

# A Review of Role of Information System and ICT in Deaf and Dumb Schools

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**Abstract** - The use of information technology in educational management has rapidly increased due to its efficiency and effectiveness. Management information system's (MIS) main purpose and usage is to improve the efficiency of school office activities. Our research study is related to how MIS is usable in deaf and dumb schools along with ICT (Information and communication Technologies) when communicating with these types of students. Overall review of literature highlighted positive impact of MIS and ICT on school administration and management including better accessibility to information, more efficient administration, higher utilization of school resources, reduction in workload, better time management, and improvement in the quality of reports. As a consequence, these types of schools are government aided; this is the new research activity looking at developing and establishing practices. Here we are giving some people/authors and the review from their respected papers, which had been conducted the research study among these type of research. The aims of this study are to examine the status of these schools and evaluation feedback in the use of MIS and ICT through the undertaking of a systematic review of the literature, identify and discuss methodologies, role of evaluator in evaluation and consider gaps within the research literature, discuss implications for future research and practice.

**Key Words:** Management information systems, MIS, Information and communication Technologies, ICT, Deaf and Dumb schools, Government, SIS, School Information System, IS, Information system.

## I. INTRODUCTION

Developments in information technologies and respective communication technologies have been impacting upon educational organizations, using management information systems (MIS) to improve the efficiency of administrative services.

This research is about how management information systems designed and how school management information systems are useful in deaf and dumb schools. As these deaf and dumb schools are specialized schools, with the help of increased interest in data delivery systems or Management Information Systems (MIS), the schools will be very much benefited for data-driven decision making.

The deaf and dumb students are always facing problem of communication with their teachers and colleagues which may affect negatively in their education and attitudes. So there must be inclusion of Information and Communication technologies (ICT) in their education to facilitate and enhance the education components for them. In schools they use traditional ways that are not very much attractive and the level and quality of education can be

increased by using multimedia tools like images, videos, animations etc. These schools have a qualitative infrastructure and funding by government for the ICT set-up. This type of a survey is also done in this research to initiate some action to enhance use of Information and Communication technologies (ICT) in education for deaf and dumb schools

But, before administrators rush to build data and information systems, we argue for a careful review of existing knowledge about information systems in the education sector in light of what business and organizational research already knows about information systems. Overall review of literature highlighted positive impact of MIS and ICT on school administration and management including better accessibility, more efficient administration, higher utilization of school resources, and reduction in workload, better time management, and production of qualitative reports.

## II. LITERATURE REVIEW

Decision making is very important process in our day-to-day life. Considering the education field, the various interests are increasing in implementing MIS for decision making services. According to Breiter, A. & Light, D. (2006), the current focus is on the potential of new technologies like ICT and new ways of analysis to meet the information needs of educators across different levels of the system. In this research, the discussion is held about critical factors for the development and implementation of effective information systems for schools:

- consider the real needs of classroom ,construct them and concentrate towards educators

- Select appropriate data to include in the information system
- Educators need professional development on instructional decision-making that considers the role of data
- Further research on effective instructional decision-making and IS support is needed. The management should support for various updates in the system time-to-time.

Overall they conclude that we have to consider each and every factor in the school when implementing MIS with ICT. So it will be effectively beneficial for learners, teachers and also for management.

Nour Eldin Mohamed Elshaiekh , Banan Yahia Mursi Idris & Mohammed Abuelgassim Hussein (2013) investigated the impact of multimedia education system for Deaf and Hear Impairment Children and also application system designed to help a learning media, a part of ICT, for deaf children to understand the basics of language, mathematics , color, signs etc... but in graphical manner. The paper describes the difference in the way of teaching traditionally and with the use of multimedia. Traditional ways are not attractive and don't improve child's Intelligence and there are no specialist teachers to teach these kinds of children. Their system project gives us solutions to teach and improve child's intelligence by using computerized games and multimedia like images, videos, animations etc. By using this system children will be more efficient and more intelligent. Also it will help teachers and families to teach the children in easy way. The researchers conclude that, their system is very effective for dealing and communicating with such types of students. Multimedia can be used with fun and computer games to impart knowledge among these students.

Deaf and dumb students have the inability of hearing and speaking. To overcome these difficulties, Soraia Silva Prietch & Lucia Vilela Leite Filgueiras(2013) described how the assistive technology can help them to get the better education. They concluded the following information to fill the gaps such as

- Potential causes to educational barriers for such students
- Technological resources
- Teaching-Learning Strategies, based on literature review and observation
- Profiles of deaf students considering forms of communication, by real subject's observation.

They notice that, in many cases, technology can favor universal access and strengthen collaborative work initiatives in a classroom. They say that presence of a communicator is must in classroom for deaf students. Different teaching-learning strategies, different profiles, different context, among other factors, can influence the choice of technology to be used in the classroom.

The purpose of this review is to promote addition of Information and Communication technologies (ICT) in higher education. Ashish Hattangdi & Prof. Atanu Ghosh (2008) claimed strong impart on the use of ICT which will indirectly contribute to the socio-economical environment of our country. ICT decreases the distance barriers and geographical barriers along with right from breaking time, to facilitate collaboration and knowledge sharing among geographically distributed students. The findings of the paper describes that ICT facilitates sharing of best practices and knowledge across the world. For educational process voice, video and print are the ICT tools used which increase the flexibility of delivery of education anytime, anywhere. It can improve the quality of learning and thus contribute to the economy. Wider availability of best practices and best course material in education, which can be shared by means of ICT, can foster better teaching. Thus, the paper conclude that ICT enabled education will ultimately lead to the democratization of education. Especially in India, effective use of ICT education has the potential to bridge the digital divide in various parts of the country to interconnect.

Efficiency and effectiveness are the main key points in implementing MIS. In initial stages MIS was used at some extent in the school management, but later on, in its integration stage, it had occupied all the parts of school administration and management (Madiha Shah, 2014)

While implementing MIS in the school, the following problems can occur:

- lack of time
- lack of confidence or skills
- lack of training
- lack of senior management support and
- lack of technical support

These systems can help the school manager in determining the aims of the school, deciding strategic plans, distributing resources, and evaluating staff performance as well as organizational success.

This paper is about School Information Systems (SIS) Utilization in the United Arab Emirates' (UAE) primary schools. Ala M. Abu-Samaha and Rima Shishakly (2008) had studied the current technical status of the schools' SIS through the series of case studies (documents analysis,

questionnaires and interviews) of availability of primary schools representing the educational zones of the UAE for understanding of SIS level of utilization. The ministry of education of UAE is supportive for implementing SIS in the schools, the strategy had been have adopted by the UAE government to accelerate the effective utilization of educational management and automation technologies in the educational institutions and the Ministry of Education itself. According to the research results, the number of primary schools have computerized their administrative activities at different levels via the Ministry of Education’s suggested system or individually developed systems.

The most initial school administrative computer applications started its development in the late 1970s. In the early1980s, several loose, non-integrated clerical and administrative applications were developed. But these applications limited the possibilities for management support as the relationships among data could not be analyzed. Researcher believes that MIS can provide administrators and teachers with the information required for informed planning, policy-making, and evaluation (Visscher, 1996)

TABLE 1: Summary of Review

Sr.No.	Name of the researcher	Technical use		Gaps within research	
		Use of MIS	Use of ICT	Development of IS For primary and normal schools	Development of IS For deaf and dumb schools
1	Breiter, A., & Light,D.(2006).	Yes	Yes	Yes	---
2	Nour Eldin Mohamed Elshaiekh1, Banan Yahia Mursi Idris2, Mohammed Abuelgassim Hussein 3(2013)	---	Yes	---	---
3	Soraia Silva Prietch,Lucia Vilela Leite Filgueiras 2(2013)	---	Yes	Yes	---
4	Ashish Hattangdi ,Prof. Atanu Ghosh (2008)	---	Yes	---	---
5	Madiha Shah	Yes	---	Yes	---
6	Ala M. Abu-Samaha and	Yes	---	Yes	---
	Rima Shishakly				
7	Visscher	Yes	---	---	---

### III. RESEARCH ANALYSIS

- Most of the researchers have strongly said that MIS is very much useful in schools and educational filed
- MIS can be used with the integration of ICT in special education.
- Most of the researchers have concentrated on introduction of multimedia tools in deaf student’s education.
- Most of the researchers have not concentrated on how the deaf and dumb students should be trained and educated so that these students can personally use computers in their day to day life.
- Considering India which is developing country, researchers have not concentrated on the use of computers (with internet,wi-fi), specially in government aided deaf and dumb schools.

- No researcher has contributed towards design and development of information system which will be used by government as well as private deaf and dumb schools.

### IV. CONCLUSION

Information technology in educational management is a challenging thing that not only needs in-depth studies and evaluation of systems in schools but also on their effects on the school processes and maybe outcomes .There are issues in this area both with the forms of technology being used, it’s implementation, and with the lack of techniques available to enable users to make use of data currently available.

The overall review of literature indicates a very positive impact of ICT use in the area of educational management. Principals and teachers’ skills in working with ICT have developed significantly over the years .Further studies are needed to explore the areas of improvement in MIS with

ICT as most of these systems are not developed according to the site-based needs. And the special attention should be given when implementing these systems in Deaf and Dumb Schools at relatively low cost, understandable to everyone, simple and possessing ICT tools.

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