairments there is limitation of sign language that create communication barrier between teachers and students with hearing impairments. The limitation of sign language skills of instructors to communicate with hearing impairments contributed for poor academic performances. The findings of the study revealed that, there is academic achievement gap between students with hearing impairments and hearing students. This limitation of sign language bewilders social interactions and their academic achievement. Moreover, absence of sign language interpretation services, adaptation of the curriculum and limitation of using visual teaching aids dissatisfied during teaching and learning process the learners. This dissatisfaction led students with hearing impairments to less interest of learning and fewer achievements.

Concerning challenges of students with hearing impairments, the educational opportunities for students with hearing impairments in integration have both psychological and social advantages. Integration education brings the child into the community, creates the enjoyment of working with peers and opportunity to no longer feel excluded, opens opportunity to communicate and share common understanding. Furthermore, leads to better academic performance and social acceptance. However, the finding revealed that students with hearing impairments often tend to feel uncomfortable in the classroom instructions because of communication barriers and administrative staffs are not in a position of fulfilling the needs of students.

Furthermore, the finding disclosed that there are a lot of challenges students with hearing impairments facing in integrated classrooms such as limited supports from classroom instructors, absence of interpreter and rigid curriculum, lack of teaching aids, communication barrier and lack of access for information were major challenges in teaching and learning processes.



From this study it is clear that instructors feel that achieving this complex task requires action at all levels; proactive leadership in the college; removing communication and interpretation barrier, creating responsive support system ; ongoing professional development in sign language skill and time for joint planning; developing collaborative relationships between teachers and heads, support from concerned agencies; and effective interventions by support agencies and adequate and planned funding needed to facilitate equal educational participation. Societal responses to diversity need to be multifaceted and college administration and teachers can play a critical role in enabling students and hearing impairments to become meaningful participants in education system and society.

## REFERENCES

- Bench, R.J. (1992). *Communication skills in hearing impaired children*. London: Whurr Publications.
- Biklen, D. (1992). *Schooling without labels. Parents educators and inclusive education*. USA: Temple University Press.
- Carrington, S., & Robinson, R. (2006). Inclusive school community: why is it so complex?. *International journal of inclusive education*, 10(4-5), 323-334.
- Cawthon, S. W., Winton, S. M., Garberoglio, C. L., & Gobble, M. E. (2011). The effects of American Sign Language as an assessment accommodation for students who are deaf or hard of hearing. *Journal of Deaf Studies and Deaf Education*, 16(2), 198-211.
- Chimid, W. (2014). Ethiopian sign language and accessibility for the deaf community language and culture of Ethiopian sign language *journal research, Jimma University*.
- Creswell, J.W. (2012). *Educational research planning, conducting, and evaluating quantitative and qualitative research*. Boston: Pearson Education Inc.
- Florian, L., Rouse, M., Black-Hawkins, K., & Jull, S. (2004). What can national data sets tell us about inclusion and pupil achievement?. *British Journal of Special Education*, 31(3), 115-121.
- Gathoo V. (2006) Higher Education for person with disability. *National Journal of Education*; 10(2):131-167
- Guest, R. (2016). *Blended and personalized learning. 10 challenges deaf students face in classroom*.
- John, M., & Sylod, C. (2013). *Challenges faced by Hearing Impaired pupils in learning: A case study of King George VI Memorial School*. IOSR Journal of Research & Method in Education 2320–7374 Volume 2.
- Knoors H., & Hermans, D. (2010). *Effective instruction for deaf and hard-of-hearing students: Teaching strategies, school settings and student characteristics*. Oxford Handbook of Deaf 84.
- MoE. (1994). *Education and training policy*.
- MoE. (2012). *Special needs/inclusive education program strategy implementation guideline*. MoE: Addis Ababa.
- MoE. (2013). *Inclusive education in primary schools, Addis Ababa*, pp.26, 29-30,74
- Mohammed Hayat, I. (2013). *Status of inclusive education of hearing impaired students in primary schools, the case of yekatit 23 special primary school and mekanissa school for the deaf in Addis Ababa*. Addis Ababa. *Secondary Education*. Inclusive Education Reports Jakarta, Indonesia.
- UNICEF. (2011). *The right of children with disabilities to education: A rights-based approach to inclusive education*. Geneva.
- Yasseldyke, A. (1995). *Special education, practical approach for teachers*. Boston: Houghton Mifflin.