

Utilization and barriers of inclusive education resource centers: The case of Gamo zone primary schools

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Abstract

This study aimed to examine teachers' utilization of Inclusive Education resource centers and identify the barriers that hinder the function of the centers in primary schools of Gamo Zone. For this purpose, the study employed a mixed methods explanatory sequential design. Primary data were collected from 95 teachers and 41 members of Resource Center Core Teams. Self-developed questionnaires, semi-structured interviews, and document analysis were used to gather data. Quantitative data analysis involved the use of percentage, mean, standard deviation, and independent sample t-tests, while qualitative data was analyzed through narrative and descriptive techniques. Results revealed that teachers did not adequately utilize the centers. Moreover, barriers such as shortage of specialized staff, inadequate training, lack of specialist support, limited resources, absence of qualified personnel, insufficient monitoring tools for students with special needs, and inadequate funding were identified. Finally, measures that aimed to enhance teachers' utilization of the centers and address the barriers identified are forwarded.

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Introduction

Education is a universally accepted fundamental human right that should be accessible to all citizens (UNESCO, 2003). Ethiopia has been committed to providing quality education to its citizens, including Learners with Special Educational Needs (LSENs). The country's constitution, specifically article 41, mandates the state to provide necessary rehabilitation and support services for individuals with disabilities.

Ethiopia has also ratified several international conventions and instruments related to inclusive education, which can be implemented through the successful operation of IERCs at the school level. The ratification of international conventions such as the EFA, FPE, IDEA, UNCRPD, ESDPs, the Salamanca Framework for Action, and the "Full Inclusion Movement"

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has a significant impact on the inclusion of a large number of learners with special educational needs in regular primary schools.

In response to the directions of the federal constitution, the 1994 Ethiopian Education and Training Policy (ETP) urges the expansion of quality primary education to all citizens not only as a right but also a guarantee for development (TGE, 1994). The new ETP, introduced in 2023, also underscores the need to consider gifted and talented students, students with disabilities, and LSEs while developing and implementing curricula (MoE, 2023). The Ministry of Education has also developed a strategy for special needs education. The strategy aimed to promote inclusive education through the establishment and utilization of IERCs in primary schools (MoE, 2006).

During the implementation of ESDP IV, Ethiopia planned to establish a total of 500 IERCs across the country (MoE, 2018). As part of this nationwide project, in the study area, eleven IERCs were established at the primary school cluster center level. They were established and organized by the federal and regional governments in collaboration with NGOs. The purpose of establishing resource centers at the cluster schools is to effectively and efficiently support the teachers and learners, including LSEs, in the realization of the inclusion philosophy in the nearby schools (Giordano, 2008; Tonegawa, 2019). The present study, therefore, aims to examine teachers' utilization of the resource centers and the barriers that inhibit their proper functioning.

Statement of the Problem

According to Mosha (2015), resource scarcity is a significant barrier hindering the effective functioning of resource centers, including IERCs. Limited finances further exacerbate the issue by constraining the availability of necessary materials and hindering efforts to enhance education quality and provide essential training opportunities. This ultimately leads to a lack of priority placed on improving education quality and training when resource centers are faced with financial constraints.

Similarly, the study conducted by Fabunmi (2000) on the management of special education resources in Ibadan, found that special education resources were not evenly distributed and the few available resources were not efficiently used while others were diverted to normal students. On the other hand, as Ikpeya (2000) noted, special schools managed by private individuals and religious institutions provide better services than those established by the government.

While implementing inclusive education through IERCs, developing countries face several challenges including insufficient teacher training, lack of relevant research, inadequate facilities and materials, inappropriate support services, and ineffective policies and strategies (Charema, 2005). Sharma, Forlin, and Loreman (2008) in their study also reported that in developing countries like Ethiopia, attitudinal problems, change resistance, and inflexible curriculum and pedagogy were among the challenges that negatively affect the proper utilization of IERS.

Coming to Ethiopia, IERS are established to provide services related to assessment, training, and professional support as well as to offer educational assistance to satellite schools to ensure the provision of inclusive education, especially for LSEs. In the IERC guidelines,

the responsibilities of different stakeholders are outlined. For instance, the RCCT is expected to perform various tasks in the implementation, monitoring and evaluation of the IERCs. The resource center school director is also responsible to leading and managing the center. As indicated in the guideline, the successful functioning of the IERCs relies on the active participation and cooperation of all stakeholders (MoE, 2015).

Nevertheless, some studies conducted on various aspects of IERCs explored several challenges. For instance, according to Gedfie and Negassa (2019), IERCs were not adequately addressing the diverse needs of LSENs and teachers in Ethiopia. Similarly, the study conducted by Beyene and Tizazu (2010) showed that lack of relevant facilities and materials was the major challenge to the implementation of inclusive education.

In 2013, the Ministry of education, in collaboration with the FCG International, conducted a situation analysis on seven of the existing nine IERCs. In the study, most of the IERCs were found to be “houses for special materials” and were not properly utilized (Pather, 2013). The Ministry of Education also identified barriers such as lack of knowledge about diversity, curriculum rigidity, insufficient preparation of teachers and educational leaders, rigid and poor teaching methods, inconvenient learning environment, and inadequate assessment procedures (MoE, 2015).

To the best knowledge of the researchers, no adequate study has been conducted on the utilization and barriers of IERCs in the study area. Hence, the present study sought to examine teachers' utilization of IERCs in Gamo zone, Ethiopia and the barriers encountered for their proper functioning. For this purpose, the study is organized under the following research questions: (1) To what extent do teachers utilize inclusive education resource centers? (2) What are the major barriers hindering the functioning of inclusive education resource centers? (3) Is there statistically significant rating score difference between teachers and resource center core team members concerning the variables under investigation?

Methods

Research Approach and Design

This study employs a combination of quantitative and qualitative research approach. This approach allowed the researchers to confirm and enhance the information gathered, uncovering insights that may have been overlooked with just one method alone (Creswell, 2012). In the study, primary data was gathered from teachers and RCCT members, while secondary data was collected from various school documents such as strategic and operational plans, reports, core team plans/reports, and IERC plans & reports. Additionally, a non-participant observation checklist was utilized to collect supplementary data.

The current study also employed an explanatory sequential design (QUAN→ qual). This was due to its suitability to collect and analyze quantitative data first, before moving on to the qualitative data during the interpretation phase of the study alone (Creswell, 2012).

Sampling

A total of 136 participants (95 teachers out of 260 and 41 RCCT members out of 58) were selected. The teachers were selected through lottery simple random sampling to ensure

randomness and equal opportunity for all population units, following Kothari's technique (2005). The RCCT members, however, were purposively selected as key informants to obtain in-depth data through semi-structured interviews. As far as the primary school clusters is concerned, all of the five cluster schools (100%) were selected purposively. Neuman's (2000) recommendation of sampling (10%-20% of the total population) was considered in determining the sample size.

Table 1*Summary of Sample Size and Sampling Techniques*

Participant Type	Study Unit				Population (N)	Sample Size (%)	Sampling Technique
	Arba Minch	Chencha	Kamba	Selamber			
RC Schools	2	1	1	1	5	5(100)	Purposive
Teachers	17	44	101	98	260	95(36.5)	Lottery
RCCT members	9	26	12	12	58	41(70.7)	Purposive
Total	25	70	113	110	318	136 (42.8%)	

Source. Gamo Zone Education Department (2020/21).

Data Gathering*Questionnaire*

In order to collect data from teachers and RCCT members, a self-developed five-point Likert scale questionnaire consisting of 43 close-ended questions was used. This instrument allows the respondents to choose the option that most closely reflects their views (Creswell, 2012).

The mean value ranges for determining levels of teachers' utilization of IERCs are categorized as follows: 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. These ranges correspond to items scaled from strongly disagree to strongly agree (Bluman, 2017). Similarly, mean scores falling within 1.00-1.80 are considered least serious, 1.81-2.60 less serious, 2.61-3.40 serious, 3.41-4.20 more serious, and 4.21-5.00 most serious for items addressing barriers to the functioning of IERCs.

Interview

The study utilized a semi-structured interview to gather qualitative data from primary school directors, cluster supervisors, LSEs, and itinerant teachers at the cluster center. These participants were purposely selected for their expertise on IERCs. Additionally, LSEs who were part of the RCCT were included in the study. The interviews were conducted in Amharic to ensure clarity for the participants.

Document Analysis

In order to triangulate data, a thorough review was conducted on a variety of documents from the school and center levels. These include strategic and operational plans, reports, IERC plans and reports, and RCCT minutes.

Reliability

Prior to the main study, a pilot study was carried out at Chamo Primary School in Arba Minch City Administration. The purpose was to reduce potential errors in the items. Subsequently, the Cronbach alpha coefficient was calculated and determined to be higher than 0.8, falling within the acceptable range (George & Mallery, 2003). For further information, see Table 2.

Table 2

Reliability Test Results (N=32)

Variables	No. of Items Before Pilot Study	No. of Items After Pilot Study	Deleted Items	α value
Utilization of IERCs	12	10	2	.958
Barriers of IERCs	15	12	3	.952
Overall Reliability Coefficient	49	43	6	.955

Note. α - alpha & N= Number of Respondents

Data Analysis

Percentages, means, standard deviations, and independent sample t-tests were used to analyze the quantitative data. The significance level was set at 0.05. In contrast, the qualitative data were analyzed descriptively through narrative means. Significant findings have been discussed with empirical evidence and relevant literature to draw further conclusions.

Ethical Issues

Informed consent was obtained from the participants themselves and the administrations of the schools studied. The Respondents were fully briefed on the study's purpose and assured that their responses would only be used for research purposes.

Results

If the IERCs are well-organized and managed, the resources within these centers can be effectively and efficiently utilized by teachers to ensure the inclusion of all students, including those with LSENs.

Teachers' Utilization of Inclusive Education Resource Centers

In order to assess the utilization of IERCs by teachers in cluster center primary schools, ten items were prepared and rated by teachers and RCCT members. The results obtained in this manner are presented in Table 3.

Table 3*Respondents' Responses about Teachers' Utilization of IERCs (N=136)*

Items	Teachers		RCCTs		Average	
	M	SD	M	SD	M	SD
In our school/center, teachers:						
Use the center resources based on special need of every child.	3.74	.95	3.98	.61	3.81	.85
Possess the necessary skills to teaching students using the center's resources.	1.86	.13	2.78	1.44	2.14	1.38
Implement inclusive classroom practices using the center's resources.	2.51	.96	3.15	1.11	2.71	1.03
Use materials from the center to demonstrate lessons.	2.39	.10	3.24	1.07	2.65	1.05
Teach students in the resource center whenever necessary.	1.78	.12	2.88	1.55	2.11	1.40
Employ adaptive teaching methods using the center's resources.	2.47	.94	3.14	1.15	2.68	.04
Use general teaching equipment to enhance students' learning.	2.55	.11	2.98	1.57	2.68	1.23
Support LSENs using locally available teaching materials.	2.64	.12	3.19	1.08	2.81	1.16
Use the center's resources for curriculum differentiation.	1.99	.14	2.76	1.48	2.22	1.44
Support students with special educational needs using the center's resources.	2.44	.93	3.34	1.26	2.71	1.10
Grand Mean	2.44	.85	3.14	1.07	2.65	.08

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

Table 3 presents the responses of teachers and RCCT members concerning teachers' utilization of the IERCs. Accordingly, teachers' utilization of IERCs, as rated by the teachers themselves was low (M=2.44, SD.85). The RCCT members, on the other hand, rated it at a moderate level (M=3.14, SD1.07). The overall average (M=2.65, SD.08) suggests that teachers' utilization of IERCs in the primary schools studied was at a moderate level.

Additionally, during the interview session, two RC directors, two RC supervisors, and four itinerant teachers shared their perspectives on the utilization of RC in promoting inclusive education. The consensus was that the extent of RC utilization was low. While most agreed on this point, they disagreed on some items mentioned in Table 3.

Specifically, the interviews pointed out that teachers were not utilizing center resources tailored to the individual needs of each student, lacking the necessary skills to teach LSENs effectively. Moreover, they noted that teachers were not incorporating lessons from the center into their classroom teaching or utilizing the resource center when needed. It was also highlighted that some teachers were not adapting locally available teaching materials or resources from the center to support LSENs. The RC directors emphasized that the utilization of IERC materials by teachers in cluster center primary schools was extremely low.

In order to corroborate the above findings, attempts were made to collect data through document analysis. However, after thorough review of documents such as school strategic and operational plans, IERC plans and reports, annual and lesson plans, as well as core team

minutes, it is understood that there were no plans or reports detailing the utilization of resource centers to support the learning of LSENs for inclusion in the cluster primary schools.

Generally, based on the quantitative and qualitative results presented above, it is possible to understand that teachers' utilization of IERCs was minimal.

Barriers Hindering the Functioning of Inclusive Education Resource Centers

Using both quantitative and qualitative data, the present study attempted to understand the barriers that inhibit the proper utilization of IERCs. The quantitative results obtained through 12 close-ended items from teachers and RCCTs are presented in Table 4.

Table 4

Respondents' responses about the Barriers that Hinde the functioning of IERCs (N=136)

No. Items	Teachers		RCCTs		Average	
	M	SD	M	SD	M	SD
1 Availability of special materials or equipment	4.41	.83	4.73	.63	4.51	.79
2 Availability of special skill staffs	4.56	.78	4.83	.44	4.64	.71
3 Availability of special training for teachers	4.17	1.02	4.34	.69	4.22	.93
4 Provision of various educational services	4.48	.74	4.49	.74	4.48	.74
5 Existence of active school community participation	3.72	.93	3.90	.70	3.78	.87
6 Presence a positive community attitude	4.10	1.10	4.46	.71	4.21	1.01
7 Efforts to mobilize the community	3.73	.91	3.51	.98	3.67	.94
8 School principal's monitoring competence	4.00	.68	3.73	.92	3.92	.77
9 The practice of screening and assessment of tools	4.62	.60	3.76	1.28	4.36	.95
10 Existence of early intervention at the school level	4.48	.71	3.95	1.20	4.32	.92
11 Availability of conducive room to store resources	2.34	1.13	1.98	1.06	2.23	1.12
12 Availability of grant budget for LSENs	2.64	1.15	3.90	1.20	3.02	.11

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

Table 4 shows the respondents ratings of various facilities and services in the IERCs. The results revealed that barriers hindering the functioning of Inclusive Education Resource Centers, as indicated by mean values from teacher respondents, include the lack of special equipment, trained staff, educational services, assessment tools, and early intervention at the school level as they were respectively rated to be M=4.41 (SD.83); M=4.56 (SD.78); M=4.48 (SD.74), M=4.62 (SD.60), and M=4.48 (SD.71). These factors were consistently rated as the most significant obstacles. The mean scores of the respondents in the RCCT also showed agreement that these variables were hindering the effective utilization of IERCs. Additionally, both respondent groups identified issues such as the lack of teacher training, community involvement, negative community attitudes, insufficient monitoring by school principals, and limited community engagement as serious barriers.

On the contrary, when looking at item 11, the average values for both respondent types (M=2.34, SD1.12; M=2.23, SD1.03) indicate that having a suitable room for storing resources is not seen as a significant barrier. Additionally, teachers did not view the availability of grant budget for LSENs as a major obstacle, but RCCT members did. Overall,

based on the average values of each variable, except for storage space, all factors are seen as barriers that impede the functioning of IERCs in the research area.

In addition to the quantitative results presented above, twelve participants were interviewed for further insight. This included two resource center school directors, two supervisors, four itinerant teachers, and four LSEs. They were asked about barriers that hinder the functioning of IERCs in cluster primary schools. More than three-fourths of the participants strongly agreed with eleven of the barriers listed. The majority of the interviewed directors also identified other barriers, including stakeholder commitment, rigidity of the formal curriculum, physical accessibility of the schools, the impact of the COVID-19 pandemic, close supervision by District SNIE experts, functioning of IEPs, awareness of the school community about IERCs, and staffing issues such as the lack of interpreters, orientation & mobility trainers, specialist support personnel, and educational psychologists.

Rating Score Differences Between Teacher and Core Team Respondent Groups

This section examines the differences in rating scores between the two respondent groups on variables related to utilization and barriers using an independent samples t-test.

Table 5

Rating Score Difference Between Teacher and RCCT Groups (N=136)

Variables	Group	N	Mean	SD	Std. Error Mean	MD	Df	t	Sig. (2-tailed)
Utilization	Teacher	95	2.44	.83	.08	-.70	134	-4.17	0.000
	RCCT	41	3.14	1.07	.17				
Barriers	Teacher	95	3.94	.39	.04	-.03	134	-3.2	0.747
	RCCT	41	3.97	.48	.07				

Note. N = Number of Respondents, M=Mean, SD= Standard Deviation, MD= Mean Difference

Table 5 displays the mean differences between the teacher and RCCT respondent groups in terms of the utilization and barrier variable. As indicated in the table, while there was a significant difference of ratings between the two groups concerning the utilization of IERCs ($t = -4.17, p < 0.05$), no significant differences were found in relation to the barriers that inhibit the functioning of IERCs ($t = -3.2, p > 0.05$).

Discussion

This study examined teachers' utilization of IERCs in the primary school cluster centers of Gamo Zone. It also assessed the barriers that inhibit the proper functioning of IERCs. Accordingly, the following results are obtained.

According to the quantitative results of the study, teachers were utilizing IERC resources at a modest level. Contrary to the quantitative results, the qualitative results showed that teachers were not effectively utilizing the IERC resources to meet the needs of all students in the classroom. This finding is confirmed by the results obtained through interviews and document analysis. Based on these results, it is generalized that the IERCs in the study area were underutilized.

This finding is found to be consistent with various local and international research findings. For instance, Mosha's (2015) study revealed that IERCs were not sufficiently utilized to address the needs of all learners in regular schools. He also added that teachers were not in a position to utilize the resource centers due to various reasons. Similarly, the study conducted by Hunt (2009) reported the underutilization of IERCs. In this study, teacher's lack of the necessary knowledge, skills, and expertise was found to be the major reason for teachers' unsatisfactory utilization of IERCs. As this study reported, the underutilization of the IERCs by teachers had negatively affected the learning of LSENs.

The study's findings on the underutilization of the IERCs are also supported by some local research findings. For instance, Gedfie and Negassa (2019) found that due to different reasons, the IERCs were not properly utilized. These researchers further contend that the efforts to adequately address the diverse needs of LSENs in Ethiopia fell short of their intended goal. The study conducted by (Pather, 2013) also brought similar results. In this study, most of the IERCs in Ethiopia were described as "houses for special materials" implying the improper utilization of their resources by the teachers.

Identifying the barriers that inhibit the smooth functioning of IERCs was the second major purpose of this study. Hence, based on the qualitative and quantitative results, the present study identified various challenges that affected the proper utilization of IERC resources. The major barriers identified in the study include inadequate skill training, ineffective community resource mobilization, low participation of school communities, negative attitudes towards LSENs in the community, insufficient monitoring from school leaders, inadequate utilization of screening and assessment tools, lack of early intervention, and insufficient budget allocation for LSENs.

Several studies, both within and outside of Ethiopia, also brought similar findings on the topic at hand. For example, according to Mosha (2015), resource scarcity and financial constraints were reported to be major challenges that jeopardize the smooth functioning of IERCs. Similarly, Charema (2005) showed that inadequate facilities and materials, inappropriate support services, and ineffective policies and strategies were barriers that developing countries face in relation to IERCs. Likewise, Sharma, Forlin, and Loreman (2008) reported that in developing countries attitudinal problems, change resistance, and inflexible curriculum and pedagogy were negatively affecting the proper utilization of IERS.

Coming to local studies, various challenges similar to those identified in this study were reported. In this regard, Beyene and Tizazu (2010) indicated that the lack of relevant facilities and materials was the major barrier hindering the implementation of inclusive education. Teferra (2005), on his part, stressed that the unfavorable attitude of the community towards individuals with disabilities was a major challenge. Teacher-related challenges such as absence of qualified and experienced teachers, limited knowledge about inclusion, and scarcity of ongoing professional development were also reported by Kassie (2013).

Lastly, the present study analyzed the mean differences between teachers and RCCTs with regard to the two variables, i.e., the utilization of IERCs and the barriers encountered for the proper functioning of the IERCs. Accordingly, though there was a significant mean difference in ratings concerning the utilization of IERCs, no significant differences were found regarding the barriers that daunt the functioning of IERCs between the two groups.

The results of the study suggest that there were disparities between teachers and RCCTs in terms of the utilization of IERCs, with the RCCT group having higher ratings than the teacher group. This difference could be due to a variety of factors such as experience, training, or familiarity with the resources available in the IERCs. On the other hand, the lack of significant differences in the perceived barriers to the functioning of IERCs between teachers and RCCTs is interesting. It could indicate that both groups face similar challenges when it comes to accessing and utilizing the resources in the IERCs. This finding highlights the need for improved support and training for both teachers and RCCTs to overcome these barriers and make the most of the resources available to them.

Overall, the findings of the present study suggest the importance of improving the current status of IERC utilization by teachers and addressing the barriers that hinder their proper functioning. By addressing these differences and providing appropriate support and training, educational institutions can ensure that all educators have access to the resources they need to support student learning and growth.

Conclusion and Recommendations

The purpose of this study was to examine how teachers were utilizing Inclusive Education Resource Centers and to identify the barriers that were hindering the effective utilization of these centers in the primary school cluster centers in Gamo Zone. The results of the study revealed that teachers were not making full use of the Inclusive Education Resource Centers. Additionally, the study identified various barriers that were adversely impacting the appropriate usage of these centers. These barriers included a shortage of specialized staff, inadequate training, lack of specialist support, limited resources, absence of qualified personnel, insufficient monitoring tools for students with special needs, and inadequate funding. All of these barriers contribute to the underutilization of the centers by teachers.

The findings of the current study suggest that various measures need to be taken by different stakeholders. In light of the study's findings, the researchers propose the following recommendations.

First of all, it is imperative to ensure that the Inclusive Education Resource Centers are staffed with individuals who have the necessary training and expertise in supporting students with special needs. This will boost teachers' confidence in effectively utilizing the centers. Providing additional training to teachers on utilizing the centers can also help overcome barriers.

Additionally, the Gamo Zone education department, in partnership with other stakeholders, need to ensure that the Inclusive Education Resource Centers are well-equipped with a variety of materials and resources that cater to the diverse needs of students with disabilities. This will help teachers feel more confident in effectively utilizing the centers. Most importantly, concerted efforts should be made to develop and provide teachers with monitoring tools specifically designed for students with special needs to track their progress and offer targeted support. This will facilitate a better understanding of students' needs and informed decisions on utilizing the resources in the centers effectively.

Moreover, all relevant parties, especially stakeholders in the Gamo Zone, should advocate for increased funding for the Inclusive Education Resource Centers to ensure they have the resources required to support teachers in addressing the needs of all students, including those with special needs. Adequate funding can help address many identified barriers and enhance the utilization of the centers.

Finally, the researchers suggest conducting comprehensive studies involving satellite and neighboring primary schools in all districts of Gamo Zone and beyond. These studies should focus on various aspects including the organization, management, and utilization of Inclusive Education Resource Centers in order to gain a more in-depth understanding of the IERCs and inclusive education practices.

By implementing these recommendations, the researchers contend, the utilization of Inclusive Education Resource Centers in primary school cluster centers in Gamo Zone can be significantly enhanced leading to better support for students with special needs and a more inclusive educational environment for all students.

Limitations of the Study

This study exclusively focuses on the cluster primary schools neglecting satellite and other neighboring primary schools. This narrow focus might have resulted in overlooking the potential contributions of these institutions in effectively utilizing the resources provided by the IERCs.

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