Organization and Management of Inclusive Education Resource Centers in Gamo Zone Primary Schools

Sewalem Tsega[1], Solomon Sapo[2] and Wudnesh Aschenaki[3]

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Abstract: Inclusive education resource centers are pedagogical centers equipped with specific materials and support devices and staffed with professionals to support LSENs teachers, and satellite schools. This study aims at exploring the current status of the organization and management of inclusive education resource centers in Gamo zone primary schools in Southern Ethiopia. A convergent parallel mixed design was used to blend both quantitative and qualitative research methods. Primary data were obtained from 136 systematically selected sample units that comprised 95(36.5%) teachers and 41(69.5%) resource center core team members. A self-developed questionnaire, non-participant observation, semi-structured interviews, and document analysis were used as data-gathering tools. Quantitative data were analyzed using mean, SD, independent sample t-test, and Pearson's correlation coefficient(r), whereas qualitative data were analyzed through the narrative description. Based on the results, inclusive education resource centers are not well organized with necessary materials and professionals, perhaps due to the absence of professionals and the inadequacy of special equipment and support devices. In contrast, the resource center core team weakly managed their implementation, more likely due to a lack of special skills. Most probably due to resource center-related training received, there are some significant view variations between the respondent groups for management and organization of inclusive education resource centers. It can also be concluded that when the resource center core team increases their involvement by at least an average, the centers tend to be well organized since the two variables have moderate and significant positive correlations with each other. The resource center core team, therefore, should better *design educational projects* and work in collaboration with school stakeholders as well as NGOs to lobby for additional funds. They should also provide awareness raising and special skill training for school teachers regarding inclusion and inclusive education resource centers. Above all, district education offices should work closely with resource center schools and allocate budget mainly for recruiting professionals and purchasing special equipment for the centers.

Key Words: inclusive education resource centers, management, organization, resource center, core team

[1] Department of Pedagogical Sciences, School of Pedagogical & Behavioral Sciences, Arba Minch University, Ethiopia. Email: bulchasapo@gmail.com

[2] School of Psychology, College of Education & Behavioral Sciences, Addis Ababa University, Ethiopia. Email: sewalemtsega@yahoo.com

3 Department of Special Needs & Inclusive Education, School of Pedagogical & Behavioral Sciences, Arba Minch University, Ethiopia

Background of the Study

In Ethiopia, only four percent of the estimated population of Learners with Special Educational Needs (LSENs) are enrolled in primary school (MoE, 2015) although this has been increasing in recent years. Likewise, the Ethiopian government almost doubled the share of its budget allocated to education, from 15% to 27% (UNESCO, 2016). There are indicators that changes are observed in the education system in responding to diverse learning needs and the increasing number of children with disabilities in schools (Bekele, 2017). On the contrary, the World Bank (2018), in its pilot study titled *Diagnostic of Inclusive Education Resource Centers* (IERCs) *in Ethiopia*, identified that many children with disabilities are not integrated into the education system. However, all children have the right to be educated regardless of their gender, location, religion, and particular educational needs/disabilities. Moreover, education for all children is a fundamental right enshrined in national and international regulatory frameworks, even though the right to education does not necessarily imply inclusion and quality education (UNICEF, 2014). Consequently, the potential of inclusive education to improve the overall quality of education to enable the system to respond to all types of diversity, and to make the system more cost-effective has also been highlighted (Ainscow, Booth, & Dyson 2006; Polat, 2011; Rieser, 2012).

For any educational reform and successful education for LSENs, IERCs play a significant role in many countries worldwide (Ekanem, 2015; Tefera et al., 2015). Accordingly, Ethiopia started the movement towards inclusive education mainly through such resource centers (Beyene &Tizazu, 2010; MoE, 2016; Franck & Joshi, 2017). In this regard, the term inclusion means ending all exclusion for all children with disabilities and realizing full-time placement in regular education with appropriate educational support within a classroom. Its aim is to be realized through the effective implementation of IERCs (Booth &Ainscow, 2011; Kearney, 2011; Cologon, 2013). Human variations and differences are naturally occurring and a valuable part of the

society that is going to be reflected in schools. As a result, schools are expected to offer opportunities for a range of working methods and individualized learning so that no child remains outside the fellowship and participation in schools (UNICEF, 2014). To this end, the ratification of international and local policies such as EFA, FPE, IDEA, UNCRPD, ESDPs, the Salamanca Framework for Action (1994), and current trends like 'Full Inclusion Movement' have a great impact on bringing in a large number of LSENs into the regular schools. This process demands an effective organization, implementation, and management of IERCs, especially in primary schools. Ethiopia has ratified different international conventions and enshrined them in its various domestic laws, policies, strategies, and programs that contribute to the expansion of inclusive education in the country, mainly through the centers mentioned above (Malle et al., 2015; Tefera et al., 2015; MoE, 2016; Abdella, 2017). In light of this, inclusive education resource center is defined by the Ministry of Education in its strategy implementation guideline as *a pedagogical center that is equipped with specific materials and assistive devices as well as staffed with professionals to give support to LSENs, teachers, and neighboring schools* (MoE, 2012b:11).

According to Santwona Memorial Academy Pvt. Ltd. (2011), Great Britain was the pioneer in initiating the practice of IERCs in 1960. The center in Britain was aimed at providing support for teachers and educational officials, developing their skills for managing the center, responding to diversity, designing and distributing curriculum, and providing in-service training to improve the quality of education. For their historical development, special schools were used as IERCs in some countries, such as Kenya, South Africa, Armenia, Sweden, India, Hong Kong, Ethiopia, Nepal, and the Philippines. In Kenya, for instance, a central resource center was established to provide specialist support to schools and families. The center in Kenya has a library, training facilities, a therapy area, and a communication unit (Ogot, 2004).

In South Africa, where special schools have been converted to IERCs since 2001, special school resource centers as they are referred to are intended to become support bases, together with district-based support teams to provide full-service for ordinary schools, as well as to cater for learners who require high levels of support when they face barriers (DoE, 2005). Likewise, there are a limited number of special schools in Armenia, and all the centers are divided based on the type of disability they address; each special school has the potential to act as a resource center for any mainstream school working with students who fit one of those disability profiles (Gibb et al., 2007). The conceptual and operational frameworks for IERCs are similar, and the main focus is on supporting LSENs in Sweden. In India, two resource centers are established in Colaba (urban) and Pelhar (rural) as part of a project which started in 2010 (ShikshaSankalp, 2010). The resource centers in India provide assessment, support services, treatment, training, and guidance to referral services for children with disabilities identified in the local schools and homes in the two catchment areas.

Moreover, in other parts of India, there are plans underway to establish IERCs (The Hindu, 2010). In Hong Kong, the focus is on the inclusive education center model, which supports mainstream schools, including LSENs. Special and mainstream schools in Hong Kong are invited to establish themselves as resource support hubs for partner mainstream schools. Both mainstream and special schools are hence selected to be converted into IERCs, although it would appear that special schools are preferred given their existing resources and expertise (Forlin, 2010).

Among others, Hong Kong appears to be the only country like Ethiopia where the model includes mainstream schools converted into IERCs, and students with special needs are supported with their non-disabled peers. The centers are based on the community-based model that comprises the school community in the resource center, PTSA, NGOs, and satellite schools, which work collaboratively for mutual benefit (Forlin & Rose, 2010; Siska etal., 2019). The review of the existing

literature on IERCs in Ethiopia, such as Pather (2013), depicted that some schools consider the Resource Room the only Resource Center in Ethiopia. On the other hand, the 'SNIE Program Strategy', described the concept of the resource center as the whole school rather than a mere room where materials are stored (MoE, 2012).

In countries like Sweden, India, and South Africa, resource centers are open only for children with disabilities, especially those with severe and complex needs, but continue to support students with disabilities in neighboring mainstream schools. In India, South Africa, and Kenya, special schools are essentially converted into IERCs. The same principle is applied in some areas where special schools exist in Ethiopia although most IERCs are established in mainstream primary schools. However, in Nepal, the fundamental functions of IERCs are assisting and supervising teaching and learning activities at least once a month; organizing discussions with satellite schools at least once a month; participating in and coordinating different co-curricular activities for all satellite and cluster schools; collecting and disseminating teaching materials and supplies to the schools, and organizing workshops and dialogues (Santwona Memorial Academy Pvt. Ltd., 2011). Similarly, in the Philippines, such centers were named special needs resource centers and aimed at providing support for the education of children with diverse abilities in inclusive classrooms. On top of that, the resource centers were supposed to provide support, including facilitating training, co-teaching, and creating linkage with different stakeholders to include LSENs in inclusive settings for teachers at cluster and satellite schools (Quijano, n.d.).

Likewise, as an implementation strategy for inclusive education in Ethiopia, IERCs were established with the technical assistance of the Finnish government through a Special Needs project entitled "Special Needs Education Program in Ethiopia, 2008-2012," which led to the establishment of nine resource centers across the country which support some satellite schools within their communities (MoE, 2006). A group of three to five satellite schools belongs to one core or center

school. Hence, in such center schools, educational materials are prepared, which the satellite schools can then borrow. Teacher training and teacher meetings for experience sharing are also held in these cluster center schools for teachers teaching at both the core and satellite schools (Jennings, 2011). Therefore, the Ministry of Education committed itself through its Inclusive Education Strategic Plan to ensure that IERCs are equipped with appropriate materials and professional staff. Accordingly, appropriate materials include, for example, Montessori educational kits, TV, DVD, Video camera, wheelchair, cane, hearing aid, low vision materials, crutch and the likes. Similarly, professionals mainly include itinerant teachers, psychologists, braille trainers, and sign language interpreters and the like. The intention was not only to support children with LSENs but also to 'give support to teachers in the cluster, satellite, and neighboring schools'(MoE, 2012). In general, the ultimate objectives of the aforementioned centers in Ethiopia are to provide necessary teaching expertise to support the learning of all children, including those with LSENs in both special and mainstream schools, provide necessary specialist support to enhance the psycho-social and medical needs of all children so that their learning capacities are enhanced, provide the necessary equipment/materials and assistive devices to enhance the learning capacities of LSENs, and provide support to schools and teachers to include all children in a cluster, satellite, and neighboring primary schools.

Consequently, the guideline for establishing and managing IERCs formed in 2015 pinpoints that there are 113 IERCs established in Ethiopia (MoE 2015). Accordingly, eleven of these centers were established and organized to promote inclusion. Hence, the present study explored the current conditions of four IERCs in Gamo zone primary schools in South Nation Nationalities Peoples Region, Ethiopia. Consequently, assessment of the organization for such centers and RCCT involvement in managing such centers was one of the main rationale for undertaking the current study. Currently, inclusive education is being implemented based on the assumption that

all children can learn if they are provided with a rich school learning environment and support. Hence, the Ethiopian government has given emphasis and preferred inclusive education to segregated education and appears to show its commitment to bring all children to school following the philosophy of inclusion (Tefera et.al., 2015, MoE, 2016; Franck & Joshi, 2017). Even though there are legal and policy framework in Ethiopia that support the provision of inclusive education, there is still a considerable gap in terms of actualizing into reality (Mitiku et.al., 2014; MoE, 2016; Franck & Joshi, 2017; Tola, 2017; Beyene et.al., 2020). This is so because inclusion requires practical changes in the school and its system including common attitude of the school community, instructional adaptation, educational provisions, curriculum modification, and physical adaptation for all children with diverse background and abilities (UNESCO, 2005). That is why the organization and management of the existing centers in realizing inclusion need to be explored and studied (Tonegawa, 2019).

Similarly, Gedfie and Negassa (2019) conducted a study concerning the contributions of the IERCs in the implementation of inclusive education for LSENs at Atse Sertse Dingil cluster primary school in Ethiopia and revealed that the resource center failed to adequately address the diverse needs of LSENs and teachers even if the school tried to mobilize the community for the education of LSENs through organizing dialogues and workshops. The center also did not function adequately in supporting the education of LSENs due to lack of finance, an attitude, a shortage of materials, and trained human resources (Govender, 2005; Mosha, 2015). On the other hand, special education resources were also not adequate in schools, as they were unevenly distributed, and the few available resources were not efficiently used, while others were often made available to normal students (Fabunmi, 2000). In this regard, the active involvement of RCCT in managing the centers under investigation is of paramount importance for the effective implementation of the established centers because the centers aim at providing LSENs with necessary service

provisions to maximize children's potential across the nation (Rafferty et.al., 2001).

Likewise, Giordano (2008) and Tonegawa (2019) confirmed that the purpose of establishing resource centers in cluster schools is to effectively and efficiently support teachers and learners in nearby schools. However, Govender (2005), in his study, asserted that about 86.5% of the respondents felt their school resource centers were not functioning at their optimum level. Mosha (2015) also revealed that the centers were much more underutilized as the teachers used only 10 percent of their time to use the resource center for their purpose. He also asserted that scarcity of finance limited the ability to fulfill or organize resource materials to accommodate the needs of all learners. In this respect, the responsibility of RCCT formed at cluster center primary schools revolved around ensuring adequate provision of resources and effective management of the centers to their purpose. Hence, the current study focused on assessing the involvement of this core team and the adequacy of the provided resources which aimed at promoting the inclusion of all learners including LSENs.

As far as the researchers' pieces of experiential knowledge are concerned, there are almost no empirical studies conducted in the present study area, which provide some insights about the current conditions of the existing IERCs. During the study area visit, we observed inadequate special equipment and professionals, as well as a lack of coordination among RCCT members, who are responsible for managing the implementation of IERCs in both cluster center schools and satellite schools. Consequently, the centers are not uniquely functioning more than pedagogical centers when providing the required services for students, mainly LSENs, to promote inclusion. Moreover, the resource centers are also not considered as well organized as per the outlined standards of the Ministry of Education. Methodologically, this study is also different from the existing local studies, mainly in using a convergent parallel mixed research design. Most of the previous studies employed qualitative research methods with case

study design, one-point-in-time mixed methods, descriptive surveys, and thematic literature review.

Furthermore, as one of the novelty dimensions, the human rights model on disability was also used to theoretically frame the variables under inquiry. This study mainly focused on identifying the extent of resources organized and RCCT involvement in the management of study area resource center primary schools. It also attempted to analyze a significant rating score difference between study groups (i. e., teachers and RCCT) for variables such as organization and management. Lastly, it tried to find out the relationship between the organization and management of the centers under discussion. Therefore, based on the above context and problem statement, the following basic research questions are formulated to address the intended purpose of the current study.

- To what extent inclusive education resource centers are organized in primary schools;
- To what extent resource center core teams manage the resource centers;
- Whether there is a significant mean score difference between the respondent groups (i. e., teachers and resource center core team) for the organization and management of inclusive education resource centers, and
- Whether there is a significant correlation between organization and management of resource centers.

Theoretical and Conceptual Framework

Inclusive education resource centers were not adequately addressing the diverse needs of LSENs and teachers in Ethiopia (Gedfie & Negassa, 2019). Hence, the purpose of establishing resource centers at cluster schools was to effectively and efficiently support the teachers and learners, including LSENs, in the realization of the inclusion philosophy in the nearby schools (Giordano, 2008; Tonegawa, 2019).

The present study was intended to explore the current conditions for the organization and management of primary schools in Gamo zone, which in turn helps to promote the inclusion of all learners, including LSENs. Likewise, the "Human Rights Model of Disability" is preferred to theoretically frame this study since it builds on the social model based on the principle that all people should have equal opportunities to participate in society (Degener, 2014). The main goal of the model is to empower people with disabilities and to guarantee their rights to equal and active participation in political, economic, social, and cultural activities.

Accordingly, in Ethiopia, inclusive education is preferred to segregated education to ensure equal participation of all children including LSENs, to realize the philosophy of inclusion (Tefera etal., 2015; MoE, 2016; Franck & Joshi, 2017). From the point of view of the model, disability is the result of limitations imposed by social, cultural, economic, and environmental barriers. Hence, the locus of the problem is the practices of discrimination and exclusion by the school and the larger community in which LSENs have been experiencing their lives and education. Consequently, the response of the model is to remove those barriers and provide the required support mainly for needy children through the effective implementation of IERCs to exercise their rights on an equal basis, ultimately ensuring the inclusion of all learners comprising LSENs (Rafferty etal., 2001; Giordano, 2008; Booth &Ainscow, 2011; Kearney, 2011; MoE, 2012; Cologon, 2013; UNICEF, 2014; Tonegawa, 2019).

On the other hand, there is one independent variable (i. e., organization of IERCs) that is considered as a cause and can have some influence on the independent variable (i. e., involvement of RCCT in the management of the aforementioned centers). Likewise, the dependent variable is assumed to be an outcome of the aforementioned independent variable as shown in the figure below. Moreover, the conceptual framework indicates the confounding variables, which are not yet treated in this study. In general, the human

rights models of disability were used to build a foundation of the study, conceptualize it and provide a reference point for the interpretation of the findings. It was also used to establish a vantage point, a perspective, and a set of lenses through which the present researcher views the problems under investigation. Hence, the conceptual framework was constructed to operationalize the selected theory further to explain and predict the relationship between the two variables under manipulation, as presented in the figure below.

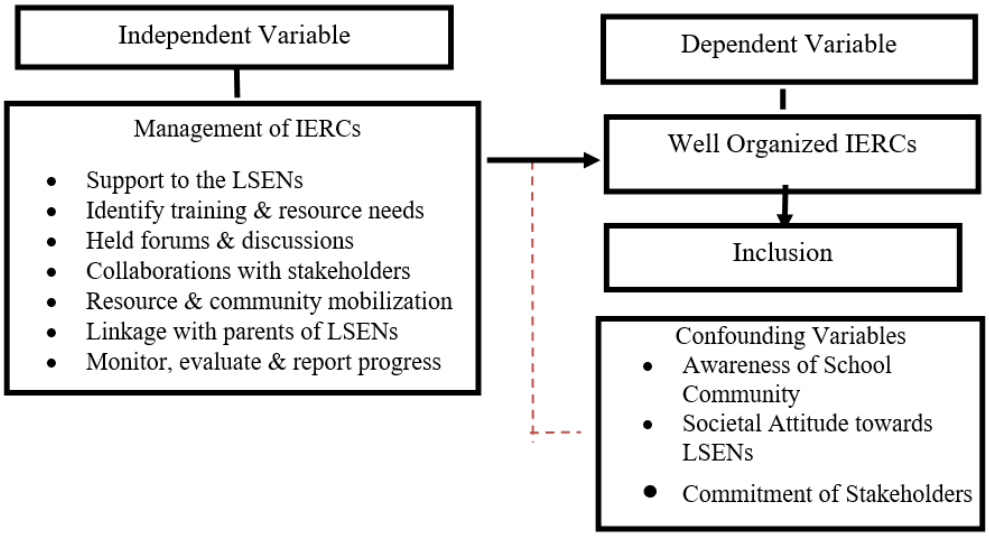

***Figure 1**: Conceptual Framework*

Operational Definitions of Terms

Inclusive Education Resource Centers (IERCs): pedagogical centers that are equipped with specific materials and assistive devices as well as staffed with professionals to give support to LSENs, regular students, teachers, and satellite primary schools.

Management of Inclusive Education Resource Centers: the involvement of RCCT Members in implementing IERCs through effective and efficient utilization of the existing center resources to achieve the center objectives in primary schools.

Organization of Inclusive Education Resource Centers: the process of providing human and material resources in an orderly and sufficient manner in the IERCsto promote Inclusive education in primary schools.

*Resource Center Core Team(RCCT)**:*** a committee established at resource center school to be led by principals of the school with support from the Itinerant teachers to hold the responsibility to discuss and implement plans, including monitoring and evaluation for the implementation of IERCs.

Research Design and Methodology

Study Area Description

There are 23 government administrative structures (i. e., 16 zones and 7 special woredas) in Southern Nation Nationalities Peoples Region, Ethiopia. Gamo zone is one of the zones in the region. The zone consists of 20 districts with 14 rural districts and six town administrations. Arba Minch is the capital city of the zone, which is located 505 km to the south of Addis Ababa, the capital of the country, and 275 km from the regional city, Hawassa. As indicated in the figure below, out of six town administrations, the present study was conducted on the four town administrations, namely; Arba Minch, Kamba, Salamber, and Chencha. IERCs were established earlier in these districts with the aid of Federal and Regional governments, and non-government organizations (NGOs). Of the eleven resource centers in the aforementioned zone, five centers are established, functioning in the mentioned four town administrations. In the study area, there are about 2681 children with different disabilities who require inclusion

through effective implementation of IERCs. Nearly half (46.9%) of these children are in Arba Minch city Administration.

Table 1: Number of LSENs in the study area

S/N	Type of Disability	Chencha	Salamber	Kamba	Arba Minch	Total
1	Learners with visual impairment	2	3	9	6	20
2	Learners with partial sighted	88	74	7	5	174
3	Learners with severe hearing impairment	11	11	3	44	69
4	Learners with partial hearing impairment	16	31	2	3	52
5	Learners with severe physical impairment	6	7	2	10	25
6	Learners with partial physical impairment	6	32	0	9	47
7	Learners with severe intellectual disability	6	1	1	4	12
8	Learners with partial intellectual disability	21	30	1	55	107
9	Learners w/ severe communication problem	13	3	0	29	45
10	Learners w/severe behavior & emotional problem	5	2	5	72	84
11	Learners with severe learning disability	11	3	21	1022	1057
	Total	**185**	**197**	**42**	**1257**	**2681**

Research Design

Convergent parallel mixed design (**QUAN+QUAL**) was used to simultaneously collect quantitative and qualitative data, merge the data, and use the results to understand a research problem (Creswell, 2013). A fundamental rationale for this design is that one data collection form supplies strengths to offset the weaknesses of the other form and this promotes a comprehensive (complete) understanding of a research problem. Hence, the design helps the researchers to gather both quantitative and qualitative data, analyze both datasets separately, compare the results from the analysis of both datasets and make an interpretation as to whether the results support or contradict each other.

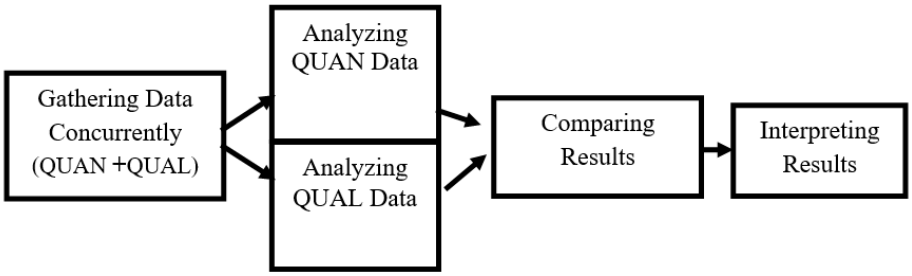

Figure 2: Convergent Parallel Design (Adapted from Creswell, 2013)

Research Methods

A mixed research method was employed to undertake the present study due to the reason that it provides complementary in both quantitative and qualitative data better and more thorough understanding of the research problem being studied (Creswell, 2013).

Data Sources

According to Kumar (2011), primary sources enable researchers to obtain first-hand information in addition to second-hand data obtained from secondary sources. The primary data were obtained from RCCT, resource center school directors, cluster supervisors, teachers, LSENs, and itinerant teachers. However, the secondary data were gathered from resource center schools documents such as RCCT minutes, plans and reports, school management minutes, and school operational and strategic plans and reports to provide complementary data.

Participants

The present study is purposefully delimited to four town administrations; namely Arba Minch (which consists of two centers, namely Arba Minch special and Chamo primary schools), Chencha (which consists of one center at Chencha primary school), Kamba (which consists of one center at Kamba primary school) and Salamber

(consists of one center at Salamber primary school). The justification is that purposive sampling can help to make generalizations from the sample that is being studied. When the data from at least three reliable sources converged, the conclusions were treated with reasonable confidence. Accordingly, it was combined with semi-structured interviews for primary data collection, and the conclusions from all the interviews provide a sound basis for judging the extent to which they can be extrapolated. Moreover, it depends on having a thorough knowledge of the context of the study area; it was combined with a random sampling technique. Likewise, the samples were selected through systematic random sampling in study area schools selected through purposive sampling. On the contrary, to make these samples statistically representative, the sampling process undertaken followed random sampling principles. In general, it was also believed to be worthwhile since the preferred technique helps to improve efficiency and credibility and to have consistency with the purpose of the present study. Accordingly, this study encompasses a total of 318 target population (i.e., 260 teachers and 59 RCCT members). Accordingly, 136 samples comprised 95 (36.5%) teachers and 41(69.5%) RCCT members to represent the population from which each stratum was drawn because 10%-20% of the total population is recommended for determining desired sample size (Neuman, 2000).

On the other hand, teachers and RCCT members were selected using systematic random sampling to ensure the randomness of the selection and to give equal opportunity to every unit of the population being selected in the sample (Kothari, 2005). However, RCCT, except for LSENs, and teachers, were intentionally selected as key informants to conduct semi-structured interviews since they are considered to have reliable qualitative data to explore the manipulative variables of the study. To sum up, the sample, sample size, and sampling techniques of the study are presented in *Table 2*.

Table 2: Summary of Sample Size and Sampling Techniques

Participant Type		Study Unit				Population	Sample Size (%)	Sampling Technique
		Arba Minch	Chencha	Kamba	Selamber			
1	School	1	1	1	1	4	4 (100)	Purposive
2	Teachers	17	44	101	98	260	95(36.5)	Systematic Random
3	RCCT	9	26	12	12	59	41(69.5)	
	Total	**26**	**70**	**113**	**110**	**319**	**136 (42. %)**	

***Source**: Gamo Zone Education Department (2020/21), **Note**: N=Number, & %= Percentage*

Instruments

The questionnaire is used as the main quantitative data-gathering instrument since it helps the respondents to choose one option from the given scales that best aligns with their views (Creswell, 2013)**.** Hence, a self-developed questionnaire comprising close-ended items was prepared to collect the quantitative data from teachers and RCCT for the organization and management of IERCs since it is convenient to collect information from a large number of respondents within a short period and in a cost-effective way. To this end, the tool was translated into Amharic to increase the understanding of the respondents, and was rated with the responses progressing from one to five - Strongly Disagree (1), Disagree (2), Undecided (3), Agree (4), and Strongly Agree (5) respectively. Furthermore, before using the questionnaire, it was pretested at Chamo primary school in Arba Minch City Administration to minimize possible errors that might appear in the items to make necessary adjustments. On the other hand, interviews, observation, and document reviewing were employed to compare the results from quantitative analysis to determine if the two databases yielded similar or dissimilar results. Most importantly, this comparison

was used to describe the quantitative and qualitative results side by side in a discussion section. Hence, we first presented the quantitative statistical results and then provided qualitative quotes to either confirm or not-confirm the statistical results.

A semi-structured interview was used to acquire qualitative data from resource center directors, cluster supervisors, LSENs, and itinerant teachers. Accordingly, it was also translated into Amharic to increase respondents' understanding. The tool is preferred because it has the advantage of flexibility in which new questions could be forwarded during the interview based on the responses of the interviewees. Accordingly, it helped the researchers to get relevant and supplementary information concerning the issue under the study as recommended (Koul, 2008). The recording of each interviewee's responses took nearly 20 minutes and was done under the management of two of the research team.

A checklist-based non-participant observation was also conducted to explore the accessibility of the school's physical environment, staffing, special equipment, assistive devices, and adaptive educational materials of the centers under investigation. In addition, safety and security of the school compound and resource room, resource center location and lighting, equipment maintenance, and use of the electrical appliances in the centers were also observed by the research team members.

Best and Khan (2005) noted that document analysis is an essential and relevant source of data, helpful in yielding information and exploring education practices. Hence, various resource centers schools documents such as RCCT minutes, plans and reports, school management minutes, and school operational and strategic plans and reports were reviewed to complement the quantitative data.

Validity and Reliability

A pilot test was conducted at Chamo primary school of Arba Minch City Administration for at least 32 participants from teacher respondents, and then the Cronbach alpha (α) was calculated. According to George and Mallery (2003), a reliability score of greater than 0.9 is excellent, greater than 0.8 is good, greater than 0.7 is acceptable, greater than 0.6 is questionable, greater than 0.5 is poor, and less than 0.5 is unacceptable. Accordingly, an overall reliability coefficient was calculated to be greater than 0.8, which is in the acceptable value range for the tool under testing. Consequently, some corrections were made after the given test. Concerning content validity, items were reviewed by scholars from the field of SNIE.

Table 3: Reliability test results(N=32)

Study Area	School	Variables	Before pilot study	After pilot study	Deleted Items	*value
Arba Minch City Administration	Chamo Primary	RCCT Management	10	10	None	.931
		Organization of IERCs	12	11	1	.941
		Overall Reliability Coefficient(*)	**22**	**21**	**1**	**.912**

***Note**: *=alpha & N= Number of Respondents*

As methods of analysis, descriptive and inferential statistical techniques were applied. Accordingly, mean, SD, independent sample t-test, and Pearson correlation coefficient were used to analyze the collected data. On the other hand, qualitative data collected through interviews, observation, and document reviewing were analyzed descriptively to compare the results from the quantitative analyses to determine if the two databases yield similar or dissimilar results. Most importantly, such comparisons were used to describe the quantitative

and qualitative results side by side in a discussion section. Accordingly, we presented first the quantitative statistical results and then provided qualitative quotes to either confirm or disconfirm the statistical results.

Results and Discussion

Under this section, quantitative data analysis was undertaken using percentage, mean, SD, independent sample t-test, and correlation coefficient (r) to explore the status of the organization and management of IERCs. Moreover, qualitative data narrative was analyzed, and discussions of major findings were made using empirical evidence and reviewed works of literature for further conclusions. The cutoff point for mean value range determination is considered as; 1.00-1.80=very low, 1.81-2.60=low, 2.61-3.40=moderate, 3.41-4.20=high and 4.21-5.00=very high, to interpret items scaled from strongly disagree to strongly agree (Bluman, 2012).

Respondents' Demographic Characteristics

Background variables such as sex, qualifications, field of study, and training are analyzed and presented using the frequency distribution below.

Table 4: Background variables (N=136)

Variables		Category	Frequency Distribution			
			Teachers (N=95)		RCCT (N=41)	
			N	**%**	**N**	**%**
Sex		Male	53	55.8	25	61
		Female	42	44.2	16	39
Qualification		Diploma	50	52.6	9	22.0
		Degree	45	47.4	29	70.7
		Masters	0	0	3	7.3
Field of Study		Social	16	16.8	6	14.6
		Natural	41	43.2	13	31.7
		Language	26	27.4	7	17.1
		SNIE	3	3.2	7	17.1
		Other	9	9.5	8	19.5
Training	Inclusive Education	Yes	16	16.8	14	34.1
		No	79	83.2	27	65.9
	IERCs	Yes	7	7.4	13	31.7
		No	88	92.5	28	68.3

Note: *N=Number of Respondents, RCCT=Inclusive Education Resource Center Core team*

As can be seen from *Table 4*, the respondent groups hold a minimum required qualification (i. e., diploma) as per the standard of the Ministry of Education in Ethiopia. Consequently, they may have the awareness to implement IERCs because they all considered learning a course titled *Introduction to Inclusive Education* either at the college or university level. Only 3.2 & 17.1 percent of teachers and RCCT respectively specialized in Special Needs and Inclusive Education. However, some scholars argue that Special Needs and Inclusive Education as a field showing development from time to time, and currently, more than fifteen universities and twelve teacher education colleges opened the *special needs and inclusive education* programs to produce professionals (Tefera et.al., 2015; MoE, 2016; Hankebo, 2018). Only 16.8 and 34.1 percent of teachers and RCCT respectively

received a kind of training on inclusive education. On the contrary, about 92.5% of teachers and 68.3% of RCCTs who are supposed to organize and effectively manage the established centers adequately did not receive training for IERCs.

Table 5: Respondents' View Differences Regarding the Training They Received about Inclusive Education

	Group statistics						
	t-test for equality of means					95% confidence interval of the difference	
Variable	T	Df	Sig.	Mean	Std.Error	Lower	Upper
MgtRcs	3.73	134	.000	.611	.163	.287	.935
OrgRCs	5.50	134	.000	.1.02	.185	.653	1.387

***Note**: IE=Inclusive Education; OrgRCs=Organization of IERCs; MgtRCs=Management of IERCs*

As depicted in *Table 5*, based on t-values of the two variables, management of IERCs($t(134)=3.73$, $p<0.05$) and organization of IERCs($t(134)=5.50$, $p<0.05$), there are statistically significant response differences between the respondent groups due to the training they received for inclusive education.

Table 6 is presented to show whether there exists any view differences between the respondent groups due to the training they received regarding inclusive education resource centers while rating scores for the two variables under analysis.

Table 6: Respondents' view differences for the training they received about IERCs

	Group statistics					95% confidence interval of the difference	
	t-test for equality of means						
Variable	T	Df	Sig.	Mean	Std.Error	Lower	Upper
MgtRCs	3.54	134	.001	.683	.192	.30	1.06
OrgRCs	4.67	134	.000	1.04	.222	.60	1.48

***Note**: OrgRCs=Organization of IERCs; MgtRCs=Management of IERCs*

Based on t-test values, MgtRCs ($t(134)=3.54$, $p<0.05$) and OrgRCs ($t(134)=4.67$, $p<0.05$), it is confirmed that there are significant view differences between the respondent groups (i.e., teachers and RCCT) while responding to the variables under investigation (i.e. management and organization) due to the training they received for IERCs.

Organization of Inclusive Education Resource Centers

M and SD scores are used to assess the organization of IERCs and whether they are equipped with appropriate materials and professionals.

Table 7: M & SD values of respondents' responses about the organization of IERCs (N=136)

S/N	Variables		Descriptive Statistics					
			Teacher		RCCT		Average	
	Inclusive Education Resource Center (IERCs):		M	SD	M	SD	M	SD
1	is organized with special equipment		2.91	1.04	3.90	1.02	3.21	1.13
2	has adaptive educational materials		3.19	1.48	2.95	1.50	3.11	1.49
3	is equipped with assistive devices for learners with:	visual impairment	2.59	1.03	3.17	1.18	2.76	1.10
		hearing impairment	2.57	1.02	3.34	1.15	2.80	1.11
		physical impairment	3.06	.94	3.27	1.16	3.11	1.02
		speech & communication difficulty	2.30	.84	2.46	1.19	2.35	.95
		intellectual disability	2.51	1.01	2.83	1.05	2.60	1.03
4	contains instructional materials		3.65	1.03	3.73	1.10	3.65	1.05
5	consists other office materials		2.74	.88	3.56	.95	2.98	0.97
6	is functioning with skilled human manpower		1.77	1.06	1.80	1.01	1.78	1.04
7	is guarded against actual danger, threat/harm to children & property		4.00	1.04	4.37	.97	4.10	1.05
	Grand Mean		**2.98**	**.68**	**3.22**	**.76**	**2.96**	**.65**

***Note**: N = Number of Respondents, M=Mean, SD= Standard Deviation*

As can be seen from *Table 7*, the mean score for item six (M=1.78±1.04) fell to a very low extent which indicates the resource centers under investigation were not organized with skilled human manpower. Concerning assistive devices for learners with various impairments, both respondents agreed to a moderate level (M=2.75±1.05). Concerning items 4 & 7, the grand mean values (M=3.65±1.05; M=4.10±1.05) pinpoint that the centers were highly organized with instructional materials and it is also well guarded against threat/harm to children & property. Hence, based on the grand mean value (M=2.96±.65), it is possible to say that IERCs a re-moderately organized with appropriate materials and professionals in

the cluster center primary schools. However, almost all interviewed LSENs, and nearly half of the cluster supervisors expressed their disagreement with a medium-level organization of their respective centers due to the lack of special skill professionals, the inadequacy of assistive devices, and the scarcity of special equipment.

Moreover, these interviewees also informed that they had no expert knowledge about such special equipment and assistive devices and standards of appropriate materials needed to be organized in their respective resource centers due to the absence of awareness and skill development training. Similarly, the majority of directors and itinerant teachers also expressed their opinion on the scarcity of special equipment and specialists as per the standard outlined by the Ministry of Education, but they disagreed with the high-level organization of the centers. However, one of the interviewed directors strongly claimed the statistically revealed medium-level organization of the centers by mentioning the shortage of special equipment, adaptive educational materials, and assistive devices in his resource centers. Lastly, less than one-fourth of the interviewed RCCT members strongly believe that the center in their respective cluster primary schools is moderately organized.

According to the non-participant observation conducted by two of the investigators, the organization of the centers with necessary resources is believed to be at a moderate level because nearly all schools under inquiry were not accessible for LSENs except some of the classroom entrances in a few schools due to shortage of such necessary materials and absence of special skill manpower (except the itinerant teachers). It was also observed that there was a shortage of adaptive educational materials, special equipment, and assistive devices, mainly for learners with speech and communication difficulties and intellectual disabilities. Furthermore, checklist-based observation ascertained that the centers were not adequately equipped with adaptive educational materials and assistive devices for LSENs with visual impairments (i. e., slate, stylus, braille, cane and abacus), hearing impairments

(hearing aids, sign language dictionary and sign language chart), physical disability (wheelchair, walker, crutch, ground accessible to wheelchair users and ramps at every door of every room). In almost all schools, the safety and security of the school compound and resource room were free from any threat or danger. The resource center location and lighting were not conducive, and equipment maintenance was also not taking place in almost all schools; however, the use of electrical appliances was available in all resource centers.

Management of Inclusive Education Resource Centers

The RCCT has a responsibility to prepare a plan, monitor the progress and evaluate the outcomes, and manage the proper functioning of IERCs. Hence, the successful implementation of the centers relies on the active participation and cooperation of the Team. Hence, M and SD are used to assess the Core team involvement in the management of IERCs.

Table 8: M & SD values for RCCT involvement in the management of IERCs (N=136)

S/N	Variables	Descriptive Statistics					
		Teacher		RCCT		Average	
	RCCT (RCCT)	M	SD	M	SD	M	SD
1	Identify and support out of school children	1.91	1.35	2.80	1.49	2.18	1.45
2	Identify material and training needs of cluster schools	2.38	.75	3.10	1.14	2.60	.94
3	Hold regular forums to discuss the development of an inclusive culture	2.32	.85	3.05	1.14	2.53	1.00
4	Provide information on the enrollment of LSENs	2.43	.85	3.39	1.26	2.72	1.07
5	Work in collaboration with stakeholders to acquire learning materials	3.79	.71	4.00	.71	3.85	.72
6	Keep records of screened learners and daily progress	2.41	.74	3.10	1.20	2.62	.95
7	Monitor, evaluate and report the progress of the center	1.77	1.23	2.85	1.54	2.10	1.42
8	Mobilize resources to equip the existing centers	2.51	1.03	3.12	1.12	2.69	1.09
9	Work on community mobilization to strengthen the center	2.30	.76	2.73	.98	2.43	.85
10	Link with parents of LSENs to discuss problems noticed	2.24	.83	2.93	.96	2.45	.92
	Grand Mean	**2.41**	**.68**	**3.10**	**.93**	**2.62**	**.83**

***Note**: N = Number of Respondents, M=Mean, SD= Standard Deviation*

As indicated in the above Table, both respondent groups agreed to a low-level involvement of the Core team for items such as 1, 2, 3, 7, 9 & 10 as referred by the mean scores (M=2.18±1.45; M=2.60±.94; M=2.53±1.00; M=2.10±1.42; M=2.43±.85; M=2.45±.92) respectively. Against these mean scores, the respondent group responses to item

five fell to the high-level mean score range determination (M=3.79±.71; M=4.0±.71), which points out that RCCT actively works in collaboration with stakeholders to acquire learning materials. The respondents also showed their level of agreement to the moderate range as per cutoff point intervals for items such as 4, 6 & 8 since the mean scores of these items are revealed as (M=2.72±1.07; M=2.62±.95; M=2.69±1.09). An average mean score for RCCT (M=2.41±.68) refers that the core team moderately manages the implementation of the existing centers; however, an overall extent of both respondent groups reveals that the members passively participated in the management of the centers in the study area (M=2.62±.83).

On the other side, a semi-structured interview was conducted with resource center directors, cluster supervisors, LSENs, and itinerant teachers, and hence, nearly half of each respondent group informed possible areas of core team involvement such as identification of marginalized children and school training needs, collaboration with stakeholders/parents as well as community and resource mobilizations. In connection with this, they strongly pointed out that the RCCT members were not actively participating in the aforementioned areas to promote inclusion through proper implementation of the centers. However, few of them slightly agreed to their occasional monitoring, evaluation, and reporting of the centers' progresses.

In addition, resource centers school documents like RCCT minutes and reports/plans, management minutes, and school plans/reports were reviewed, and hence, it is assumed that except for one school, the remaining resource center schools have no compiled and complete pieces of evidence in the mentioned documents. On the contrary, all resource center schools have RCCT plans without corresponding reports of plan accomplishments. Once the centers were organized with the intervention of the Regional and Federal Governments in collaboration with NGOs, the issue of the organization was a forgotten element in all target schools, and hence we did not find any remarks in the school plans and reports. Surprisingly, no single school

management minute was found in all study schools. All these pieces of information ascertain that the RCCT involvement was found to be very low.

Response Difference between Teachers and RCCT Respondent Groups

This section intends to show whether there exists a significant response difference between the two respondent groups in rating the scores for variables such as organization of IERCs and RCCT involvement in the management of the centers for further conclusions.

Table 9: Independent t-test results for the rating score differences of teacher and RCCT groups (N=136)

Group Statistics									95% confidence interval of the difference	
Variable	Group	N	Mean	SD	Std. Error	df	t	Sig.	Lower	Upper
MgtRCs	Teacher	95	2.41	.68	.07	134	-4.90	0.000*	-.985	-.419
	RCCT	41	3.11	.93	.15					
OrgRCs	Teacher	95	2.53	.89	.09	134	-3.20	0.002*	-.607	-.143
	RCCT	41	3.16	1.07	.17					

***Note**: **N** = Number of Respondents, M=Mean, SD= Standard Deviation, t= t-test*

The respondents' views concerning the management of IERCs (MgtRCs) and the organization of IERCs (OrgRCs) are compared to see the mean score differences between the teacher and RCCT respondent groups. Accordingly, the teacher and RCCT groups

responded differently (i.e., low and moderate) to the MgtRcs (M=2.41±.68; 3.11±.93) respectively; similarly, the responses of these groups for the OrgRCs are found to be at a low and moderate mean value range determination (M=2.41±.68; 2.53±.89) respectively. Hence, it can be concluded that there are some significant variations in responses of teachers and RCCT concerning the RCCT involvement in the management of IERCs ($t(134)=-4.90$, $p<0.05$) and the organization of the centers under investigation ($t(134)=-3.20$, $p<0.05$).

Correlations between Organization and Management of Inclusive Education Resource Centers

Table 10 depicts the relationship between RCCT involvement in the management of IERCs and the organization of IERCs. Accordingly, the correlation coefficient(r) assured that the MgtRCs ($r=.509$, $p<.000$) have a moderate and significant positive correlation with OrgRCs. Consequently, it can be further concluded that *when the RCCT moderately increases their involvement in the management of resource centers, IERCs tend to be well organized as per the standard of the centers in Resource Center primary schools* since both have direct, moderate, and significant positive correlations with each other.

Table 10: Pearson Product Moment correlation coefficients among variables(N=136*)*

		CoreTeam Inv	OrgIERCs
MgtRCs	Pearson Correlation	1	.509**
	Sig. (2-tailed)		.000
	N	136	136
OrgIERCs	Pearson Correlation	.509**	1
	Sig. (2-tailed)	.000	
	N	136	136

**. Correlation is significant at the 0.01 level (2-tailed)

***Note**: OrgRCs=Organization of IERCs, MgtRCs=Management of IERCs*

Discussions

Based on the results of quantitative and qualitative data analysis, all IERCs were functioning without special skill manpower, and special equipment and assistive devices for learners with speech and communication difficulties and intellectual disabilities (M=2.96, SD=.65). Likewise, Ayele (2017) in his study pointed out that implementation of inclusive pedagogy is not supported by the special equipment like assistive technology to address the special learning needs of students with special needs. Although the existing necessary equipment and materials were not sufficient, they were averagely equipped with some of the adaptive educational materials and assistive devices for LSENs with visual impairments (i. e. slate, stylus, braille, cane and abacus), hearing impairments (such as hearing aids, sign language dictionary and sign language chart), physical disability (wheelchairs, walker, crutch, ground accessible to wheelchair users and ramps at every door of every room). Similarly, scholars confirmed that special skill manpower including sign language interpreters and Braille teachers are not available in almost all schools (Tonegawa, 2019; Siska etal., 2020). However, they also assured that braille paper

and braille reference books for students with visual impairment and other essential teaching materials need to be available along with some assistive devices, wheelchairs, and prosthetics.

Nevertheless, due to a shortage of budget and scarcity of special skill manpower, there were no specialists such as braille trainers, sign language, interpreters, orientation and mobility trainers, physiotherapists, psychiatrists, and educational psychologists except itinerant teachers, who would provide specialist support for LSENs. In contrast, a study conducted by the Addis Ababa City Administration, SNNPR, and the Oromia Regional State of Ethiopia confirmed those sign language interpreters were assigned to primary and high school deaf students (Siska et al., 2019). In this regard, Mosha (2015) asserted that scarcity of finance limits the power of fulfilling or organizing the Resource Center materials to accommodate the needs of all learners. According to Govender (2005), the resource centers serve as training centers by providing facilities and resource persons or itinerant teachers to support satellite schools for further improvement of the teaching and learning process. Consequently, the resource person or itinerant teacher is expected to visit and supervise both the cluster and satellite schools at least once a month to discuss issues related to teaching and learning, including curriculum, teacher's guide, textbooks, reference materials, and others for the success of all learners (Ekanem, 2015). In the context of the study area, itinerant teachers regularly visit and supervise their schools and satellite schools under their cluster for the same purpose at least twice a month.

According to the revealed result of quantitative analysis, the resource center core team was passively (M=2.62, SD=.83) involved in the management of IERCs. Based on qualitative analyses, justification for the case is attributed to the lack of specialist skills and knowledge in RCCT members to provide exceptional support especially LSENs. In connection with this, Tonegawa (2019) stressed a lack of teachers' skills due to lack of teacher training, understanding, and acceptance of children with disabilities in primary schools. In contrast, the number of

teachers trained in special/inclusive education is increasing in Ethiopia (MoE, 2016; Beyene et al., 2020). Conversely, insufficient training, lack of knowledge and skills, and weak pedagogical skills were identified (Franck & Joshi, 2017). Hence, to minimize such challenging barriers, teacher training and teacher meetings experience sharing are conducted for teachers teaching at both the core and satellite schools (Jennings, 2011). Some scholars argue that Special Needs and Inclusive Education as a field showed development from time to time, and currently, more than fifteen universities and twelve teacher education colleges with the special needs and inclusive education programs are opened to produce professionals (Tefera et al., 2015; MoE, 2016; Hankebo, 2018).

Only 3.2 percent of teachers specialized in special needs and inclusive education, as per the background data of the study under investigation. Likewise, only 16.8 percent of teachers received a kind of training on inclusive education. Hence, it can be generalized that RCCT were not properly discharging their responsibilities to adequately organize the established IERCs with appropriate materials and professionals, mainly through community and resource mobilization, monitoring and evaluation, holding forums/workshops, identification of school training needs and materials, provision of special support, dissemination of information for LSENs, and communication with parents of LSENs to inform challenges their children are experiencing. However, according to Ayele (2017), the awareness of parents and communities is gradually changing, except in some inaccessible communities, and consequently, the number of students with disabilities enrolled is increasing **(**MoE, 2016; Franck, & Joshi, 2017; Tonegawa, 2019; Siska etal., 2020). Though the enrollment of children with disability is increasing, still the majority of them are out of school (Tefera, etal., 2015; Tola, 2017; Siska etal., 2019).

Hence, the inclusion of children with special needs is alarmingly low in Ethiopia. Accordingly, it is also revealed that IERCs did not adequately address the diverse needs of children with special educational needs and teachers in Ethiopia (Gedfie & Negassa, 2019). The centers also did not adequately support the education of LSENs because of a lack of financial, attitudinal, materials, and trained staffing (Mosha, 2015). Based on a study carried out by Ludago (2020), teaching and learning haphazardly take place, teaching methods are traditional (chalk and talk), teachers are not equipped to match the learners with their diverse needs, and hence learners suffer with problems of inadequate support. However, they argued that the Resource Center schools tried to mobilize the community for the education of LSENs through organizing dialogues and workshops though there was limitation (Govender, 2005). On the other hand, insufficient training of teachers (Franck & Joshi, 2017), weak and low levels of pedagogical skill teachers (Siska etal., 2019), shortages of itinerant teachers or special needs education professionals (Dagnew, 2013; Malle, etal., 2015; Franck, & Joshi, 2017; Hankebo, 2018) encounter challenges noted to implement inclusive education. Nowadays, inclusive education is being implemented based on the assumption that all children can learn if given the right learning environment and support. Accordingly, the Ethiopian government has given emphasis and preferred inclusive education to segregated education and appears to show its commitment to bringing all children to school following the philosophy of inclusion (Tefera, et.al., 2015; MoE, 2016; Franck, & Joshi, 2017). Hence, IERCs are established to effectively and efficiently support teachers and students, including LSENs, ultimately to realize inclusive education in primary schools (Giordano, 2008; Siska et al., 2019; Tonegawa, 2019).

Nevertheless, the major findings under discussion seemed to be consistent with current trends, national and international legal policies, declarations, and conventions on special needs and inclusive education, which were primarily formulated to ensure a philosophy of inclusion mainly through IERCs. They are also in light of the priority

and urgent national and global inclusion agenda. Hence, the passive involvement of RCCT and average labeled organization of IERCs have to be immensely increased with the intervention of school stakeholders, school community, and district education sectors since the significant findings make results of a greater significance deserving involvement of NGOs, stakeholders, decision-makers, and planners under the ownership and oversight of Regional and Federal education sectors of Ethiopia.

Conclusions and Recommendations

Based on the significant findings and discussions made of both quantitative and qualitative data analysis, it is possible to conclude that the RCCTwas passively involved in the management of IERCs; the reason seems to be a lack of specialist skills to provide professional support. Consistently, it can be generalized that the RCCT was not properly discharging its responsibilities to adequately organize the centers due to limitations in community mobilization, monitoring, and evaluation, holding workshops, identifying material and training needs, and notifying parents of LSENs about challenges the children are experiencing. Equally, IERCs were not well organized with necessary materials and professionals; it is due to the passive involvement of the RCCT, inadequacy of special equipment and assistive devices, and absence of professionals such as braille trainers, interpreters, orientation, and mobility trainers, physiotherapist, psychiatrist, and educational psychologist who can provide specialist for LSENs. Furthermore, it can also be concluded that *when the RCCT increase their involvement at least to the extent of moderate, the resource centers tend to be well organized as per the standard outlined by the Ministry of Education in primary schools of Gamo zone* since they have moderate and significant positive correlations with each other ($r=.509$, $p<.000$).

In general, there are still many unanswered questions not yet treated in this study which require further scientific investigations because this study was geographically limited to selected primary schools of Gamo zone and conceptually delimited to only two variables (i. e., management and organization). However, based on forgone major findings, discussions, and conclusions, it is recommended that the district education sectors and primary schools properly apply the guideline prepared for establishing and managing IERCs developed in 2015 and special/inclusive education strategy, which is primarily devised to ensure inclusion mainly through IERCsin primary schools of the country, Ethiopia (MoE, 2012). Furthermore, the following insights are suggested to enhance RCCT's involvement in the management and organization of IERCs.

- Successful implementation, adequacy of necessary equipment/materials, and effective utilization of the centers rely on active participation and cooperation from RCCT members. Hence, the core team should design educational projects and work in collaboration with school stakeholders, the school community, local government, disability associations, and NGOs to lobby for additional funds, ultimately to equip IERCs with necessary materials and to immerse the managerial performance.
- Regular teachers are critical to the learning of all children, including those with special educational needs. Hence, RCCT and itinerant teachers, in collaboration with resource center school directors, should better facilitate awareness raising and special skill training for cluster school teachers about inclusion and IERCs.
- District education sectors shall better work closely with Resource Center schools and allocate a budget for the recruitment of special skill professionals to provide specialist supports to all learners including LSENs, and regular teachers, through effective implementation of IERCsin the study area.

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