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The Utilization of Educational Management Information System in Secondary Schools of Gindeberet Woreda in West Shoa Zone, Oromia Regional State, Ethiopia

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Abstract:
The study was aimed to assess the utilization of Educational Management Information System in Secondary schools of Gindeberet Woreda. Descriptive survey method was employed to realize the objective of the study. A total of 93 stakeholders from Gindeberet Woreda education office, and its secondary school were included in this study. All secondary schools including preparatory school were selected by using availability sampling. From the three schools 65 employees, and 15 PTA members and 10 woreda education office employees were involved in the study that were relevant to EMIS activity. Both availability and simple random sampling method were employed for Population sampling of woreda education office and secondary schools of the woreda. Questionnaire, interview, focus group discussion, and document were used as the tools to gather all the necessary data both qualitatively and quantitatively. The data was analyzed by descriptive presentation, arithmetic mean, average mean and percentile together with qualitative analysis. The findings disclosed at EMIS are impeded and handicapped by different factors such as ICT materials, trained manpower, data management system, and employee redness to utilize EMIS life cycle as needed. In addition to poor design of data tools, lack of logical support and financial support for the person who involved in the data process were the major problems that were observed to utilize EMIS as needed in the secondary schools of the woreda. The employee satisfaction in line with the training given was also treated and as a result, the training was very limited especially on EMIS usage in the woreda due to the absence of need assessment when different training was given. In light of this, it is recommended that training providers should conduct need assessment before providing EMIS training. It is also recommended that schools should exert effort towards securing IT materials, most preferably by approaching NGOs and respective higher level educational offices like Zone, Regional and Federal education.

Keywords: EMIS Process owner, EMIS User, Information System, Information Utilization, Management of Information System

1. Introduction

Most countries develop an education database using the results of school census and/or surveys that are carried out on an irregular basis. These data are published in bulky statistical yearbooks, often raw, fragmented and without analysis. Yet, policy-makers and other actors in management and planning need easily understandable and interpretable data. These should be supported by in-depth analyses on the functioning of the system, that help in policy formulation, planning of relevant actions, and in monitoring and evaluation of the latter because the needs for information are varied and becoming increasingly complex, a solid information system should be as complete as possible. It should cover all the needs and areas for information and not only aim to collect, store data and process information but should also help in the formulation of education policies, their management and their evaluation ("Sylla, 1996").

The need for educational management information system is a result of educational quality deterioration that has occurred following the rapid expansion of the system in the seventies and eights in developing countries ("Chapman and Mahlack, 1993"). Accordingly, the concept of Educational Management Information System (EMIS) is to mean subsystem to collect, store, process, analyze and disseminate information ("Carrizo et.al., 2003"). Recently the need to achieve equity and access of education to all school age children has increased in the importance of EMIS as well.

Although there had been some statistical reports before, the history of EMIS in Ethiopia may be dated to 1957, the year where a research and statistics department was established in the ministry of education ("MOE, 1988").At the end of 1957, the statistical work was organized into a department known as central research, plan and statistics division under the department of programmed, plan and research ("Kassaw, 2001"). Until 1952, the statistical work was done manually. Recently the new system of EMIS utilization includes

the restructuring of the system and its management. The guidelines developed by ("MOE in 2002") have given more authority and responsibility to regional education bureaus, woredas and schools, which is under implementation in Oromia education system as well ("MOE, 2002").

1.1. Statement of the Problem
The rapid expansion of the education system, the increased complexity of its activities, the high pressure to use the scarce resources efficiently, and the availability of relatively low-cost and to manage edition data have promoted the utilization of EMIS. Paradoxically, however, because of weak EMIS utilization, most educational planning efforts do not guide the fulfillment of their objectives in an efficient way ("Carrizo et.al., 2003").
According to ("MOE 2004") Millennium Development Goal and of the millennium declaration is to achieve Universal Primary Education by 2015 for boys and girls, eliminate **gender** disparity in primary and secondary education preferably by 2015. Net enrolment ratio is an indicator that measure performance or goal achievement. A good education indicator system is expected to provide accurate and precise information to illuminate the condition of education and contribution to its improvement. This is highly related with that of the success of EMIS.As ("MOE 2004") however, implementation, capacity at woreda level is not yet at the level expected to carry out their responsibilities. Woreda capacity building programs have been initiated; deployment of staff at regional level was undertaken as first step in building the capacity at other levels.
However, there is still a huge need for training on supervision, strategic planning, budgeting and education management information system at school levels. According to ("UNESCO 2001"), special assistance is expected from central EMIS for personnel at provinces, districts and schools. The school is the major source of educational information, needs greater attention regarding training, improvement of school record management system and awareness of the use of information for planning purposes and decision-making purposes.
The government made a great effort to facilitate conditions to make EMIS functional. But as it is mentioned by ("Mekonen 2010") the EMIS outputs of the Oromia Region lack quality in terms of accuracy, presentation and timeliness. According to the researcher, work experience what Mekonen foundation stated was true. However, the utilization of Educational Information System plays a vital role for Universal Primary Education; Ethiopia takes as one part of Millennium Development Goal. The actual utilization of EMIS especially in school and district level is exposed to different problems.
Gindeberet is a woreda, which is found in the Ethiopia Region of Oromia. It is found in North-Western of Addis Ababa and borders Amhara region in the North-West, and Ambo woreda in the South. As with primary education, a substantial expansion of secondary education (grade 9-12) is increased with compared to the last five years. The increasing numbers of students complicates the management activities and to utilize information appropriately especially at the school and district level. As stated by ("Lasonen et.al. 2005") educational administration faces the challenge of managing an information system at woreda and Zone levels and facilitating school community participation in school governance. This shows how complexity of management is enhancing and enhanced. Therefore, this paper tries to identify the problems as per the statement of the problem.
More specifically, the study was guided by the following basic questions
  i. What is the current status of Educational Management Information System utilization in secondary schools of Gindeberet Woreda?
  ii. What are the major problems and challenges faced/encountered by school stakeholders and users in utilization of Education Management Information system?
  iii. To what extent are efforts made to improve utilization of Educational Management Information System at School level?

1.2. Objectives of the Study
  i. To assess the current state of utilization of Education Management Information System in Selected Secondary Schools of Gindeberet Woreda.
  ii. To find out the problems and challenges encountered by school stakeholders and users in utilization of Education Management Information System.
  iii. To assess the efforts made to improve utilization of Education Management Information System at school level.

2. Conceptual Framework
This section deals with the review of related literature which comprises information system, EMIS, MIS, life cycle of information systems, need of the schools and EMIS success factors.

2.1. Educational Management Information System (EMIS)
Education Management Information System (EMIS) informs the management of education process. Managing information through informed decision making requires the availability of accurate and timely information, which links together resource input to education teaching and learning. An educational Management Information System is therefore, the basis of management, planning and evaluation of an education system. Hence, Education Management Information System is demand responsive, which means that it serves the needs of the consumers or the users of information. Thus, to serve one's clients, conducting survey of the information needs of consumers, and the capacity needs of the procedures; and produce according to user-friendly and interpretable information products and services. To develop and maintain such a vast demand responsive and user-friendly system, various kinds of knowledge and skills

are required in different areas such as system development quality, assurance training, technical support, and national report ("Carizo et al, 2003").

2.1.1. Management Information System (MIS)

Management Information system is a collection of interacting information systems that provide information for both operations and managerial needs. The most important aspect of this definition is its inclusiveness. MIS encompasses all the information-providing systems at all levels of the organization; however, it must be stressed that is a collection system rather than one total system. In theory, a computer is not necessarily an ingredient of MIS, but in practice, it is unlikely that a sophisticated MIS could exist without the processing capabilities of computer. Nevertheless, every MIS includes non-computer elements. The word "integrating" in the definition implies some degree of integration of the multiple information systems involved. This conception of an MIS, though broader than that of fully justified because the information systems of all the organizations functions are increasingly tied together in super a system of quasi-independent information systems, so that no one information system can be viewed as entirely separated from the others ("Tegegn, 2003").

2.1.2. Educational Management Information System and Training

As stated by ("Tegegn 2003") training is one of the essential components of EMIS. Because of the rapid dynamism in the field of technology and high turnover in human power, training must be viewed as continues activity and one that management needs to pay greater attention. It is also an all-round activity because the system is powered by each components working with the other in achieving environment to make the vision happen. On the other hand, training aimed at broadening participant's perspective is generally targeted at meddle and senior level decision-makers and tends to be short term (a few days to a few weeks at a time). The rational for this type of training is that quite often, senior officials have little understanding of how national education data can be used to them or improve their job performance. When intended users do not know to interpret and use quantitative data, they tend to ignore them (Chapman and Mahlack, 1993).

 ("Tegegn 2003,) summarized the general content of EMIS training as follows; survey administration, systems development and programming, policy related data analysis and presentation, compelling reports, publication, and dissemination, networking and communication, maintenance of hard ware and software, documentation, EMIS management and innovate leadership planning and programming, monitoring and evaluation.

To sum up training is learning experience in that seeks a relative permanent change individual that will improve the ability to perform on the job, every organization needs to have well trained and experienced people to perform on the job, every organization to perform the activities that have to be done. Therefore, EMIS personnel have to get training in order to perform their duties efficiently and effectively and to cope up themselves with the changing situation and the new technologies.

2.1.3. Objective and Function of EMIS

There is inevitability about the increased importance assigned to data base planning and management ("Chapman & Mahlck, 1993") information determines the knowledge base from which critical decisions are made and provided current as well as projected scenarios of the system for which decisions are being made. It is with this ground that ("Tegegn 2003") has observed information as an additional knowledge the user's desire about the functions under their responsibilities. Information indicates knowledge about how are the goals and objectives set are achieved, how efficiently resources provided are being utilized and how far the governing rules and regulations are being followed.

Authorities in the field, put the function of information in different ways through the central essence appears the same. For instance, ("Telem 1990") has put the function of information into four main types like, analysis of accumulated historical information, what has happened information, why did it happen information, what would happen if information. When one looks at the function listed above it becomes apparent that information serves the function of showing the states and past trends of the sectors performance, and forecasting in the process of planning ("Curt et al., 2006") broadly have categorized the functions of information into two. Facilitating communication between different stakeholders and providing bases for informed decision making at all levels of organizations.

The main objective of an EMIS is to integrate information related to management of educational activities, and to make it available in comprehensive ways to varieties of users. The most direct operational application of EMIS is to support ongoing management, planning and monitoring and evaluation activities of education system. The overall of concept of an EMIS has given to provide information for users in the following functions. Management and administration of the education system (Macro & micro) and monitoring and evaluation of the education system. ("Carrizo et.al., 1996").

Therefore, the aim of EMIS is to promote the development and operation of education and training management information systems for accountability, planning and monitoring to achieve quality and effective service delivery in the national education system.

2.2. Information Management Life Cycle

This section consists of data collection, data analysis, reporting, publication, dissemination, and feedback. However, before the life cycle, the instrument used for the data should be evaluated, as ("Hue and Herstein, 2003") have pointed out that the questions, lay out and syntax should be well formulated to gather with users and producers.

2.2.1. Data Collection and Processing

Most often, data is collected by means of questionnaires these are prepared in centralized systems at the EMIS center or through decentralized regional offices, irrespective of the method-followed questionnaires, are used to collect school data annually. To do this properly, knowledge of the needs of planners, decision makers, researchers, and other users is required ("Tegegn, 2003"). According to ("UNESCO 2006"), education authorities routinely collect information on schools as part of their regular operations. Such data include location of school, condition of school facilities, number of grade offered, numbers of students by sex and age, number of repeaters, number of teachers by sex & qualification. As cited by ("Carizo et.al. 2003") data collection must include all the fields" covered in EMIS. In addition to education, it should gather and assemble other information in dispensable to EMIS in particular the demographic and financial data which are necessary for the calculation of enrolment rates, and financial indicators.

As ("Mulugeta 2001") further explained, if there is any problem with the quality of data, it is unthinkable to obtain precise results by applying sophisticated methods of analysis. A pre requisite to obtain quality data is a good design of the data collection instrument. This includes a good questionnaire design and a good sampling design.

It is obvious that school is the main source of data for EMIS function. The way records are kept at school level matters hugely when it comes to data collection. School heads, teachers, or record officer, completes the questionnaire by filling in the necessary data according to the questionnaires. Most often schools have data in a list from un aggregated, which is easy for school head or record officer to complete but difficult when it comes to extracting specific information as it is not aggregate ("Tegegn 2003").

Once you have collected the data, you need to plan how to organize its different types, so that it is unable for planning purposes ("Tegegn 2003"). He also described some of the most important aspects of this activity monitoring instruments, data entry program design and data entry, data cleaning and completion. ("Bethke et.al. 2004") although, data and statistics are infamously difficult to collect and use in emergencies, the effort must be made to strengthen sound planning and management. Generally, the data collected from the schools are affected by the following factors; staff members and skills, administrative organization, working procedures and task management, materials facilities and logistical support and financial support for operation.

2.2.2. Data Analysis and Reporting

Data analysis involves looking more closely at the data in various ways, in order to extract information useful for planning and decision-making. The analyses are done to provide information to planners, decision–makers, and other users. In other words, the results of the analysis can point decision makers in the right direction ("Tegegn, 2003").

2.2.3. Publication, Dissemination and Feedback.

The general principle "publish or perish! "" refers to the pressure to publish work constantly to further or sustain a career in academia. Without publishing your findings, the effort you have put in to collecting, processing, data analyzing is lost. You may well have printed some reports when asked by higher decision makers, Planners, researchers, and other users. ("Tegeng, 2003").

3. Research Design and Methodology

3.1. Research Methodology

Descriptive survey method was found to be most appropriate for this study. It is because this method enables to assess the utilization of educational information management system in Gindeberet woreda and to identify the major problems with regard to the management and utilization of educational information system in secondary schools. It also helps to gather various kinds of data in relatively minimum resources. ("Best and Kahn 1989") have stated the appropriateness of this method to such kinds of study.

3.2. Sources of Data

3.2.1. Primary Sources of Data

The primary source of data includes Department Heads, Head of Woreda Education Office, Woreda Education Core Process Owner, Unit Leaders, PTA members, Internal Supervisors, School Principals, Secondary School Supervisors (External Supervisors) and Teachers were given their opinions in open-ended questionnaire and in closed ended questionnaire.

3.2.2. Secondary Sources of Data

Secondary source of data for this study was the data that was collected from student and teacher's profile, stapled information of employee both from school and from Woreda education office, annually reported data from the Woreda Education Office statistical and annual plan from the relevant documents that are mainly related with that of teachers and student information.

3.3. Population, Sample Size and Sampling Technique

3.3.1. Sample Size

The study was conducted in two of the secondary school and one preparatory school that are found in the woreda including educational office. From Woreda Education Office, one Head of Woreda Education Office, five Woreda Supervisors, two Woreda Education Core Process Owner (WECPO) that is former Vice Woreda Officer, two Woreda Statistician from Gindeberet Educational Office included in the study. The sample population from general secondary schools and preparatory secondary school includes 7

School Directors, 15 PTA members, 6 Unit leaders, 24 Department Heads, one Secondary School Supervisors and 30 Teachers were involved in the sample.

3.3.2. Sampling Techniques

The three schools were selected by availability sampling method. From the three schools 7 School Directors, one school Supervisor, six unit leaders, 15 PTA members and 24 department Heads were selected purposively because they are the main role-player of EMIS. In addition, from 113 School teachers 30 (26.5%) were selected by simple random sampling because they participate in EMIS activities in some extent. Whereas from Gindeberet education office One Head of Woreda Education Office, two Woreda Education Office Core Process Owners, five Internal Supervisors and two Woreda Education statisticians were included in the study by using availability-sampling method because, they were the actors and stakeholders of EMIS and decision makers.

3.4. Instruments of Data Collection

The researcher used interview, questionnaire, FGD and document analysis to collect relevant information from sample population. Because employing multiple data collection tools helps to combine the strength of data (Brewer, 1989 and Patton, 1987)

3.4.1. Questionnaire

Questionnaire was used to gather data from principals, unit leaders, department heads, and from woreda education employees. Close-ended and open-ended items used to make questions convenient for respondents. Most of the question items were close ended type.

The questionnaire was prepared in English, because secondary school principals, unit leaders and department heads are first degree and above in terms of educational level.

Therefore, the researcher expects the respondents understand English and respond comfortably. In addition, simple language was used to avoid misunderstandings and ambiguities that hinder reliable responses. The questionnaire developed, so that it could answer the basic questions of the study. Accordingly, the questionnaire consisted of the life cycle of Education Management Information System, factors that affect the practice of EMIS and efforts to be made in schools in relation to training were included in the questionnaire.

The questionnaires for Woreda Education Officer, Woreda Education Core Process Owners (WECO), and for Gindeberet Woreda Education Office internal supervisors were prepared in English. Because it is expected, they are at least diploma holders. The question was developed, so that it could answer the basic questions of the study. Accordingly, the questionnaire was similar with that of school principals, unit leaders and department heads. Before administrating the instruments of the data collection, it is important to standardize the tools as it gives the chance to comment on and check its clarity.

3.4.2. Interview

Semi-structured interview was the second data gathering tools in this study. This helped to gather data from Gindeberet Secondary School Supervisors and Gindeberet Educational Office statisticians. The interview was prepared in English and changed to Afan Oromo in order to avoid communication barrier on one hand and to make the respondents free and confidently react to the questions on the other hand. Tape recorder used for more understanding of respondent's view. To reduce and avoid fear the researcher promised any secret would not pass to any one and relax them to react and response freely.

3.4.3. Focus Group Discussion

This helped to gather data from Parent Teacher Association (PTA). FGD questions prepared in English and changed to Afan Oromo. The study includes three groups from three schools of the woreda. Five members from Gindeberet secondary schools, five from Chulute secondary schools and five from Gindeberet high school were included in the FGD. All of PTA members were included and a total of fifteen PTA members involved in FGD using available sampling method. Tape recorder was used for more understanding of respondent's view.

3.4.4. Document Analysis

Document analysis was under taken by collecting information from school and woreda education office that are related to teachers'' profiles, student information profiles, and the way of data entry was used. These documents are related to teacher's experience, subject of specialization, student's enrollment with their grade level, the system of how to collect data and processed were checked.

3.5. Methods of Data Analysis

The data gathered through questionnaire, were structured, organized and framed to make easy for analysis and inferences. To analyze and interpret quantitative data, relevant statistical tools such as percentage and frequency distribution, mean, Grand Mean was employed. Percentage and frequency distribution were used to compare the proportion of those groups of respondents on a matter. Mean and Average Mean (Grand Mean) computed to find out the average values against each item for both groups of respondents to support results of analysis. The data obtained from FGD, interview, open-ended question, and document was analyzed qualitatively.

3.6. Ethical Consideration

Ethics refers to any set of rules or guidelines or human direction on the part of the researcher that direct the appropriate treatment of people participating in the research in planning a research project involving human participants, it is important to consider the ethical

issues suggested by scholars such as Best and Kehian, (1999), the following effort have been made.The researcher informed the participant about the process of data gathering. Furthermore, researcher tried to treat them with respect.

3. Result and discussion

This part of the study deals with the presentation and analysis of data obtained from the sample population through questionnaire, interview, FGD, and document analysis. Questionnaires used to obtain data from school principal, WEO personal, internal supervisors, teachers, department heads and unit leaders

The total score of an item is 15, to get the average it is calculated as $\dfrac{5+4+3+2+1}{5} = 3$ during analysis, most of the mean scores

Interpreted as less than 3 as less performed and greater than 3.0 as highly performed whereas 3 as average. The number of sample population from woreda education office (**WEO**) is 8 and about 65 participated in the secondary school (**SS**) were participated in the study.

SL. No	Items	Resp.	V.H		H		M		L		V.L		Mean
			F	%	F	%	F	%	F	%	F	%	
1	The degree of involvement of you in constructing data collection tool by collaboration of WEO, REB	S.S	1	1.5	8	12	4	6	21	32	31	47.7	1.8
		WEO	1	12.5	1	12.5	-	-	2	25	4	50	2.1
2	Tool collects the data on all aspects of school.	S.S	6	9	10	15	4	6	24	36.9	21	32.3	2.3
		WEO	-	-	2	25	-	-	4	50	2	25	2.2
3	Tool items are consistent with all aspects of EMIS objectives	S.S	6	9	17	26	8	12	15	23	19	29	2.6
		WEO	-	-	3	37.5	1	12.5	2	25	2	25	2.6
4	Tool is easy to understand	S.S	4	6	21	32	5	7.6	16	24.6	19	29	2.6
		WEO	-	-	1	12.5	2	25	5	62.5	-	-	2.5
5	Tool collects the data that is meant for validity	S.S	7	10.7	19	29	4	6	18	27.6	17	26	2.7
		WEO	-	-	2	25	1	12.5	2	25	3	37.5	2.2
6	Tool is reviewed before finalize it	S.S	5	7.6	17	26	3	4.6	20	30.7	20	30.7	2.4
		WEO	-	-	2	25	-	-	3	37.5	3	38	2.1
7	There are certain gaps in tool	S.S	5	7.6	10	15	16	24.6	14	21.5	20	30.7	2.4
		WEO	-	-	2	25	2	25	-	-	4	50	2.2
8	Tool is suitable toyour school	S.S	4	6	20	30.7	1	1.5	19	29	21	32	2.4
		WEO	-	-	2	25	2	25	2	25	2	25	2.5
9	Tool considers the aspects that you think	S.S	2	3	9	22	6	9	22	33.8	19	29	2.4
		WEO	-	-	1	12.5	2	25	4	50	1	12.5	2.3
10	Degree of ambiguity in tool.	S.S	1	12	8	12	1	1.5	25	38	23	35	2.2
		WEO	8	-	-	-	3	37.5	3	37.5	2	25	2.1

Table 1: Preparation of data collection tool
Grand Mean of secondary school (S.S) = 2.43Grand Mean of WEO = 2.31WEO= Woreda Education office

In general, the Grand Mean of secondary schools show 2.43 whereas 2.31 for WEO. This shows the design of data tools did not appropriately used in the both in WEO and schools.

- According to the interview, school and woreda education offices were restricted to use the data tools send by the REB. They do not have any share to change and redesign the tools. Moreover, the respondents of secondary schools and woreda education office employee in the open-ended replied that the tools were vulnerable for different problems like mismatch the design of questionnaires send by WEO and REB, not consider the interest of the client, lack of sufficient space to explain data qualitatively consider the format on specific issues only, etc. To support these findings, ("Hue and Herstein, 2003") have pointed out that the questions, lay out and syntax should be well formulated to gather with users and producers. In general, the data tool of the Woreda was poor in many of its characteristics in achieving the expected purposes. Hence, there is a need to pay more attention on the design of data collection tool.

SL. No	Materials	Resp.	Functional		Not functional		Not at all	
			f	%	F	%	F	%
1	Desk top computer	S.S	9	13.6	36	55	20	30.7
		WEO	1	12.5	4	50	3	37.5
2	Internet Service	S.S	-	-	5	7.6	60	92
		WEO	-	-	-	-	8	100
3	CD floppy disc and flash	S.S	7	10.6	38	58	20	30.7
		WEO	-	-	5	62.5	3	37.5
4	Copier machine	S.S	12	18.4	20	30.7	33	50.7
		WEO	2	25	3	37.5	3	37.5
5	Type writer	S.S	4	4.5	50	76.9	4	6
		WEO	2	25	3	37.5	2	25
6	Lap top computer	S.S	5	7.6	-	-	59	90.7
		WEO	-	-	-	-	8	100

Table 2: Availability of EMIS materials

The data shows most of the respondents of WEO and school responded as these materials are non-function and they are not available in their schools at all. Certain laptop computers, the existence and functional was rare at school level. But, about 5 7.6 %) secondary school respondents gave response that their lap top computers were functional. However, about 67 (91.7%) of WEO and secondary school respondents replied that they do not have lap top at all.

• Interview result shows, the resource constraints as computers at secondary school of the woreda are a severe problem to establish and develop educational information in a usable form. As this level, only the slowest computers are available for data entry and hence, the application runs slowly. In spite of this problem, most of the data are organized manually. In addition, there are computers that need repairing but only for the absence of technicians, still they are not utilized. The technicians are found from Ambo town that is about 98 km from the woreda so it is not simple to get these people easily because of financial and interest of the people to come the area as fast as the need of the school.

• According to FGD, most of the computers were kept without giving any function because of trained manpower. As an example, in Chulute secondary school no teachers were graduated in IT or related fields. In this case, about four computers are kept without any function in case of trained personal. Having computers without trained person is similar with absence of it unless, it gives proper function. Moreover, as Cassidy, (2005) the use of computers is new in many of the developing countries. Hence, basic knowledge of operating systems, word processing, spreadsheet programs, database operation skills, use of internet facilities are needed for all as much as possible. Moreover, self-learning (individual learning) be encouraged to cope with changing

SL. No	Requirements	Resp	SA		A		N		D		SD		Mean
			F	%	F	%	F	%	F	%	F	%	
1	To fill data collection tool is easy.	S.S	7	10.7	17	26	7	10.7	12	18	22	33.8	2.6
		WEO	-	-	3	37.5	2	25	3	37.5	-	-	3
2	It is easy to fill the tool in a given time.	S.S	3	4.6	17	26	3	4.6	16	24.6	26	40	2.3
		WEO	-	-	3	37.5	-	-	5	62.5	-	-	2.7
3	There is sufficient time to collect data appropriately and return back	S.S	6	9	10	15	10	15	24	36.9	15	23	2.5
		WEO	-	-	2	25	-	-	3	37.5	3	37.5	2.5
4	Planners have knowledge in data collection	S.S	6	9	17	26	4	6	14	21.5	24	36.9	2.4
		WEO	-	-	3	37.5	1	12.5	1	12.5	3	37.5	2.5
5	Decision makers know about data collection	S.S	7	10.7	15	23	4	6	13	20	26	40	2.4
		WEO	-	-	1	12.5	3	37.5	1	12.5	3	37.5	2.2

Table 3: Data collection in EMIS
GM WEO=2.6GM= S.S 2.4

As shown from the table most of decision makers lack knowledge on data collection procedures depicts, preparing data collection formats, receiving data from schools, verifying data, compelling data mostly done function by the WEO but as Mean shows these concerned body's did not appropriately collect the data as the Mean shows. On the other hand, secondary school respondents did not give much attention on data collection process as the Grand Mean 2.6 presented in the table.

• On the other hand, interview and FGD were held with on the adequacy of time given when data is collected from different parts of secondary schools. They replied that, however the time given is sufficient there are certain possibilities that make negative effect on the completeness of the information provided. For example, at school level, after completing the school registration most students come to school to be registered. In this case some schools allow students to be registered up to the mid of November to increase the enrollment rate. As a result, school data would not be completed at the time it is required. Hence, the data completed earlier would not be reliable and timely provision of data was difficult according to their responses. As Mulugeta (2001) further

explained, if there is any problem with the quality of data, it is unthinkable to obtain precise results. A pre requisite to obtain quality data is a good design of the data collection instrument. This includes a good questionnaire design, duration of time given and a good sampling design.

SL. No	Items	Resp	S.A		A		N		D		S.D		Mean
			F	%	F	%	F		F	%	F	%	
1	Instruments are monitored	S.S	6	9	9	13.8	6	9	27	41.5	17	26	2.3
		WEO	-	-	4	50	-	-	4	50	-	-	3
2	Data entry program is designed	S.S	4	6	15	23	7	10.7	22	33.8	17	26	2.4
		WEO	1	12.5	3	37.5	-	-	4	50	-	-	3.1
3	Data cleaning and completion is done	S.S	7	10.7	13	20	2	3	27	41.5	16	24.6	2.5
		WEO	-	-	3	37.5	1	12.5	4	50	-	-	2.8
4	All necessary materials are prepared to processed data	S.S	4	6	13	20	2	3	24	36.9	22	33.8	2.2
		WEO	1	12.5	2	25	1	12.5	1	12.5	3	37.5	2.6
5	Logistical support are in place	S.S	4	6	12	18	7	10.7	20	30.7	22	33.8	2.3
		WEO	-	-	2	25	2	25	1	12.5	3	37.5	2.3
6	Financial supports are in place.	S.S	5	7.6	10	15	5	7.6	22	33.8	23	35	2.2
		WEO	1	12.5	2	25	1	12.5	4	50	-	-	3

Table 4: Data processing method

GM S.S = 2.3GM WEO = 2.83
This means the data processing at secondary schools and WEO were poor. In this case, experience sharing between both groups and training of respondents is necessary to process data as best as possible.

• In addition, as the interview of WEO statisticians when data is processed there was a problem in the staff members and enough budget was not allocated that support the data processing method and less attention were given when it is processed. To support this ("Tegegn, 2003 ")describes that data processing method can be affected by Staff members and skills, administrative organization, working procedures and task management, materials facilities and logistical support and financial support for operation.

SL.No	Items	Resp.	S.A		A		N		D		S.D		Mean
			F	%	F	%	F	%	F	%	F	%	
1	Analyses has had a positive impact on learning out comes in my schools/ organization.	S.S	20	30.7	23	35	0	0	12	18	10	15	3.4
		WEO	1	12.5	7	87.5	-	-	-		-		4
2	Data management tools simplify the process of setting school targets	S.S	7	10.7	19	29	5	7.6	11	16.9	23	35	2.6
		WEO	2	25	5	62.5	1	12.5	-	-	-	-	4
3	It is easy to translate the information generated by data analysis into schools for education plan	S.S	8	12	19	29	2	3	17	26	19	29	2.6
		WEO	1	12.5	7	87.5	-	-	-	-	-	-	4
4	Data analysis has helped to identify pupils who are under performing	S.S	11	16.9	20	30.7	1	1.5	17	26	16	24.6	2.8
		WEO	1	12.5	5	62.5	2	25	-	-	-	-	3.8
5	Data analysis has helped to identify areas of teaches/ learning that needs to be addressed in my schools	S.S	13	20	20	30.7	0	0	14	21.5	18	27.6	2.9
		WEO	3	37.5	2	25	3	37.5	-	-	-	-	4
6	Data analysis is done manually and using computers in our schools.	S.S	5	7.6	12	18.4	11	16.9	18	27.6	19	29	2.4
		WEO	1	12.5	2	25	2	25	2	25	1	12.5	3

Table 5: Data analysis

GM SS = 2.85   GM WEO 3.3

This calculated information clearly gives us the analysis of data is less performed in secondary schools. Even though the Grand Mean of WEO is 3.3, the way they collect evidence and information from the school and other resources were traditional and disappointing according to their annually, quarterly, monthly reports of both the schools and Woreda Education Office.

• Interview was held with woreda statisticians whether they faced a problem while analysis was done in secondary school of the woreda. They explained that the reason and common problem in analysis of educational data collected from schools at secondary school and other schools of the woreda lack qualified statisticians working in this field. The shortage of trained and well-qualified staffs mostly attributed due to poor working conditions in terms of pay and career possibilities. Therefore, statisticians employed outside the education sector. Moreover, as("Tegegn, 2003") data analysis involves looking more closely at the data and in various ways, in order to extract information useful for planning and decision making. This shows how much professional personal needed for the analysis of the data.

SL.No	Items	Resp.	S.A		A		N		D		S.D		Mean
			F	%	F	%	F	%	F	%	F	%	
1	Some reports can be made from published articles in our schools	S.S	1	1.5	15	23	3	4.6	20	30.7	26	40	2
		WEO	0	0	3	37.5	5	62.5	-	-	-	-	3.3
2	preparation/publication of abstract is common in our schools	S.S	2	3	16	24.6	4	6	20	30.7	23	35	2.2
		WEO	1	12.5	2	25	-	-	1	12.5	4	50	3.3
3	Every published article passes to users without delay.	S.S	0	0	9	13.8	4	6	23	35	29	44.6	1.8
		WEO	4	50	-	-	-	-	1	12.5	3	37.5	3.8
4	Using Statistical hand out as publication.	S.S	1	1.5	14	21.5	6	9	22	33.8	22	33.8	2.2
		WEO	2	25	4	50	2	25	-	-	-	-	4

Table 6: Publication of information

Most of the teachers, department heads and unit leaders use statistical hand out in their daily report the same to that of WEO employee, there is no sufficient published article in schools as that of woreda education office as the data clearly shows.

- On the other hand, from the document of the three secondary schools of the woreda there were not published articles/indicators that show the actual states of their school. In some extent, Gindeberet preparatory school has some indicator reports that was revised from annual report of the regional education bureau and changed towards their schools in some extent. This shows the practice of publication in the woreda has on its infancy stage. As ("Carrizo and et.al.2003") the publication of information should be carried out as possible in order to provide the services for which EMIS has been set up.

SL. No	Items		Resp.	S.A		A		N		D		S.D		Mean
				F	%	F	%	F	%	F	%	F	%	
1	Dissemination of information provide in our schools with the most resent information		S.S	2	3	16	24.6	8	12	16	24.6	23	35	2.3
			WEO	-	-	3	37.5	5	62.5	-	-	-	-	3.3
2	The form of dissemination in your schools	regular distribution of school abstract	S.S	2	3	14	21.5	2	3	25	38.4	22	33.8	2.2
			WEO	-	-	4	50	4	50	-	-	-	-	3.5
		quick references	S.S	1	1.5	9	13.8	8	12	20	30.7	27	41.5	2
			WEO	-	-	-	-	2	25	6	75	-	-	2.2

Table 7: Dissemination of information in EMIS

In the case of dissemination of information in seminars and workshop, both WEO and secondary school respondents on these items the Grand Mean of both respondents' shows 3.05 and 3.7 respectively as the given items. This shows most of information is passed through these two methods.

- In addition, according to secondary school supervisors the information is disseminated in their schools according to the degree of its content. If the format is from higher education office the information is disseminated in quick references otherwise incase of scarcity of papers, shortage of secretary personal, it is difficult to disseminate all information using written forms. Nevertheless, most of the time information is disseminated in meeting and workshops. However, as ("Tegegn, 2003") dissemination takes a number of forms: Regular distribution of school abstracts, quick references and indicators reports to users, distribution of pamphlets and postures to users reports and briefing provided to planners and decision-makers at different levels of administration provinces, districts and school.

SL. No	Items	Resp.	S.A		A		N		D		S.D		Mean
			F	%	F	%	F	%	F	%	F	%	
1	The practice of feedback is totally released in our schools	S.S	3	4.6	17	26	5	7.6	20	30.7	20	30.7	2.4
		WEO	-	-	5	62.5	3	37.5	-	-	-	-	3.6
2	Feedback is taken as one part of learning practice in our school.	S.S	8	12.3	24	36.9	4	6	9	13.8	20	30.7	2.8
		WEO	-	-	4	50	4	50	-	-	-	-	3.5
3	The appreciation is depending on feedback in our schools.	S.S	8	12	19	29	8	12	8	12	22	33.8	2.7
		WEO	1	12.5	4	50	2	25	1	12.5	-	-	3.6
4	We learn our achievement from feedback	S.S	13	20	19	29	2	3	8	12	23	35	2.8
		WEO	1	12.5	3	37.5	4	50	-	-	-	-	3.6
5	Depending on feedback the tools is used in our schools	S.S	4	6	19	29	14	21.5	18	27.6	10	15	2.8
		WEO	2	25	4	50	1	12.5	1	12.5	-	-	3.8
6	Analysis is depending on feedback in our school.	S.S	8	12	17	26	16	24.6	12	18	12	18	2.9
		WEO	2	25	4	50	1	12.5	1	12.5	-	-	3.8

Table 8: Feed back
GM Secondary schools = 2.83 GM WEO =3.75

The data shows averagely most of WEO respondents replied as feedback plays a great role in the given item but it contradicts with the number of items that develops EMIS life cycle. Feedback without identifying and improving the problems observed it is impossible to say feedback was taken unless it performed properly.

- From FGD, however the practice of feedback utilized to some extent; the feedback was targeted to one or two individuals that have a strong relationship with the leaders. This shows the feedback did not appropriately utilized in order to learn the weakness or achievement observed with all stakeholders. As Tegegn (2003), Feedback is a learning process. Through feedback, we learn our achievements and where problems need correction. Therefore, however feedback plays a vital role to know the right and wrong of every activity, it should not be limited to one or two individuals in order to get sufficient and reliable information.

SL. No	Problems	Res	V.H		H		M		L		V.L		Mean
			F	%	F	%	F	%	F	%	F	%	
1	Absence of clear data/information policy	S.S	18	27.6	20	30.7	15	23	7	10.7	5	7.6	3.6
		WEO	1	12.5	5	62.5	2	25	-	-	-	-	3.8
2	Poor information culture on the part of users	S.S	24	36.9	12	18	12	18	13	20	4	6	3.6
		WEO	1	12.5	4	50	3	37.5	-	-	--	-	3.7
3	Delayed submission of reports	S.S	9	13.8	14	21.5	18	27.6	20	30.7	4	6	3
		WEO	1	12.5	3	37.5	3	37.5	1	12.5	-	-	3.5
4	Inadequate manpower	S.S	4	6	27	41.5	14	21.5	15	23	5	7.6	3
		WEO	-	-	4	50	3	37.5	1	12.5	-	-	3.3
5	Insufficient financial support for EMIS	S.S	19	29	25	38	8	12	9	13.8	4	6	3.7
		WEO	2	25	3	37.5	1	12.5	2	25	-	-	3.6
6	Lack of incentives for those involved in EMIS activities	S.S	13	20	31	47.6	8	12	9	13.8	4	6	3.6
		WEO	2	25	2	25	2	25	2	25	-	-	3.5
7	Poor ICT infrastructures	S.S	22	33.8	15	23	11	16.9	10	15	7	10.7	3.53
		WEO	3	37.5	2	25	-	-	3	37.5	-	-	3.6
8	Poor coordination and leadership	S.S	14	21.5	21	32	10	15	12	18	8	12	3.3
		WEO	1	12.5	2	25	4	50	1	12.5	-	-	3.3
9	Unhelpful managerial attitude	S.S	8	12	4	6	12	18	11	16.9	30	46	2.2
		WEO	-	-	1	12.5	1	12.5	6	75	-	-	2.3

Table 9: Factors that affect the practice of EMIS

Even though we are in information age and most of the activities and tasks are computerized, steal our school systems are suffering from different challenges facing EMIS administrative procedure. Concerning these issue different problems like poor coordination and leadership is challenging factors.

- Most interview and discussion members raised the aforementioned problems as critical challenges for EMIS functions at all levels of the education system. As well, Woreda statistics mainly affirmed that problems like poor data quality, delayed submission of reports, lack of technical skill, and absence of clear data/ information hampered severely the management of EMIS in their respective organization. On the other hand, low technical capacity and inadequacy of EMIS staff, insufficient financial investments, poor ICT infrastructure and lack of incentive were the most challenging problems to implement EMIS effectively in their schools and woreda education office. As("Mulugeta 2001") explained, if there is any problem with the quality of data, it is unthinkable to obtain precise results. Therefore, the problem observed need to get solution in order to get reliable information.

SL. No	Effort to be made	Resp.	S.A		A		N		D		S.D		Mean
			F	%	F	%	F	%	F	%	F	%	
1	Preparing data and distributing data collection formats and questionnaire	S.S	7	10.7	24	36.9	12	18	12	18	10	15	3
		WEO	3	37.5	1	12.5	4	50	-	-	-	-	3.8
2	Receiving data from immediate lower level	S.S	1	1.5	20	30.7	16	24.6	22	33.8	6	9	2.8
		WEO	-	-	3	37.5	5	62.5	-	-	-	-	3
3	Identification and analysis of information needs	S.S	5	7.6	10	15	10	15	13	20	27	41.5	2.2
		WEO	-	-	-	-	1	12.5	5	62.5	2	25	1.87
4	Verifying data	S.S	5	7.6	26	40	13	20	14	21.5	7	10.7	3
		WEO	5	62.5	1	12.5	2	25	-		-	-	4.3
5	Providing EMIS related trainings	S.S	7	10.7	9	13.8	12	18	17	26	20	30.7	2.4
		WEO	-	-	1	12.5	2	25	1	12.5	4	50	2

Table 10: Efforts to be made in educational organization/schools

GMS.S=2.75GM WEO=3.0

This clearly shows there was a great problem on giving EMIS related training in both secondary school and WEO asGrand Mean support the idea given above.

- Some documents were observed in secondary schools and woreda education office in order to investigate the techniques they used to organize different profiles of teachers like, teachers profile starting from he/ she assigned to the school, sex, age, date of birth, service year, level of education and so on. However, WEO efforts were good some schools did not appropriately organize different profiles as needed. They told as they collect information immediately from the concerned bodies, according to the format sent by different parts of education sector. Even though such kind of activities is not recommended it is better to have full information about their employee.

5. Summary, Conclusions, and Recommendations
This chapter comprises the summary of major findings, conclusions and recommendations of the study. It starts with a brief description of the study and goes to summarize the findings of the study followed by conclusions. At the end, recommendations that are considered as helpful to address the problems are forwarded.

5.1. Summary of the Major Findings
The study revealed that most of the Information Management Life Cycle (IMS) were felt as a negative response in both groups of the respondents. In the involvement of constructing data collection tool, on the appropriateness of tool, the usage of tool, the revision of tools before finalize, the target of tool as with regard to its objectives were the problems that were observed in both groups of the respondents. In this case, the design of data tools did not properly used to collect educational data/ information. Means of communication that they use were like meeting and workshop to obtain or disseminate information from school staffs, PTA, and others stakeholders. There were no internet and other electronic means of communication to receive or send data/ information the most serious problem that were observed in the data.
The finding also showed that training on effective and maximum use of ICT did not given, as it is needed according to the Mean of both respondents. The same is true in the interview part of the respondents, it emphasis that no training was given on administrative staff application and maximum use of ICT.

5.2. Conclusion
Educational Information should be utilized in adequate amount for users in order to functional a system rationally and operational decisions can be taken. The finding shows most of EMIS life cycle did not appropriately utilized in the secondary schools of the woreda. This can affect the quality, reliability and timeliness on the data collected that leads users to have the probability of using deficient information. This also might affect the ongoing management activities of, planning, monitoring and evaluation of different activities in secondary schools of the woreda. Allocation of adequate resource and maximum use of utilization information technology were found to be scanty at secondary schools of the woreda. This might affect the quality of information, time used for different purpose, like, facilitating the activities related to school management, student registration, and fee collection, reporting and timetabling processes. Effective decision can be made when information is made available at the right time to the right recipients but the use of information for different decision-making activities of the three secondary schools of the woreda were poor. This might greatly affect the quality of information that able to utilize in decision-making and to give appropriate decision.
Institutional structure and comprehensive package of capacity building activities are vital issues for facilitating the overall functions of EMIS, however, the study reviled that activities like provision of relevant training, incentives, and similar activities that needs the efforts of woreda education office did not performed as it was expected in the woreda. This has an impact to perform EMIS activities efficiently and effectively and to cope up themselves with the changing situation and with the new technologies. Therefore, in light of these findings it could be concluded that the utilization of EMIS in Gindeberet woreda secondary schools were constrained for so many problems to meet the purpose of the education in the woreda.

5.3. Recommendations
The researcher advice that the design of data tool should involve different stack holders when it is constructed, the tool should collect on all aspects of school, it is better to revise the tool used before finalizing it and tool should be appropriate. Therefore, the woreda education office and supervisors should revisit the design of data tool in order to get reliable information.
New technologies like computer, internet software development, etc. need to be introduced for easy and direct access at Secondary Schools. Therefore, school and WECPO should facilitate the means of such IT materials to be fully utilized by preparing projects for different NGO''s and other donor agencies.
Information management life cycle like, data collection, data processing data analysis, publication, dissemination, and feedback in order to use such techniques WEO and secondary school supervisors, school principals, department heads and schoolteachers should do collaboratively in order to get accurate and valid data.
The practice of publication in the woreda and secondary school should be improved. Especially woreda statisticians and Woreda Education Office Core Process Owner should actively participate to facilitate those activities. When the information is intended for the WEO manager or secondary school principals, it is necessary to quickly provide for the users with the most recent information as possible.

Supervisors should make users or stack holders aware the worth of information to help them in achieving their objectives and establishing chance for stack holders to use information through conference and workshops especially on the great value of data in decision-making process.

Managers should spend sufficient financial and material resources to EMIS unit at word education office and secondary schools by collaborating with different levels of education offices. Hence, new technologies like computer, internet software development, etc. need to introduced for easy and direct access at all levels. The expansion of ICT motivates schools to use different electronic devices (formats) for data or information utilization. Stipulation of incentive structure for those involved in EMIS activities is important for schools.

Most of the workers were unsatisfied with that of the training given. This is due to the absence of need assessment on the area on which training is given. As a result, the need and interest of the workers were not clearly addressed. Therefore, (SWOT) analysis has to be done well in both WEO and secondary school of the woreda. To do this different levels of educational office and the woreda education office might organize and give intensive training on the concepts related to EMIS at WEO and its secondary schools. In the form of seminars, workshop, conference and experience sharing programs to equip them with new technologies and activities of EMIIS. Therefore, these all observed issues are crucial and serious events that we cannot put it aside. Authorized individuals, communities, parents, NGOS, together with government have to take serious consideration on these observed problems.

6. List of Acronyms
- ➢ ABM   Activity Based Management
- ➢ DBMS   Data Base Management System
- ➢ DSS   Decision Support System
- ➢ EIS   Education Information System
- ➢ EMIS   Education Management Information System
- ➢ ESDP   Education Sector Development Program
- ➢ FGD   Focus Group Discussion
- ➢ ICT   Information Communication Technology
- ➢ IS   Information System
- ➢ IT   Information Technology
- ➢ MDG   Millennium Development Goal
- ➢ MIS   Management Information System
- ➢ TIS   Transaction Information System
- ➢ UPE   Universal Primary Education
- ➢ WECPO Woreda Education Core Process Owner

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