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Research Article

An Empirical Research on the Practices of Education Management Information System (EMIS) in South West Showa Education Sectors

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Abstract

This study focused on the implementation of Educational Management Information System (EMIS) in South West Showa education sectors. An Education Management Information System (EMIS) is a system that collects, manages, and shares educational data within a national ministry or department of education. EMIS, as defined by UNESCO in 2018, is a system of operational processes utilizing digital technology to gather, analyze, and utilize data and information in education for various purposes such as management, planning, policy-making, and monitoring. A mixed research approach was used, with data collected through questionnaires, interviews, and document analysis. Data analysis was done using SPSS version 24. The study involved the South West Showa education office management body and 6 Woredas education sectors. Challenges identified included lack of education indicators manual, qualified personnel, EMIS software user manual, relevant training, computer and printer shortages, high turnover in EMIS positions, and issues with data accuracy and reliability. Respondents highlighted problems such as insufficient ICT infrastructure, lack of IT competency, shortage of qualified staff, and poor coordination. The study concluded that EMIS faced various obstacles affecting its management, and recommendations were made to address these issues.

1. Introduction

An Education Management Information System (EMIS) is a comprehensive system that generates, oversees, and distributes educational data and information, usually within a national ministry or department of education [1]. It encompasses a series of operational processes, procedures, and collaborative agreements that consistently exchange, integrate, and analyze data about schools, facilities, teachers, students, learning activities, and evaluative outcomes, [2]. EMIS offers timely, cost-effective, and user-friendly information for educational management [3].

Education Management Information Systems (EMIS) are crucial tools for education policy-making, management, and evaluation [4]. They gather, store, process, analyze, manage, and distribute information, and are connected to computer networks [5]. EMIS offers management the most recent data, aids in decision-making, and produces reports for both regu-

lar and special purposes [6]. It assists in recognizing successful units and implementing best practices in underperforming ones for intervention [7]. Statistical data is essential for allocating resources in African nations, but there is a lack of capacity, which hampers decision-making [8]. This, in turn, affects the planning and management of education. UNESCO identified significant information deficiencies in 21 African countries related to student enrollment, teaching staff, infrastructure, educational materials, and financial resources [9].

Sub-Saharan African nations have established data collection systems to prioritize quality, development, efficiency, effectiveness, equity, and performance [10]. This transition necessitates data from various sources and levels, necessitating collaboration across different levels of management and between the Ministry of Education and private educational institutions. Tracking progress towards these goals requires access to detailed data and a strong decision-making system [11].

The Ministry of Education [12] in Ethiopia uses education performance data for planning, decision-making, and policy development. The Education Management Information System (EMIS) has expanded, with decentralized access and support from ICT directorates [13]. In 2015, the structure transitioned to the ICT & EMIS Directorate, and in 2019, the Oromia National Regional State integrated the ICT & EMIS teams into a single directorate.

The demand for education data is rising, but challenges like inadequate EMIS facilities and customer dissatisfaction are impeding the quality of education data in the South West Showa zone and Woreda Education sectors. This study seeks to tackle these issues and enhance the organizational status of the Woredas education sector EMIS.

1. What is the current practice of EMIS in using a quality data in South West Showa zone education sectors?
2. What are the major challenges that affect the effective utilization of EMIS at South West Shawa Zone Education sectors?
3. To what extent do decision makers use EMIS?

2. Objectives of the Study

2.1. General Objective

The general objective of the study is to assess the current EMIS practices of South West Showa zone, Woredas education sectors and to suggest proposed solution.

2.2. Specific Objectives

To identify the current experience of EMIS in South West Shawa zone education sectors.

1) To assess the root causes of EMIS problems on proper utilization in South West Shoa education sectors.
2) To examine how much South West Shawa zone educa-

tion sector EMIS data is used by decision makers.

3. Methodology

The methods of the study were both qualitative and quantitative research methods. The research design was mainly descriptive research design. This method is selected for it is an appropriate methodology to describe the current status of a given situation [14]. Population refers to any collection of specified group of cases to be studied. It is the entire group of people to which the researchers intends the results of study to apply. There are twelve Woreda Education offices in South West Showa zone serving the community. For conducting the study, the researcher selected 6 Woredas from the Zone. From each Woreda, 6 staticians, 6 Woreda education offices head and 1 South West Showa zone education office management bodies were selected. In order to achieve the objective of this study, both primary and secondary data were collected from various sources. Secondary data source; the researcher used as a source from reports available in the sectors and document from annual educational statistical abstracts, annual education census questionnaire reports, policy documents, web sites and other related sources.

Based on statistical information obtained from South West Showa zone, there are twelve woradas including Woliso town. South West Showa zone Education office management bodies were selected as a respondents group by using avaliabilty sampling technique. Out of twelve woredas, six woredas were selected on the basis of simple random sampling technique. This is because simple random sampling technique gives each unit of population equal opportunity to be selected. Totally, 18 respondents were selected using avaliability sampling techniques (from six Woredas education sector office heads and six woredas education office statsticians, and 1 South west Shawa zone education office management bodies having 6 management members, Zone statistician head was included in the management bodies. Questionnaire and interview were The main data gathering instrument.

To analyze the data both qualitative and quantitative methods were employed. The decisive argument here is that the use of both quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach achieves alone [15]. In quantitative method, data was coded, tabulated, and analyzed by descriptive statistics such as frequency, percentage and mean. The responses was keyed into Statistical Package for Social Science (SPSS) version 24, to generate quantitative data output.

4. Discussion

This study investigates the implementation of Educational Management Information System (EMIS) in South West

Showa zone education sectors, focusing on respondent characteristics and primary data analysis. This study used questionnaires, focus groups, and document analysis to gather data on the Woreda education sectors. It involved management bodies from the South West Showa zone and wordas education offices from six woredas, as well as heads of education offices and statisticians.

This study assessed the implementation of the Educational Management Information System (EMIS) in six Wereda education sectors in South West Showa Zone, Oromia reginal state. The majority of respondents reported a shortage of computers, printers, and data backup flash disks. The EMIS strategic plan was moderate, but there was a low status of EMIS resources such as educational indicators, software user manuals, and annual questionnaire completion guides.

The majority of respondents face serious challenges in their EMIS unit, including lack of clear information policy, poor ICT infrastructure, lack of data integration, and unavailability of clear policies and procedures. They also lack accountability for inaccuracies, irrelevant data transfer, and a clear attitude about data importance. The majority of respondents in an interview indicated that most education sector management bodies do not use EMIS data for goal setting, policy development, performance standard selection, coordination, regulation, financing, and curriculum development. They also noted that EMIS data is rarely used for operational purposes and that it is not available at all times and levels in education sectors.

5. Conclusion

Depend on the fundamental question and the key findings of the study, the following conclusions were made:

The current state of EMIS in the educational system of South West Showa reveals challenges in ICT infrastructure, compensation packages, and independent systems for managing EMIS. These findings indicate a severe shortage of resources, inadequate organizational structure, and a lack of an autonomous EMIS framework, impacting the performance and overall education quality. The absence of an Amharic version of the EMIS software user manual, educational indicators manual, and EMIS-related training were identified as the main causes of poor data availability. Specialized training and manuals are crucial for educational analysis and policy considerations. Inappropriate staff placements also contribute to the problem.

The study found that educational data was not effectively used to plan and manage the education sector in the region. While participants provided some educational statistics and information, there was limited data on financial indicators, analysis, and school facilities. The region's educational sectors lacked trained personnel to handle EMIS activities, resulting in inadequate data organization and utilization. This led to poor execution and utilization of EMIS across all levels of the educational systems, with insufficient infrastruc-

ture to support EMIS operations. Overall, there was inadequate documentation and utilization of educational data for planning and decision-making in the South West Showa educational sectors.

The study identifies significant challenges affecting the performance of EMIS in the education systems of the zonal education sectors. These challenges include assigning unrelated personnel to EMIS activities, lack of accountability for data accuracy, incomplete or invalid data transfer, and unclear understanding of the value of education data. The study also highlights issues with the educational system's structures in the South West Showa zone, such as inadequate ICT infrastructure, lack of skilled labor, and subpar coordination. Additionally, interview results revealed problems with accountability for data transfer and a lack of understanding of the importance of educational data.

6. Recommendations

In light of the findings and the conclusions drawn, the following recommendations were forwarded to strengthen EMIS practice and its positive impact in the study area:

The text emphasizes the importance of EMIS for effective planning and decision-making in the education sector. It recommends that management bodies at all levels, including the South West Showa Education Office and Worada Education Offices, should be proficient in EMIS. This can be achieved through workshops, seminars, and written materials to raise awareness and provide an overview of EMIS functions.

The text suggests that the South West Showa Zone Education Office, in collaboration with the Woredas Education Sector, should provide incentives and continuous training on basic computers, educational indicators, education statistics software, and related topics to EMIS experts.

The effectiveness of EMIS is impacted by factors such as lack of commitment, incomplete data transfers, and lack of understanding of education data value. To improve, South West Showa education sectors should create policies, reward staff, enhance data integration, decentralize software, and implement a data auditing system.

Addressing issues like insufficient ICT infrastructure, skilled labor shortage, IT competency, and coordination system requires significant effort from Wereda and South West Showa Zone education offices to develop feasible EMIS enhancement projects.

Abbreviations

EMIS	Eduacation Management Information System
SPSS	Statistical Package for Social Science
MoE	Ministry of Education
ICT	Information Communication Technology

Conflicts of Interest

The authors declare no conflicts of interest.

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