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Original Research

# Status of Educational Inputs in Secondary Schools: Implication for Quality Education

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**Abstract**

*This study aimed to determine the status of educational input in secondary schools in three Wollega zones. A descriptive survey design was used to conduct the study. The data were collected using questionnaires, interviews, and observations. The principals of the schools, teachers, and students have participated in this study. Data analysis was supported by SPSS software. In addition, information obtained from the interviews was narrated. Photographs obtained from the observation of schools were also presented as evidence where they were found to be necessary. The results of the study indicated that different infrastructures were not adequate to effectively deliver quality education in the secondary schools of the Wollega zones. Teaching materials and facilities were insufficient to deliver quality teaching in secondary schools. About 83.7% of secondary school teachers had below-standard educational qualifications, and some of them had no professional teacher training. There was a limited school budget, and an insignificant amount was utilized directly for the teaching-learning process. The findings suggest that the government and the general public work cooperatively to equip schools with the necessary inputs to increase students' learning quality in general and their academic achievement in particular.*



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## INTRODUCTION

Education is widely acknowledged as a crucial factor in fostering economic growth and alleviating poverty (UNESCO, 2014; World Bank, 2018). It empowers individuals with essential capabilities and knowledge to attain personal and professional success, enabling them to make informed decisions that positively impact their communities (World Bank, 2018). As stated by Todaro (2004), a nation that fails to invest in education to enhance the skills of its population and effectively utilize them in the domestic economy will encounter challenges in various areas of progress. Hanushek & Wobmann, (2007), affirm that education is universally recognized as a significant element that shapes the individual and socio-economic advancement of any country.

Advanced nations such as the United States, Germany, and Japan have an immense reservoir of highly skilled human capital. This enables them to not only harness their natural

resources effectively but also acquire and bargain for resources from other countries (OECD, 2019). In contrast, underdeveloped nations frequently grapple with significant societal, political, and economic challenges largely attributable to subpar educational standards. The education systems in these countries often suffer from deficiencies in infrastructure, a lack of competent educators, and outdated curriculums, ultimately resulting in a deficiency in crucial competencies among the population (OECD, 2018).

Lack of educational funding can perpetuate a cycle of underdevelopment and hinder a nation's ability to compete on a global scale (UNESCO, 2019). Without adequate funding for educational institutions, students may not have access to quality teachers, up-to-date technology, or necessary learning materials. Additionally, insufficient educational funding can lead to overcrowded classrooms, making it difficult for teachers to provide individualized attention and support (Darling-Hammond, 2000). This lack of personalized instruction can hinder students' ability to grasp complex subjects and hinder their overall academic achievement (World Bank, 2018).

Furthermore, the inadequate educational system in developing nations significantly contributes to social and political instability (Hillman & Jenkner, 2004). Limited access to high-quality education confines individuals to cycles of poverty and limited opportunities, leading to discontent, social unrest, and political instability within the country (Ladd, 2012). To tackle these challenges, developing countries must prioritize investments in their educational systems and endeavour to enhance their standards (World Economic Forum, 2022). This endeavour involves improving infrastructure, expanding educational opportunities, training and retaining skilled educators, and revising curricula to align with global requirements (African Union & UNICEF, 2017; Barrett et al., 2019; Darling-Hammond et al., 2012). Additionally, international cooperation and assistance can play a crucial role in providing resources and expertise to support the development of education systems in developing nations (Heyneman & Lee, 2016; Williams, 2017). However, countries like Ethiopia face obstacles to delivering exceptional education due to various issues. For instance, the excessive demands placed on the education system greatly impede the provision of superior education.

Previous research suggests that the standard of education is influenced by the quality and sufficiency of the physical structures that encompass a range of elements, including well-maintained lecture halls, libraries, laboratories, and other necessary amenities such as uncontaminated water (Ngwaru & Oluga, 2015; Olayinka, 2016; Yangambi, 2023). The tangible infrastructure of schools has emerged as a crucial factor in shaping students' educational journeys (Adede, 2022). The investigation carried out by Chamarbagwala and Morán (2011) emphasized the significance of school infrastructure in enhancing student attendance and involvement. Satisfactory lecture halls, libraries, and hygiene facilities contribute to establishing a favourable atmosphere for learning, thereby positively impacting students' drive and academic achievements (Yangambi, 2023).

In research conducted by Olayinka (2016), it was discovered that the availability of sufficient educational materials, like books, scientific tools, and technological devices, has a favourable impact on the academic performance of students. This discovery highlights the importance of guaranteeing that educational institutions in developing nations can acquire these vital resources, as they play a pivotal role in enriching students' learning experiences and fostering scholastic success. Teaching and acquiring resources play a vital role in facilitating the provision of high-quality education (Krathwohl, 2004; Nannyonjo, 2007). These resources encompass books, guides, scientific apparatus, technology, and various educational assets. Having access to suitable, current, and pertinent teaching and learning materials enhances the educational journey, cultivates analytical thinking, and equips learners with essential expertise and abilities (Frimpong, 2021). Likewise, the presence of up-to-date textbooks and teaching tools has been acknowledged as a pivotal element in improving the learning atmosphere (Knight, 2015).

Adequate financial resources are crucial for providing quality education. Investments in education initiatives, like reducing class sizes or providing professional development for teachers, have shown positive impacts on student achievement (Hattie, 2003). Appropriately allocating resources ensures access to quality learning materials, supports the professional growth of educators, and addresses the needs of diverse learners. Therefore, this study aims to examine and analyze the status of educational inputs in secondary schools in Wollega Zones.

## Statement of the Problem

The primary goal of this research is to assess the status of educational resources in secondary schools in the Wollega Zones. The underwhelming performance in the grade 12 national exams during the 2021–2022 academic year, where just around 3.3% of students scored 50% or above at the national level, highlights the need to analyze the factors that impact the learning environment and educational outcomes. The data gathered from the educational authorities in the East, Horo Guduru, and West Wollega regions indicate that only 2.9% of the students who took part in the national exams were able to attain passing scores and secure admission to universities for the 2021–2022 academic year.

It is critical to do an extensive study on the factors impacting secondary school learning. This investigation is essential to address concerns about the rate of advancement and the quality of education. The three key variables discovered to have an impact on educational quality are contribution, process, and context. This research will focus on the variables that contribute to education to increase academic success and find opportunities for improvement. Given national exam results that have called academic standards into question, a thorough examination of the key variables in Wollega Zone secondary schools is required. The results of this assessment will offer insightful information about the condition of educational buildings, resources, and other elements that impact the learning environment. Legislators

and educators can collaborate to raise educational standards and improve students' academic performance by identifying areas that need improvement.

**Research questions**

The study sought to get answers to the following research questions.

1. What is the status of the school infrastructure in Wollega zones?
2. What is the status of teaching-learning materials in secondary schools in Wollega zones?
3. What is the status of teacher competency in secondary schools in Wollega zones?
4. What is the status of educational finance in secondary schools in Wollega zones?

## MATERIALS AND METHODS

### Research design

The study employed a descriptive research design. A descriptive research design is a type of scientific research design that aims to observe and describe the characteristics or behaviour of a particular population or phenomenon. It focuses on providing an accurate portrayal of the existing situation or condition without manipulating or altering it in any way.

### Population and sample of the study

Secondary school principals, teachers, and students found in three Wollega zones (East, Horo Guduru, and West Wollega) were the target population of the study. For the study, 30 principals, 91 teachers, and 182 students were purposely selected from some schools that were convenient for data collection. The researchers couldn't reach far schools from the zonal town because of security problems during the study period. Nevertheless, the total data of teachers, students, and school materials and facilities were obtained from the zonal education offices.

### Data collection instruments

Primary and secondary data were employed in this study. The primary data were collected from principals, teachers, and students. The necessary data for the study were collected by different methods. Questionnaires for principals, teachers, and students were prepared based on the literature reviewed. The questionnaires were evaluated by a team of researchers at the College of Education and Behavioural Sciences of Wollega University. Then the instruments were tried on 3 principals, 40 teachers, and 100 students in one of the secondary schools in Nekemte Town. Then, necessary improvements were made to the questions and used for final data collection. Interview guides were prepared and also used to collect additional information regarding the status of educational inputs in the secondary schools of the three zones.

In addition, the researchers conducted observations on the school's physical environment, classrooms, libraries, and laboratories by taking photographs that were found to be necessary. Furthermore, document data related to the number of principals, teachers, and students including teaching materials and facilities, and grade 12 national examination results were obtained from the zonal education offices. The data obtained helped to understand the status of

educational inputs in the three zones of secondary schools.

**Data collection procedures**

After preparing the instruments for data collection, three data collectors underwent training on data collection techniques and ethical considerations. Subsequently, a letter was sent to educational offices and sample schools on behalf of the College of Education and Behavioural Sciences, requesting their cooperation in the research data collection. Once permission was obtained, the study's objective was explained to the participants, emphasizing their voluntary participation and the option to withdraw if they experienced any inconvenience. Additionally, participants were assured that the information they provided would remain confidential and be analyzed anonymously.

**Data analysis**

The data collected underwent a thorough examination to ensure the inclusion of complete responses, which were subsequently entered into a computer system. The analysis of the collected data was facilitated by the use of SPSS software. During the analysis process, frequency tables, percentages, and means were employed. In addition, information obtained by the interview was narrated. Photographs obtained on observation of schools were also presented as evidence where they were found to be necessary.

Under this topic, the backgrounds of principals, teachers, and students are presented. Table 1 presents the background of the principals.

**Table 1**

*The Background Characteristics of Principal Respondents*

| Variables | Options | Responses f | % |
|---|---|---|---|
| Qualification | Second degree | 27 | 90 |
| | First degree | 3 | 10 |
| Field of specialization | School/Educational Leadership | 15 | 50 |
| | Other Natural Sciences | 7 | 23 |
| | Other social science | 2 | 7 |
| | Languages | 6 | 20 |
| Training in Educ. leadership | Yes | 18 | 60 |
| | No | 12 | 40 |
| Years of service in Educ. Leadership | 1-5 years | 14 | 47 |
| | 6-10 years | 6 | 20 |
| | above 11 | 10 | 33 |

Of the 30 principal respondents, 18(60%) had received training in school leadership. While 47% of principals indicated that they had 1 to 5 years of service as principals in school, 53%

of them claimed that they served about 6 to 11 years. This shows that the principals are competent in terms of their qualifications. In terms of qualification, professional training, and experience, the principals were found to be moderately appropriate for secondary-level school management. However, the subject specialization area of the principals deviates from educational leadership.

**Table 2**

*Background characteristics of teachers*

| Variables | Options | f | % |
|---|---|---|---|
| Sex | Male | 73 | 80.2 |
| | Female | 18 | 19.8 |
| Qualification | Second degree | 42 | 46.2 |
| | First degree | 49 | 53.8 |
| Subject specialization | Natural Science | 34 | 37.4 |
| | Social Science | 26 | 28.6 |
| | Languages | 31 | 34.1 |
| Professional training | Yes | 86 | 94.5 |
| | No | 5 | 5.5 |

Table 2 presents the teacher respondents' background characteristics concerning their sex, qualification, subject specialization, and professional training. Accordingly, of the total 91 teacher respondents, 80.2% were males and 19.8% were females. Regarding qualification, 46.2% had a second degree, while 53.8% held a second degree. The respondents were from the fields of study of Natural Sciences (37.4%), Social Sciences (28.6%), and language (34.1%). Besides, the majority, 86 (94.5%) of teachers had teacher professional training.

**Table 3**

*Background of the student respondents*

| Variables | Options | f | % |
|---|---|---|---|
| Sex | Male | 113 | 62.1 |
| | Female | 69 | 37.9 |
| Stream | Natural Science | 80 | 44.0 |
| | Social Science | 102 | 56.0 |

Thus, the result indicates that the secondary schools in the study area were dominated by male teachers. Though secondary schools in Ethiopia demand a second degree, more than half of the respondents had a first degree. Though the overwhelming majority of the teacher respondents had professional training, it becomes a surprise that even 5.5% of them

were playing the role of teachers. The majority of the respondents were male (62.1%) while female respondents were 37.9%. There were 44% and 56% of student respondents from the streams of Natural Sciences and social sciences respectively.

**Status of Infrastructure of the Secondary Schools**

Table 4 and Table 5 present the analysis of the status infrastructure of the secondary schools. The principals' responses on the availability of infrastructures show that 2, 8, 1, 5, 4, and 7 schools had no library, laboratory, clean water, toilet, sports field, and computer labs, respectively. Regarding the adequacy of the infrastructure services, 16(53.3%), 18(60.0%), 19(63.3%) 11(36.7%), 15(15%), 16(53.3%), 74(82.5%), and 14(46.7%) principals judged the adequacy of library, laboratory, clean water, toilet, sport field, and computer lab infrastructures as either low or very low. Thus, results indicate that the infrastructures were not adequate to run the teaching-learning process. The principals' responses on the availability of infrastructures show that 2, 8, 1, 5, 4, and 7 schools had no library, laboratory, clean water, toilet, sports field, and computer labs, respectively. Regarding the adequacy of the infrastructure services, 16(53.3%), 18(60.0%), 19(63.3%) 11(36.7%), 15(15%), 16(53.3%), 74(82.5%), and 14(46.7%) principals judged the adequacy of library, laboratory, clean water, toilet, sport field, and computer lab infrastructures as either low or very low. Thus, results indicate that the infrastructures were not adequate to run the teaching-learning process.

**Table 4**

*Principals' responses on the status of infrastructure*

| Options | Library | | Laboratory | | Clean water | | Toilet | | Sport field | | Computer lab | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | % | f | % | f | % | f | % | f | % | f | % |
| Very | 7 | 23.3 | 11 | 36.7 | 12 | 40.0 | 5 | 16.7 | 6 | 20.0 | 9 | 30.0 |
| Low | 9 | 30.0 | 7 | 23.3 | 7 | 23.3 | 6 | 20.0 | 9 | 30.0 | 7 | 23.3 |
| Medium | 10 | 33.3 | 2 | 6.7 | 5 | 16.7 | 11 | 36.7 | 6 | 20.0 | 5 | 16.7 |
| High | 1 | 3.3 | 1 | 3.3 | 3 | 10.0 | 5 | 16.7 | 3 | 10.0 | 3 | 10.0 |
| Very | 1 | 3.3 | 1 | 3.3 | 2 | 6.7 | 2 | 6.7 | 1 | 3.3 | 2 | 6.7 |
| No | 2 | 6.7 | 8 | 26.7 | 1 | 3.3 | 1 | 3.3 | 5 | 16.7 | 4 | 13.3 |
| Total | 30 | 100. | 30 | 100 | 30 | 100.0 | 30 | 100 | 30 | 100 | 30 | 100 |

Data presented in Table 5, obtained from the documents of educational offices of the zones and Nekemte Town, represents the total/actual data of the educational offices. The overall classroom-student ratio indicates better achievement compared to the standard set by the Ministry of Education (1:40). However, during our observations of schools, we found that more than 100 students were learning in a single classroom. This problem may have occurred due to the uneven distribution of teachers, with many teachers in areas where classrooms are limited.

**Table 5**

*Classroom-student ratio (Actual data)*

| Zone | Number of students | Number of classrooms | Ratio |
|---|---|---|---|
| Horo Guduru Wollega | 41248 | 875 | 01:47 |
| East Wollega | 53976 | 1650 | 01:33 |
| West Wollega | 82172 | 2274 | 01:36 |
| Nekemte Town | 16626 | 406 | 01:41 |
| Total | 194022 | 5205 | 01:37 |

**Status of the teaching-learning materials**

The analyses of the status of the teaching-learning materials are presented in Tables 6, 7, and 8. Figures 1 and 2 are presented to support the analyses of the status of the teaching-learning materials of the schools.

The materials listed in Table 6 are crucially needed for the teaching-learning process. However, a significant number of the respondents claimed the availability of blackboards and student desks was on a medium level. On the other hand, a large number of principals estimated the availability of student desks, teacher tables and chairs, office computers, and reference books as low. Additionally, in observation, we noticed that some secondary schools have very few outdated reference materials, old boards that are uncomfortable to write on with chalk, and unconformable chairs and tables for teachers.

**Table 6**

*Principals' views on the adequacy of teaching-learning materials*

| | Blackboard | | Student desk | | Teacher's table & chair | | Office computer | | Reference books | |
|---|---|---|---|---|---|---|---|---|---|---|
| Options | f | % | f | % | f | % | f | % | f | % |
| Very Low | 3 | 10.0 | 6 | 20.0 | 7 | 23.3 | 10 | 33.3 | 8 | 26.7 |
| Low | 8 | 26.7 | 10 | 33.3 | 12 | 40.0 | 12 | 40.0 | 16 | 53.3 |
| Medium | 14 | 46.7 | 12 | 40.0 | 8 | 26.7 | 7 | 23.3 | 4 | 13.3 |
| high | 4 | 13.3 | 1 | 3.3 | 2 | 6.7 | 1 | 3.3 | 1 | 3.3 |
| very high | 1 | 3.3 | 1 | 3.3 | 1 | 3.3 | 0 | 0.0 | 1 | 3.3 |
| Total | 30 | 100 | 30 | 100 | 30 | 100 | 30 | 100 | 30 | 100.0 |

In an interview, students mentioned that they had access to almost all the required textbooks. However, during classroom observations, it became apparent that the majority of students did not have their textbooks with them. It was observed that the

students did not consider it important to bring their textbooks to the classroom. Additionally, teachers appeared to be lenient when it came to enforcing the use of textbooks by students. This indicates that it was not the insufficiency of the textbook that could have contributed to the poor quality of learning in the secondary schools this study conducted, but rather the unwillingness of students to use the textbooks and the teachers' poor follow-up with students in using the textbooks.

**Table 7**

*Teachers' views regarding the adequacy of materials and facilities*

| S.No | Items | Mean | SD | Evaluation |
|---|---|---|---|---|
| 1 | Provision of library service | 2.63 | 2.27 | Moderate |
| 2 | Adequacy of reference materials | 2.44 | 1.16 | Low |
| 3 | Provision of laboratory service | 1.65 | 0.85 | Very low |
| 4 | Provision of water service | 2.03 | 1.08 | Low |
| 5 | Toilet service | 2.93 | 1.12 | Moderate |
| 6 | Health /clinic service | 1.51 | 0.95 | Very low |
| 7 | ICT services | 2.57 | 1.21 | Low |
| 8 | Stationery materials (paper, pen, toner, ink, etc.) | 2.15 | 1.01 | Low |
| 9 | Computer service | 2.4 | 1.03 | Low |
| 10 | Printer service | 2.13 | 0.96 | Low |
| | Total | 2.23 | 0.62 | Low |

*Note: 1.00 -1.79 = very low, 1.80 -2.59 = low, 2.60 – 3.39 Moderate, 3.40 -4.19 high, and 4.20 – 5.00 very high adequacies*

The teacher respondents evaluated the adequacy of services and materials on the point 5 Likert scale (1 = very low and 5 = very high) indicating a high score of high adequacy and a low score of low adequacy.

According to Table 7, the teachers' overall evaluation of the adequacy of services and materials was not very positive (M = 2.23. SD = 0.62). The teachers considered the library and toilet services to be acceptable, but they felt that all other services and materials were lacking or insufficient. Similarly, in an interview, one teacher said "Please look at our chairs and tables; we share them with many teachers even though they are broken and uncomfortable. Look at our books, they are copied and do not clearly show the pictures. Please, give us some chairs, whatever they are, and we need them."

Moreover, during the observation conducted, we witnessed that that desks that are comfortable for two students were found to be shared among 3 or 4 even sometimes among 5 students. The classrooms were so crowded with many desks that teachers had no opportunity to move in classrooms to check the activities of students.

The following sample pictures are presented to indicate the status of teaching materials in the secondary schools this study was conducted.


**Figure 1.** *A sample on conditions of secondary schools*

**The status of teachers' competency**

Tables 8 to 10 deal with the status of the competency of teachers. Tables 8 and 9 present the actual data of the educational offices obtained from their documents. According to the data in Table 8, it is evident that only 16.3% of teachers in secondary schools have met the required standard for a second-degree qualification. Astonishingly, there were about 172 (1.9%) of teachers who teach at secondary school with diploma qualification. Having a diploma graduate at secondary this time is a serious problem because recently diploma programs have been given in local languages. In general, secondary schools found in the Wollega zone have been dominated by first-degree, 7592(81.8%) which is supposed to have an impact on the delivery of quality of education.

**Table 8**

*Status of teachers' qualifications (Actual data)*

| | 2nd Degree | | 1st Degree | | Diploma | | |
|---|---|---|---|---|---|---|---|
| Zone | N | % | N | % | N | % | Total |
| Horo Guduru Wallagga | 363 | 12.9 | 2419 | 86.1 | 22 | 0.8 | 2804 |
| East Wallagga | 387 | 16.1 | 1951 | 81.4 | 59 | 2.5 | 2397 |
| West Wallagga | 559 | 15.2 | 3017 | 82.3 | 91 | 1.6 | 3667 |
| Nekemte Town | 205 | 50 | 205 | 50 | 0 | 0 | 410 |
| Total | 1514 | 16.3 | 7592 | 81.8 | 172 | 1.9 | 9278 |

The general picture of the student-teacher ratio in the three zones looks much better than the standard of the Ministry of Education (1:40). However, a low or high student-teacher ratio alone does not guarantee a level of quality education. The quality and competence of teachers would impact the teaching-learning process.

**Table 9**

*Student-teacher ratio (Actual data)*

| Zone | Number of teachers | Number of students | Teacher-student ratio |
|---|---|---|---|
| Horo Guduru Wallagga | 2804 | 41248 | 1:15 |
| East Wallagga | 2397 | 53976 | 1:23 |
| West Wallagga | 3667 | 82172 | 1:22 |
| Nekemte Town | 410 | 16626 | 1:41 |
| Total | 9278 | 194022 | 1:21 |

According to the data presented in Table 10, while principals rated the competency of teachers at an average level (M = 3.06, SD = 0.68) level, students estimated the professional competency of the teachers as high (M = 3.66; SD = 1.08). The differences in viewing the teacher professional competency between principals and students may be that principals do not only consider the issue of classroom teaching. The principals are expected to have more information about the competency of teachers than students. Thus, it can be concluded that teachers need continuous professional updates following the responses of the principals.

**Table 10**

*Principals' response to teachers' competency*

| | | Principal Responses | | | Student responses | | |
|---|---|---|---|---|---|---|---|
| S. N | Items | Mean | SD | Evaluation | Mean | SD | Evaluation |
| 1 | Subject matter knowledge | 3.30 | 0.84 | Average | 3.66 | 1.08 | High |
| 2 | Pedagogical skills | 3.17 | 0.87 | Average | 3.52 | 1.19 | High |
| 3 | Attitudes toward the profession | 2.73 | 0.91 | Average | 3.77 | 1.23 | High |
| 4 | Ability to utilize instructional time | 2.93 | 0.83 | Average | 3.58 | 1.28 | High |
| 5 | Willingness to help students | 3.13 | 0.94 | Average | 3.71 | 1.41 | High |
| 6 | Given academic support to students | 3.07 | 0.74 | Average | 3.69 | 1.34 | High |
| | Total | 3.06 | 0.68 | Average | 3.66 | 1.08 | High |

Note: *1.00 to 1.79 = very low, 1.80 to 2.59 = low, 2.60 to 3.39 = moderate, 3.40 to 4.19 = high and 4.20 to 5.00 = very high adequacies*

**Status of educational finance**

The following two tables present the evaluation of the status of educational finance in the secondary schools

According to Table 11, from the total of 91 teacher respondents, (70%) of them mentioned that the budget of their school was insufficient. Besides, in the discussion held with principals about budget utilization, they informed that 20%-50% of the budget was used for stationery; there was no budget

expenditure for laboratories; about 10%-40% of the budget was used for teaching materials; about 10%-20% of the budget was utilized for reference materials. In a nutshell, the teaching-learning activities of secondary schools were weakly supported by educational finances.

**Table 11**

*Principals' response on the adequacy of the budget*

| S. N | Options | F | % |
|---|---|---|---|
| 1 | Very sufficient | 1 | 3.3 |
| 2 | Sufficient | 4 | 13.3 |
| 3 | Somewhat sufficient | 4 | 13.3 |
| 4 | Insufficient | 21 | 70.0 |
| | Total | 30 | 100 |

The teachers were asked to forward their observations on the budget utilization of schools. Accordingly, 51.7% of them said that the utilization of budget for teaching-learning activities was either low or very low while 26.4% suggested it was a medium. This shows the very limited amount the budget of the school has directly used for the teaching-learning process which impacts the quality of education.

**Table 12**

*Teachers' response to budget utilization*

| S. N | Options | F | % |
|---|---|---|---|
| 1 | Very high | 6 | 6.6 |
| 2 | High | 14 | 15.4 |
| 3 | Medium | 24 | 26.4 |
| 4 | Low | 29 | 31.9 |
| 5 | Very low | 18 | 19.8 |
| | Total | 91 | 100 |

## DISCUSSION

Factors that affect the quality of education, such as educational inputs, are crucial. Educational inputs are essential for providing quality education. However, when assessing the current state of educational inputs, it was discovered that the infrastructure was insufficient to support the delivery of quality education. This includes the inadequacy of libraries, laboratories, clean water, toilets, sports fields, and computer laboratories. The classroom-student ratio indicated that there was no shortage of classrooms, but quality needs due attention.

While infrastructure problems can also be found in developed countries, such as the United States, where over 50% of public schools require repairs or modernization,

according to NCES (2019), the situation is particularly concerning in developing countries, particularly in Africa. Many African countries face significant challenges in terms of educational infrastructure, with inadequate facilities and resources for their students being a widespread issue. According to UNESCO, there is a lack of schools, teachers, and infrastructure in many parts of the continent, especially in rural areas (UNESCO, 2019). As a result, many children and young people are unable to go to school due to the limited resources available (Yangambi, 2023). The African Union & UNICEF (2017) has also emphasized the importance of investing more in educational infrastructure in Africa (Ngwaru & Oluga, 2015). Because having adequate infrastructure can improve the learning experience and academic outcomes for students (Adede, 2022; Darling-Hammond et al., 2012), and vice versa. Therefore, the current study has found that the secondary schools in Wollega zones have poor infrastructure, which may be a contributing factor to their low academic achievements.

Teaching-learning materials and facilities play a crucial role in enhancing the quality of education. Research has shown that the use of appropriate teaching-learning materials and facilities can improve student learning outcomes and increase student motivation and engagement (Krathwohl, 2004; Munna & Kalam, 2021). However, the findings of the current research indicated that there was a high shortage of teaching materials and facilities in secondary schools where the present study was conducted. The majority of principals estimated the adequacy of student desks, teacher tables and chairs, office computers, and reference books as either low or very low. In addition, teachers rated the provision of libraries, reference materials, laboratories, clean water, toilets, health care, ICT, stationary materials, computers, and printing services as low. Results obtained from observation also confirmed that the materials and facilities deteriorated, though there were variations among schools. Some schools had relatively better materials and facilities. Consistently, a study conducted on the effect of input and process factors affecting quality education at a teacher training college indicated that there was a poor status of facilities and educational material/inputs (Chala, 2014). Therefore, it becomes logical that the inadequate conditions of the teaching-learning materials and facilities have negatively contributed to the quality of learning for students.

Educational finance is a crucial aspect of ensuring quality education for all students. According to the National Education Association (NEA), "school funding is one of the most important factors in determining the quality of education that students receive" (NEA, 2019). This is because financial resources can provide schools with the necessary tools and resources to hire qualified teachers, purchase up-to-date textbooks and technology, and maintain safe and well-equipped facilities (Rice, 2004). Thus, increasing spending on education can lead to improved student outcomes, including higher test scores and better graduation rates (Ladd, 2011). However, the present study shows that secondary schools were suffering from financial problems in two ways. First, the budget that goes to schools is very limited. Second, of the budget allocated for schools, very little was utilized directly for the

teaching-learning process. Hence, secondary schools in Wollega zones were working under the constraint of educational finance.

## CONCLUSIONS

According to the findings, significant issues were identified in the educational system of secondary schools in Wollega zones. Insufficient infrastructure and teaching materials were observed, along with financial challenges. Furthermore, the qualifications of the teachers were deemed inadequate for teaching at the secondary level. Addressing these concerns is crucial to enhancing the quality of education and offering improved learning opportunities for students. Because they can negatively affect the learning outcomes of students and impede their overall educational growth. Thus, measures must be implemented to enhance and broaden school facilities, guarantee the availability of essential teaching materials, and promote the effective utilization of textbooks as valuable resources.

### Recommendations

1. A comprehensive plan needs to be developed by the Oromia Education Bureau to address the infrastructure needs of each school after assessing them.
2. Additional infrastructure development resources can be secured by schools through partnerships with local communities, NGOs, and government agencies.
3. To ensure that teaching materials are in good condition, schools should develop a system for their regular maintenance and replacement.
4. Schools should establish a resource centre where teaching materials can be accessed and borrowed by teachers.
5. Teachers should be motivated to include textbook-based activities and exercises in their lesson plans.
6. A teacher-training program should be developed and implemented by the Ministry of Education and Oromia Education Bureau to upgrade the qualifications of teachers in secondary schools in Wollega zones.
7. The teaching-learning process, including the procurement of teaching materials, infrastructure development, and teacher training, should be allocated a significant portion of the budget by the Oromia Education Bureau.
8. If the upcoming research considers the subject specialization of teachers and parental involvement in schools as educational input will help to understand the status of educational inputs in Wollega Zones. Besides, future research is informed to examine the relationship between educational inputs and student achievement in national examinations to better understand how inputs have been influencing the learning of students.

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## DECLARATION

There was no conflict of interest among the authors or otherwise.

## DATA AVAILABILITY STATEMENT

All data related to the study are available from the corresponding author upon request

## REFERENCES

Adede, K.O. (2022). Impact of school infrastructure on provision of quality education in public secondary schools of Nyakach District, Kenya. University of Nairobi, (Master Thesis). http:// erepository. uonbi.ac.ke:8080/xmlui/handle/1234567 89/7161

African Union & UNICEF. (2017). Transforming education in AFRICA: An evidence-based overview and recommendations for long-term improvements, Author.

Barrett, O., Treves, A., Shmis, T., Ambasz, D., & Ustinova, M. (2019). The impact of school infrastructure on learning. A Synthesis of the Evidence. World Bank Group. DOI: 10.1596/978-1-4648-1378-8

Chala, T. (2014). Inputs and process factors affecting the quality of training in Nekemte College of Teachers Education, Ethiopia. *Science, Technology and Arts Research Journal. 3*(3), 166-175. DOI: http://dx.doi.org/10.4314/star.v3i3.28

Chamarbagwala, R., & Morán, H. E. (2011). The human capital consequences of civil war: Evidence from Guatemala. *Journal of Development Economics, 94*(1), 41-61. https://doi.org/10.1016/j.jdeveco.2010.01.005

Darling-Hammond, L. (2000). Teacher quality and student achievement: A Review of state policy evidence. *Education Policy Analysis Archives, 8*(1), 1-44. https: //www. Researchgate .net/ publication/240273279

Darling-Hammond, L., Amrein B.A., Haertel, E., Rothstein, J. (2012). Evaluating Teacher Evaluation. Phi Delta Kappan, 93(6), 8–15. doi:10.1177/003172171209300603

Frimpong, S. O. (2021). The role of teaching and learning materials and interaction as a tool to quality early childhood education in Agona East District of the Central Region of Ghana. *African Educational Research Journal, 9*(1), 168-178. DOI: 10.30918/AERJ.91.20.112

Hanushek, E, A. & Wobmann, L. (2007). The Role of School Improvement in Economic Development. World Bank Policy Research Working Paper 4122.

Hattie, A.C. (2003). Teachers make a difference: What is the research evidence? Paper presented at the Building Teacher Quality: What does the research tell us ACER Research Conference, Melbourne, Australia. Retrieved from http://research.acer.edu.Au/research_conference_2003/4/

Heyneman, S. P. Lee, B. (2016). International organizations and the future of education assistance. International Journal of Educational Development. 48, 9-22. http://dx.doi.org/10.1016/j.ijedudev.2015.11.009

Hillman, A. L. & Jenkner, E. (2004). Educating Children in Poor Countries. International Monetary Fund. Economic Issue No. 33

Knight, B. A. (2015). Teachers' use of textbooks in the digital age. Cogent Education, 2, 1-10. http://dx.doi.org/10.1080/2331186X.2015.1015812

Krathwohl, D. R. (2004). Reflections on the taxonomy: Its past, present, and future. In L.W. Anderson & L.O. Sosniak (Eds.), Bloom's Taxonomy. A Jbrty-year retrospective. Chicago: University of Chicago Press.

Ladd, H. F. (2011). Teachers' perceptions of their working conditions: How predictive of planned and actual teacher movement? *Educational Evaluation and Policy Analysis*, 33(2), 235-261. https:// doi. org/ 10.3102 /0162373711398128

Ladd, H. F. (2012). Education and poverty: Confronting the evidence. *Journal of Policy Analysis and Management, 31*(2), 203–227. https://doi.org/10.1002/pam.21615

Munna, A. S. & Kalam, A. (2021). Teaching and learning process to enhance teaching effectiveness: a literature review. *International Journal of Humanities and Innovation, 4*(1), 1-4. DOI: https://doi.org/10.33750/ijhi.v4i1.102

Nannyonjo, H. (2007). Education inputs in Uganda: An Analysis of factors influencing learning achievement in grade six. The World Bank

National Education Association (NEA). (2019). School funding: A roadmap to equitable, adequate, and sustainable financing. Retrieved from https:/ / www. nea. org/ ho m e/63122.htm

Ngwaru, M., & Oluga, M. (2015). Educational infrastructure and resources for sustainable access to schooling and outcomes: The case of early literacy development in southern Tanzania. *Africa Education Review, 12*(1), 88-108. http://ecommons.aku.edu/eastafrica_ied/66

OECD. (2018), Education at a Glance 2018: OECD Indicators, OECD Publishing, Paris. http://dx.doi.org/10.1787/eag-2018-en

OECD. (2019). PISA 2018 Results (Volume I): What Students Know and Can Do. OECD Publishing.

Olayinka, A.R, B. (2016). Effects of instructional materials on Secondary school student's academic achievement in social Studies in Ekiti State, Nigeria. *World Journal of Education,* 6 (1), 32-39, http: // wje.Sciedup ress.com

Rice, J. K. (2004). K-12 education finance: New Directions for future research, Equity and efficiency in school finance reform: Competing or Complementary Goods?. Peabody Journal of Education, 79(3), 134–151. doi:10.2307/1493298

UNESCO. (2014). Teaching and learning: Achieving Quality for All. EFA Global Monitoring Report 2013/2014. Paris: UNESCO. Retrieved on www.UNESCO.org, accessed on 26/05/2014

UNESCO. (2019). Global Education Monitoring Report 2019: Migration, Displacement and Education. UNESCO Publishing.

Williams, J. H. (2017). International Cooperation for Education in Developing Countries. https://doi.org/10.1093/acrefore/9780190264093.013.42

World Bank. (2018). World Development Report 2018: Learning to Realize Education's Promise. Washington, DC: World Bank.

World Economic Forum. (2018). The Future of Education, Gender and Work: A Global Systemic Analysis. World Economic Forum Publishing.

World Economic Forum. (2022). Catalyzing Education 4.0 Investing in the Future of Learning for a Human-Centric Recovery. Insight Report. www.weforum.org

Yangambi, M. (2023). Impact of school infrastructures on students learning and performance: Case of three public Schools in a Developing Country. Creative Education, 14, 788-809.