



**ADDIS ABABA UNIVERSITY**

**COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES**

**DEPARTMENT OF EDUCATIONAL PLANNING AND  
MANAGEMENT**

**AN ASSESSMENT OF THE CONTRIBUTION OF HUMAN RESOURCE  
INFORMATION SYSTEM IN HUMAN RESOURCES MANAGEMENT AT  
ADDIS ABABA CITY ADMINISTRATION EDUCATION BUREAU**

**A THESIS PROJECT SUBMITTED TO THE DEPARTMENT OF  
EDUCATIONAL PLANNING AND MANAGEMENT PARTIAL FULFILLMENT  
OF THE REQUIREMENT FOR THE MASTER OF ARTS DEGREE IN HUMAN  
RESOURCE AND ORGANIZATIONAL DEVELOPMENT IN EDUCATION**

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## DECLARATION

I hereby declare that this research proposal is my original work and has not been presented in any other University, and that all sources of material used for the proposal have been duly acknowledged.

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## ACRONYMS

AEB	Addis Ababa Education Bureau
HR	Human Resource
HRIS	Human Resource Information System:
HRM	Human Resource Management
SPSS	Statistical Package for the Social Sciences
e-HRM	Electronic Human Resource Management
WBT	Web-based training
IE	Internet Explorer
M&E	Monitoring and Evaluation
TNA	Training Needs Analysis



## **ABSTRACT**

*The purpose of this study was to assess the contribution of HRIS in human resource management throughout recruitment, selection, training and development as perceived by Senior HR Executives of Addis Ababa City Administration Education Bureau. In this study a descriptive survey research design was employed for this study the researcher used systematic sampling and simple random technique Data collected through different tools and paired questionnaires were analyzed and interpreted both quantitatively and qualitatively. The quantitative data that were obtained through questionnaires was coded, tallied, tabulated, organized and treated with different statistical techniques for analysis and inferences. More specifically, different statistical tools like, frequency counts, mean average, weighted mean values, percentages, standard deviation was calculated using software called SPSS version 20 to compare one set of scores to another. Thematic analysis was carried out for information obtained through interview and document analysis to enrich the quantitative data obtained and finally analysis of the questionnaire were made based on the five-point Likert scale. As the results of the findings indicated in average more than 75% of the respondents disagreed on the issues raised on all items showed the HRIS was not practiced. the evaluation of the recruitment and selection process has not done in the organization with the help HRIS therefore the system has not played a vital contribution in recruitment and selection processes in the organization. With regard of the training and development because of the organization has not used HRIS for training and development functions, it is not specifically known whether it minimizes the cost or not for the organization. All group of respondents negatively agreed on this issue of management and decision-making process of the organization over all human resource planning and management functions with mean score of 2.05. An indication of another potential problem was revealed in the answers to open-ended questions on the survey seeking additional feedback. Frequently mentioned by the respondents was the need for more training on the system. Since the training was given to very few and selected persons among them majorities are already resigned from the organization, so they do believe that additional and better training would lead to better results. In addition to these responses in my interview showed that the city administration education bureau was not the fully owner of the program whereas its owned by MoE, thus lack of the sense of ownership by itself create big problem and only a focal person was assigned and there was lack of follow up and proper monitoring and evaluation and feedback. On top of this the delivery of the training for the selected staffs and the way how those employees selected was also another source of problem in the practical implementation and consequently lead to losing of the proposed benefits and the contribution of HRIS AEB expecting to its overall Human Resource Management. As per the responses of the open ended questions and the interviews held with some of the staff and top level management members of the organization, they were not found practically implementing HRIS in their organization. Finally the solutions they used to overcome the major challenges by the Addis Ababa City Administration Education Bureau was to wait for the coming new software and its implementation that was prepared by the city administration office for all the bureaus. In doing so the city administration education bureau already select participants for this new program The study concludes that HRIS as a tool is an excellent tool for Human Resource management (HRM). It enhances and contributes a lot in the identification of unfilled positions accurately and analyzes each job position with its title in an organization. It also provides insight into organizational training needs, selects the right persons to be trained and evaluates the effectiveness of training and development programs, it plays great roll in recruitment and selection but has the challenges of available trained man power, lack of ownership, high turnover of those trained employees the way how the first time training was delivered administered i.e that is more of theoretical than practical.*

*Key word :-HRIS Human Resource Information System*  
*AEB Addis Ababa Education Bureau*

# CHAPTER ONE

## 1. INTRODUCTION

This chapter deals with the problems and its approach. It contains background of the study, statement of the problem, objectives of the study, significance of the study, delimitation of the study, definitions of key terms and organization of the study. Therefore, the researcher will try to elaborate each item briefly hereunder as follows.

### 1.1. Background of the Study

We are living in an era of changes where the highly competitive market always requires for quick and effective responds. It is expected that the rate of change will increase much faster in the near future along with the development of new technologies. Therefore, companies need either to adapt to the changes or to change their processes and innovate as the market requires, In order to being highly competitive in the new market. Managers realized that the success of a business enterprise in a complex and changing environment depends on the efficient management of its Human Resources (Grensing-pophal, 2008).

According to Ulrich (1997), the competitive reality is that organizations will have to develop capabilities that will better serve their customers while differentiating the organization from its competitors. Therefore, the maintenance and development of human capital is necessary to sustain an organization's competitive position. In other words, the organization needs to have a human capital mix (e.g., knowledge, skills, and abilities) that will facilitate goal achievement year after year. Organizations that fail to take a proactive approach to developing and maintaining human capital will be less competitive. Human Resources is a fundamental part of the structure of every successful organization, therefore, the information received in this area needs be continuously followed-up and correctly evaluated to have effective decision making.

Human Resource Information System (HRIS) is one of the most important Management Information Systems, which contributes to human resource administration functions of an

organization. HRIS, aptly described by Noe *et al.*, (2007), as a computer system used to acquire, store, manipulate, analyze, retrieve, and distribute information related to human resources. Modern HRIS needs to help organizations by automating most of the HR planning functions. HRIS becomes an important strategic tool since it collects, manages and reports information for decision-making. Fully integrated organizational HRIS ought to interface with other systems enabling and enhancing the communication between departments such as payroll system with accounting system.

Since HRIS deals with employees personal data, which are sensitive, it should ensure data security while transferring information from one place to another. HRIS should be able to enhance communication between employers and employees and build strong relationship with unions and management committees. HRIS should be capable of identifying trends, evaluating and managing costs, comparing the organization with other competitive organizations and issue relevant reports. New HRIS trends seem to build important effect on HR planning embedding new technology with organizational objectives and goals. Enterprise Resource Planning System (ERPS), when linked with the HRIS sub system, provides a competitive advantage to organizations over their competitors (Noe *et al.*, 2007).

If HRIS facilitates HR planning functions such as recruitment and selection, training and development and succession planning, organizations would gain a competitive advantage. HRIS or Human Resource Management Systems (HRMS) can assist in recognizing experienced, qualified and skilful employees. It can provide a statistical overview for the whole organization to improve its productivity by selecting and developing potential employees for positions.

Organizational recruiting sources such as direct applications, advertisements, public or private employment agencies, colleges, universities, etc. are going to be replaced by HRIS electronic recruiting facilities reducing the cost of the organization. Employee selection must be according to the job type and relevant skill requirements such as technical skills, intelligence, interpersonal skills, computer skills, etc.

Organizations continuously invest substantial amounts of money on Information Systems. If they invest without identifying the current value of support and future limitations, they cannot gain competitive advantage in a rapidly changing business world. They may even go bankrupt without ever meeting these two ends. Human Resource Information System (HRIS) is one Information System in which one should invest intelligently (Tansley et al., 2001).

However, due to the large amount of information from many activities of the organization is handled in the area of human capital; managing the information in this area is becoming more difficult. Information stored in paper & files did not provide the holistic view to objectively evaluate the most important assets of the knowledge of an organization, its human resources management information. Moreover, the information technology, recently, has started playing an important role in storing and using information in every aspect of an organization. Hence an information system is required to effectively communicate and work within the organizational human resources management information system (Grensing-pophal, 2008).

Therefore, the purpose of this study is to assess the contribution of HRIS in human resource management throughout recruitment, selection, training and development within the perception of Senior HRM Executives of Addis Ababa City Administration Education Bureau.

## **1.2. Statement of the Problem**

Human resource information systems (HRIS) have played an important role in the day-to-day functions of HRM and payroll managers. However, in a world of information technology, there is always new software born to suit with any requirements of any organizations.

The problem is how to select the best system for the organization's need. With so many flexible HRIS options available, perhaps this is the time to consider organization's needs, and to get one step ahead. Since, something that was adequate 10 years ago may not be

adequate now. So, company must figure out what are the problems with the current operation activities, especially with the HRM functions. Buying a new human resources management system is both a daunting and risky proposition.

The purpose of this study is to assess the contribution of HRIS in human resource management throughout recruitment, selection, training and development within the perception of Senior HR Executives of Addis Ababa City Administration Education Bureau.

Addis Ababa City Administration Education bureau is applying HRIS for its overall human resource management activities. According to the information gathered from the information sub process owner they did not use this system to the extent of its capacity as a management tool which contributes to HR management, planning and planning related activities such as recruitment, selection, succession planning, training, and development. Although AEB has identified the inadequacy of the existing human resource management system, the office cannot afford a new system right now or keep on proper using of it since they have already spent a considerable amount on HRIS. Therefore, HRIS does not play a significant role in AEB's HR management to manage its employees fairly, equally and transparently.

The idea of HRIS in applying to a given organization is to reduce the cost and increase the productivity of its man power especially the capacity of its teachers by compensating labor shortages which will led to flatter their office with wider spans of supervision. Thus, HRIS fairly supports HR management functions as well as HR planning, training and development functions.

However, the current practice and trend of the AEB shows that still using manual data gathering and management in all human resource functions rather than i.e. in planning and developing, recruiting, selection of employees/teachers.

Though the existing HRIS system supports in the Human Resource Management functionalities of the organizations, some stockholders (sub cities and wereda) do not

fully utilize the system for recruiting, selection, training and development due to the lack of unawareness and orientation. This is the reason that the researcher intends to assess the contribution of HRIS in human resource management throughout recruitment, selection, training and development within the perception of Senior HR Executives of Addis Ababa City Administration Education Bureau.

In addition to this, this research also tries to seek answers for the following basic questions.

1. What is the current practice of HRIS in HRM process of Addis Ababa City Administration Education Bureau?
2. What is the overall contribution of HRIS in HR planning through recruiting and training and development subsystems?
3. What are the major challenges the organization faced during the implementation process of HRIS?
4. What are the mechanisms they used to overcome the major challenges the organization faced during the implementation process of HRIS?

### **1.3. Objectives of the Study**

#### **1.3.1. The General Objective of the Study**

The general objective of the study is to assess the contribution of HRIS in human resource management throughout recruitment, selection, training and development within the perception of Senior HR Executives of Addis Ababa City Administration Education Bureau and to recommend the necessary intervention mechanisms for the gaps identified.

#### **1.3.2. The Specific Objectives**

The Specific Objectives of the study are:

1. To assess the current practice of HRIS in HRM process of Addis Ababa City Administration Education Bureau.
2. To investigate the overall contribution of HRIS in HR planning through recruiting and training and development subsystems.

3. To identify the major challenges the organization faced during the implementation process of HRIS.
4. To investigate the solutions they used to overcome the major challenges the organization faced during the implementation process of HRIS.

#### **1.4. Significances of the Study**

The purpose of this study is to assess the contribution of HRIS in human resource management throughout recruitment, selection, training and development within the perception of Senior HR Executives of Addis Ababa City Administration Education Bureau. Therefore, the results of this study may have the following importance:-

1. It may give an insight to any of concerned bodies about the contribution of HRIS in human resource management throughout recruitment, selection, training and development within the organization.
2. It may provide some suggestions to concerned bodies that will help as input for future improvement of the HRIS in human resource management throughout recruitment, selection, training and development process of the organization.
3. It may serve as a spring board for other researchers that have an interest to study in the area in a wider scope.

#### **1.5. Delimitation of the Study**

In order to make the research manageable, the study was delimited to main office of Addis Ababa City Administration Education Bureau because of the availability of time and resources. The study will also delimit to the study of HRIS in human resource management in the area of recruitment, selection, training and development process of the organization.

#### **1.6. Limitation of the study**

In order to complete this research, the main limitation in addition to the time shortage the top management was not easily accessible during collecting of data on time I could not found related researches done with regard HRIS.



### **1.7. Definition of Key Terms**

**Human Resource Information System:** is a computer system used to acquire, store, manipulate, analyze, retrieve, and distribute information related to human resources (Noe *et al.*, 2007).

**Human Resource Management:** Human Resource Management (HRM) is the function within an organization that focuses on the activities of recruitment, management, and providing direction for the people who work in the organization (Werner and DeSimone, 2006).

### **1.8. Organization of the study**

This study consists five chapters. The first chapter deals with the background, statement of the problem, objectives, delimitations, significance of the study, definition of terms and how the research paper was organized. The second chapter reviews literature related to the research topic. Methodological issues including procedures of the study and its area will be presented in chapter three. The fourth chapter will present the results of the study and their interpretation. The final chapter summarizes, concludes and provides possible recommendations. At the end, references and appendices are attached.

# CHAPTER TWO

## 2. REVIEW OF LITERATURE

### 2.1. Introduction

To make proper assessment of in any topic, it is important to have a look at theoretical aspects preceding of related literature of the study. As such this chapter reflects on the conceptual framework and related literature of the subject matter In regard to the trends of Human Resource Information System, its implementation and its contribution to the specific organization

### 2.2. Theoretical literature review

The history of HRIS begins from payroll systems in the late 1950s and continues into the 1960s when the first automated employee data was used (Kavanagh *et al.*1990, Walker 1993, Martinsons 1997). Walker (1993: 11) presents how a “true” personnel system was defined in the late 1960s: “A “true” personnel system (a system that is not just appended to payroll) has the following characteristics: First it is used to solve personnel’s needs, not just payrolls. That is the system is developed primarily for the Personnel Department’s use, to solve personnel not financial- problems. Second it is multifunctional and in that it handles or addresses user needs in more than one personnel area. In other words, it is not limited to one function such as benefits, or employment, or wage and salary administration. Thirdly it utilizes the five basic concepts underlying human resource systems (These concepts are expanded upon in A. J. Walker (1982) HRIS Development A Project Team Guide to Developing an Effective Personnel Information System. New York: Van Nostrand Reinhold.). A database with definitions specified for data elements, a method of data update and entry, ad-hoc retrieval techniques, a human resource information centre to assist with administration and a data quality focus.

These concepts bring methodology to the development and operation of personnel systems. As objectives, they provide an approach and structure for the work, and they necessarily involve procedures, users, and systems professionals. Thus, the first personnel systems were made to store a tremendous amount of data for record keeping and

reporting associated with personnel administration. In the course of time, the development of HR activities generated the design, development and the successful implementation of various computer-based HRIS (Martinsons 1997). Kavanagh *et al.* (1990) present their conception of the development of HRIS introducing the historical eras in HR from the pre-World War II era to the 1980s and how the eras have affected the development of HRIS.

In the 1990s there existed various expectations of how HRIS should have affected an organization's HR activities and business planning. Studies about advantages of using HRIS and about users of HRIS were performed. An organization was considered efficient if it had technology and IS to support HR activities. Also, effectiveness of HRIS on work and development of HR departments and HR professionals were under discussion. (Groe, Pyle & Jamrog 1996, Townsend & Hendrickson 1996, Haines & Petit 1997, Axel 1998, Hubbard *et al.* 1998, Rodger, Pendharkar, Paper & Molnar 1998, Stroh, Grasshoff, Rudé & Carter 1998, Niederman 1999.)

In the new millennium electronic services such as e-learning, e-commerce and e-business became possible and common because of the invention of World-Wide-Web (WWW). Along with the development of HRIS the concept of electronic HRM (e-HRM) has also been launched as an internet invention and implementation of HRIS.

Because of the different technical devices and realizations, there are terms which may have similar meanings to e-HRM, such as electronic HR (e-HR), virtual HRM, HR internet, web-based HR, computer based human resource information systems (CHRIS) and HR portals. Still, according to the literature, various articles and web sites, e-HRM is the most commonly-used term. The research community of e-HRM is in its early beginning.

Therefore, there is not an explicit definition of e-HRM but following the available initial definitions, e-HRM is *“a way of implementing HR strategies, policies, and practices in organizations through a conscious and directed support of and/or with the full use of*

*web-technology-based channels*”, by Ruël, Bondarouk & Looise (2004: 365) “*the, as a rule, spatial segregated, both technically networked and supported, shared and organized performing of HRM tasks through atleast two actors*”, by Strohmeier (2005:2). Although different scholars defined HRIS differently the listed below are same of the common definitions of HRIS are available in the literature.

The definition offered by Walker was (1982: 16): “*The modern Human Resource Information System may be defined as a computer-based method for collecting, storing, maintaining, retrieving, and validating certain data needed by an organization about its employees, applicants, and former employees.*”

Tannenbaum (1990) defined human resource information system (HRIS) as “one which is used to acquire, store, manipulate, analyze, retrieve, and distribute information about an organization’s human resource”. Later HRIS was also defined as “the composite of databases, computer applications, and hardware and software necessary to collect/record, store, manage, deliver, present, and manipulate data for human resources” (Broderick and Boudreau, 1992

In conclusion, the above mentioned definitions of HRIS emphasize the technical activities to process the data of human resources. In addition, the definitions are also affected by the application area. Thus, because HRIS are related to HRM, the definitions of HRM are shortly noticed and referred to using lists of different tasks associated with employees like: recruiting, training, promoting, record keeping and meeting various legal requirements.

HRM is also defined as monitoring, facilitating and setting up processes that select, assess, and assign people to appropriate roles in an organization (Hubbart, Forcht & Thomas 1998, Targowski & Deshpande 2001, Ball 2001).

### **2.2.1. Administrative and Strategic Implementations of HRIS**

In examining the benefits of HRIS there are two extremes, the pure administrative use of HRIS and its strategic use. Ultimately the goal of both is to increase organizational value. HRIS efficiency and administrative effectiveness can be described by studies of

administrative HRIS, but the overall efficiency and effectiveness of an organization can only be reached through strategic deployment of the information provided by an HRIS.

Administrative HRIS is used in day-to-day operations and it is usually in the form of records that hold employee information. Administrative HR is much more efficient when it is used with IT because HR professionals are better able to handle large amounts of information efficiently. For instance, Watson Wyatt's survey report (2002) concluded that it does not take a high progression of e-HR to reach high HRIS performance on the administrative side.

The results showed that a properly integrated e-HR system is the key to the evolution of the system. The survey covered all organization sizes, and the measures used included productivity improvements within the HR organization, cost reductions, return on investment, and enhanced employee communications. They concluded that by properly implementing an e-HR system an organization should be able to reduce the amount of work for which the HR department is responsible which would then leave HR professionals free to concentrate on performing more strategic roles for the organization.

In contrast to administrative HRIS, strategic HRIS is much more difficult to explain and measure because there is no way to be sure that the benefits are a direct result of strategic deployment of an HRIS system. Strategic HRIS consists of tools that assist in decision making. For example strategic decisions may include those associated with recruitment and retaining employees. Much, if not all, of the administrative information held by HRIS can be used to analyze an organization and formulate strategies to increase the value of an HRIS.

Some experts also believe that easy access to vital information will become an integrated part of many strategic decision-making process (Kovach, Hughes, Fagan, Maggitti, 2002). But, the possibilities of strategic deployment still remain useless without a way of getting there.

### **2.2.2. Human Resource transformation and Human Resource Information System**

HR transformation initially focused on making HR operations more efficient and effective through process standardisation and technology. The next generation of HR transformation is more tightly linked to corporate strategy and to creating business value through HR services that address a company's most pressing strategic challenges (Deloitte, 2006). HR department's role gently shifts from transaction and administration to business and strategic transformation. In the literature on business process transformation using IT, a key development has been the introduction of Enterprise Resource Planning (ERP) systems (Tansley et al., 2001).

An ERP system incorporates a number of IT systems from the different functional areas of the organisations, which are integrated to form a single, common database (Devenport, 1998). Yet, in his opinion, while these IT systems are configurable, they nevertheless require companies to adapt or even completely rework their processes to fit the requirements of the system. The HR information system (HRIS) element of an ERP system will incorporate records for employee resources, rewards, training, etc (Tansley et al., 2001). Thus personal data on employees can potentially be used much more flexibly to transform the way people are managed within organization's and to transform the role of the HR department (Tansley et al., 2001).

An integrated HRIS offers the potential for the flexible and imaginative use of stored personal data, which can in turn encourage a transformation of both the people management style used and the role of the Personnel/HR department (Tansley et al., 2001). According to Tansley, HRIS plays an important role in HR transformation storing personal data on employees changing the traditional management styles.

The strategic role of the HR function means not only being involved in strategic planning from the outset and during the implementation phase but also matching employee resources with business needs (Panayotopoulou et al., 2005). However, this does not mean that the administrative role will cease to exist, although there is an inherent tension between the outlook required for a strategic HR role and that of the HR specialist in a

traditional role (Panayotopoulou et al., 2005). Specifically, a HRIS may contribute to firms' strategic positioning in a number of ways, for instance, by improving customer service levels to managers and employees and enhancing the lines of communication between the company and its employees (Alvarez-Suescun, 2007) or by harmonizing tools and practices of management staff and developing HR management and strengthening corporate character (Alvarez-Suescun, 2007).

Beadles et al. (2005) have postulated that HRIS will be implemented at three different levels: the publishing of information; the automation of transactions; and, finally, a change in the way human resource management is conducted in the organization by transforming HR into a strategic partner with the line business. In their view, the evolution of HR as promoted by HRIS evolves from information to automation and from automation to transformation.

They note that while HRIS has been widely deployed, a transformation of human resource management has occurred in relatively few organizations.

According to Beadles et al. (2005), the use of HRIS has been advocated as an opportunity for human resource HR professionals to become strategic partners with top management. The idea is that HRIS would allow for the HR function to become more efficient and to provide better information for decision-making. However, the authors question whether HRIS has fulfilled its promise. The Beadles study has questioned decision-making aspects of HRIS while talking about the HRIS role as strategic partner. Studies have not addressed this aspect in depth.

The most challenging request from next generation HR transformation is to achieve organizationally desired objectives rather than support for standard transactions and reporting. Even though Lokhandwala (2009) has discussed employee training, performance, succession plans and compensation modelling functionalities of HRIS, it was not a detailed study. Very few research studies have scrutinized aspects like how HRIS functionalities such as recruitment, selection, training and development facilitate HR planning aspects. HR planning functionalities of HRIS is very important for HRIS to play a strategic role in the HR department. In order to analyse HR planning aspects,

HRIS users' perception towards its functionality is very important. How do HR professionals perceive the role of HRIS? Top management, personnel management and MIS management all differ in their views of the role of HRIS and the meaning of HRIS effectiveness (DeSanctis, 1986).

### **2.2.3. Human Resource Information System benefits and obstacles**

Many studies cited HRIS benefits, such as the improvement in accuracy, the cost saving and the timely and quick access to information through HR reports (Ngai and Wat, 2006). In HR, reports can be generated from data input into a HRIS database via previously programmed report generators, thereby making transparent" HR collective data from the aggregation of the personal data actually input (Tansley et al., 2001). Ngai and Wat (2006) studied how HRIS reduced the cost of an organisation. How it maintained customer satisfaction, improved quality, and innovations. Almost all the HR applications involve the automating of HRM activities (Ngai et al., 2006). Furthermore Ngai and Wat (2006) showed how the accuracy and timeliness of HRIS varied according to operating, controlling, and planning HR activities. Due to technological evolution in mid 1990s, HRIS has shaped the need for and the nature of human resource planning within organizations.

HRIS was not only designed to automate HRM activities to gain administrative advantages; rather, it could also be used for decision making to provide strategic advantages for companies (Ngai and Wat, 2006). The key element in the support HRIS provides for the company's HR strategy is the availability of information as input for HR-relating decision-making processes (Beulen, 2009). Ngai and Wat (2006) listed benefits of HRIS: increases competitiveness by improving HR operations, shifts the focus of HR from the processing of transactions to strategic HRM, makes employees part of HRIS and reengineers the entire HR function of companies. Alvarez-Suescun (2007) also highlighted HRIS as a competitive tool which can be used in the organisational HR department.

As stated in Kovach and Cathcart 1999, they mentioned that lack of top management support, funds, HR knowledge of system designers and HR solutions are the main factors



that keep organisations away from HRIS. Teo et al. (2007) also came up with similar findings: departmental relative advantage, compatibility, top management support, size of the organization and HRIS expertise emerged as important variables discriminating between adopters and non-adopters of HRIS. A research conducted by the Institute of Management and Administration (2002) indicated the issues in managing a HRIS to include: lack of staff; lack of budget; problems with time management; need to work with other departments; and lack of information technology (IT) support.

Ngai and Wat (2006) found costs to be the main barrier to the implementation of HRIS. Hall and Torrington (1986) identified the relationship between HRIS and organisational size. Ball (2001) identified two fundamental differences between small and large firms when purchasing HRIS: cost and risk. Small firms cannot afford advance enterprise resource planning (ERP) systems (i.e. SAP, PeopleSoft) due to cost. The risk of implementing new software was high for small organisations.

They needed longer time to develop HRIS to have more sophisticated facilities. Martinsons (1994) as cited by Ngai and Wat (2006) and Ball (2001) showed that small organisations have a lesser possibility of implementing HRIS due to lack of funds. However, Ball (2001) foresaw suitable HRIS systems for small organisations though they did not facilitate all the features that large organisations gain.

He states that the small business sector is seen as a growth area by some HRIS software vendors who prefer flexible, low-cost, generic, Windows-based products. Recent practitioner literature examining the use of HRIS in small companies advanced the view that the issues they face regarding HRIS uses are slightly different to their larger counterparts, yet research in HRIS to date is oriented to the larger organisation Ball (2001).

According to Ngai and Wat (2006) concluded that cost of adopting, operating and maintaining the HRIS is relatively high. Cost created barriers and kept HRIS away from small organisations. Same issues caused the lack of attention given to develop and enjoy sophisticated benefits of HRIS. Özçelik and Ferman (2006) say that HRIS may create

resistance from employees due to emotional resistance to change or use technology due to learning difficulties, and fear of measures taken to ensure the security of information. Most HRIS researches focus on its' benefits and implementation barriers. Most of them observed the high cost of HRIS. Few of them analysed the HRIS decision support benefits.

More over In 1992 a survey by Overman (1992) concluded that the potential advantages of HRIS are faster information processing, greater information accuracy, improved planning and program development, and enhanced employee communications. All of these benefits are types of administrative efficiency. At the time of the study few An Exploratory Study on the Public Sector Nicholas Beadles, Christopher M. Lowery & Kim Johns Communications of the IIMA 40 2005 Volume 5 Issue 4 researchers thought to explore possible strategic advantages and even today while there are various studies which recognize that strategic benefits may exist, they fail to explain how those benefits are realized within an organization and they fail in attempting to measure whether those benefits have occurred.

Some authors have proposed that the use of a HRIS would reduce HR costs by automating information and reducing the need for large numbers of HR employees; by helping employees to control their own personal information; and by allowing managers to access relevant information and data, conduct analysis, make decisions, and communicate with others without consulting an HR professional (Awazu & Desouza, 2003; Ball, 2001). Ideally, with an appropriate use of HRIS, less people should be needed to perform administrative tasks such as record keeping and more time would be made available for HR managers to assist by providing data on a strategic level. Many of these authors believe the future to be bright for HRIS as it creates new paths for human resources and for the organizations that effectively use HRIS. One study even goes as far as to suggest that there is evidence that HRIS can improve shareholder value (Brown, 2002).

A significant problem with deciding whether HRIS benefits the organization is that of measuring the effect of HR and more particularly HRIS on the bottom line. There are few clear cut ways to measure the value of HRIS. While there are measurements for administrative HRIS such as cost reductions in HR departments, it is difficult to measure precisely the return on investment and specific improvements in productivity within the HR departments (Mayfield, Mayfield, and Lunce, 2003). Indeed, while the ideal assessment of HRIS success might include hard measures such as ROI, the control of extraneous variables makes this type of measurement of success difficult if not impossible. This is why user satisfaction and perception of the system has often be used as a proxy measure for the effectiveness of the system (Haines and Petit, 1997)

#### **2.2.4. Human Resource Information System usage**

Human resource planning, recruiting, and training are less frequent users within personnel perhaps reflecting greater use of the system for routine reporting than for decision support (DeSanctis, 1986). Ngai and Wat (2006) stated that HRIS usage was decided by the HR strategy of an organisation and further described a matching process between different strategies and different system usage. If the strategy were to reduce cost, the system would have been based on administration purposes.

According to Martinsons (1994) as cited by Ngai and Wat (2006) classified HRIS into two types according to their usage: unsophisticated and sophisticated. Payroll and benefits administration, and employee absence records keeping electronically is listed as unsophisticated, since it is an electronic replication of the contents of the HR department's manual files. He called this simple minded automation. Use of IS in recruitment and selection, training and development, HR planning and performance appraisal, is classified as sophisticated, since those support decisions which involve expert judgements. A quality-based strategy is similar to an expert systems approach. Innovation strategy matched with decision support systems.

Kovach and Cathcart (1999) also noted that HRIS information could be used for administrative purposes, which reduced cost and time, and supported more analytical

decisions as well. They further added two general purposes of HRIS applications as administrative purposes that reduced processing costs and time, and decision-support applications that assisted HR managers, non-HR managers, and employees to make better decisions. The key was to focus on making better decisions, not just producing data faster. According to a survey conducted in 1998, Ball (2001) showed that 60 percent of Fortune 500 companies used the HRIS to support daily human resource management (HRM) operations. He classified HRIS according to administrative and analytical aspects and predicted out though HRIS was used for administrative purposes, the trend would be to use it for analytical purposes.

HRIS functionality nowadays includes corporate communication, recruitment, selection, training, employee opinion survey, compensation, payroll services and employee verification as well as general information (Ngai and Wat, 2006). According to Beulen (2009), the HRIS contributes positively to staff retention for global IT service providers in emerging markets.

HRISs have indirect influence on retention management. But a HRIS can also be a strategic HR tool. HR executives can use HRISs to support their strategy and talent management programs by considering some specific functionality, such as human resource planning, staff development and regulatory compliance, benefits administration, and performance appraisal (Beulen, 2009).

According to Beulen (2009), performance appraisal is an important factor in employee retention. In performance appraisal, it is really important that employees 'individual expectations are managed well, but the same holds for the expectations of departments and divisions (Beulen, 2009).

The degree to which objectivity regarding individuals 'performances is properly assessed is very important and employees 'sense of being appraised objectively is increased by setting clear objectives before the assignment, and by assessing their performance together with them afterwards (Beulen, 2009). These insights should be used to set the HRIS parameters and to implement its functionalities (Beulen, 2009). When such aspects

are implemented, HRIS may indeed contribute significantly to the optimization of retention management (Beulen, 2009). Though Beulen (2009) studied in depth the staff retention aspect of HRIS, most of the researchers had studied unsophisticated usages of HRIS. They have not focused much on whether the users enjoy the sophisticate usages fully or partly.

### **2.2.5. Integrating the technologies of Human Resource**

Many HRIS are part of larger, enterprise-wide systems that enable integration of organizational information about human resources with the major functions, such as finance and production (Tansley and Newell, 2006). In a similar manner HRIS become a major MIS sub-function within the personnel areas of many large corporations (DeSanctis, 1986). The MIS area plays an advisory role in HRIS and must coordinate planning of systems design and enhancements across all functional areas (DeSanctis, 1986). DeSanctis (1986) indicated that 33% of firms did not coordinate personnel department plans with corporate strategic plans. Lack of planning from the overall organisational level to the department level made coordination of plans between MIS and the HRIS area difficult to achieve. DeSanctis (1986) study showed that still some organisations struggle to integrate HRIS with overall IS.

The management issues associated with HRIS may also be encountered in other functional areas of the organisation where information systems are developing independence from the corporate MIS area (DeSanctis, 1986).

HRIS brings many advantages such as ease of use, sophistication, security of data, flexibility of reporting, low cost, and most important, the integration of human resource information into all aspects of the organization (Özçelik and Ferman, 2006).

Wang (2005) described the need for technology innovation and HRM integration. Once integration is achieved, security and privacy issues rise. Few researches have addressed this aspect as well.

Security and privacy concerns associated with employee record keeping, interfacing with information systems in other functional areas, career path for HRIS employees, and lack

of cooperative relationships between human resource and MIS staff are additional problems confronting the organisations (DeSanctis, 1986).

Security and privacy concerns do not exist only in HRIS; it is affected by e-HRM as well. As Ngaiet al. (2006) said that the security and privacy of information is another concern in Internet-supported HRM and that is necessary to have a secure way of transferring sensitive data via the Internet. HRIS and e-HR In an organisational context, the Internet makes it possible for an organization to automate HR processes. Various existing HR functions, applications or services can virtually be transformed to Web-based ones (Ngaiet al., 2006). More and more HRM systems today are being changed to e-HRM systems, mainly due to the advent of Internet technology and the emerging concept of business intelligence (Zhang and Wang, 2006).

Reddic (2009) addressed the effectiveness of HRIS and the use of web-based self-service in HR. He concluded that most of the web based HR is currently providing information rather than more advanced self-service based applications. The most pronounced method is using the Web for recruitment. The Internet has dramatically changed the ways of both job seekers and organizations in employment practices (Ngaiet al., 2006). CVs sent through the Internet can be scanned for keywords identifying the required knowledge, skills, competencies and experience (Ngaiet al., 2006). This information can then be stored in the information system for immediate or future use (Ngaiet al., 2006). Ngaiet al. (2006) pointed out that the Cisco Corporation has achieved a 45% reduction in recruitment costs since using the web as its core channel for recruitment. Web-based training and performance evaluation are two other functions supported by e-HR, which was studied by Ngaiet al. (2006).

The proliferation of the Web has enabled HR to train employees in city government virtually from home or at work. Web was mostly being used to provide information on benefits information (Reddic, 2009).

Web-based training (WBT) is a popular approach to distance learning using the technology of the Web, the Internet, intranets and Extranets. Individuals use the commonly available Web browsers of Internet Explorer (IE) and Netscape to access different types of information text, pictures, audio and videos over the Internet (Ngaiet al., 2006). The Internet plays an important role in reducing the effort and agony of managing performance evaluation as well. Typically, individuals have their performance evaluated at regular intervals. Performance evaluations can easily be tracked online by one or more sources such as supervisors, peers, customers or subordinates (Ngaiet al., 2006).

#### **2.2.6. Traditional Human Resources and HRIS sourcing decision**

As organisations move to leaner and flatter organisation structures, it is clear that the establishment of a traditional personnel/HR function is no longer a seemingly inevitable consequence of increases in organisation scale (Morley et al., 2006). According to Morley et al. (2006), in evaluating the option of managing without a formal personnel/HR function, there appears to be two principal ways of carrying out the HR role, namely: Devolvement of personnel/HR responsibilities to line management (internal devolution) and Outsourcing HR activities to external contractors (external devolution) Line management have always played a key role in the execution of day-to-day HR activities. However, what is different about the internal devolution argument is the suggestion that line managers should play a greater role in policy development and interpretation, in addition to their traditional role in carrying out HR activities. This theme has developed concurrently with moves towards flatter organisation structures and team working (Morley et al., 2006).

A more significant threat to the existence of a formal personnel/HR function is that of outsourcing (Morley et al., 2006). The transaction cost model places considerable emphasis on the so-called make or buy decision (Morley et al., 2006). According to Morley et al. (2006), in transaction cost model, it is argued that if a particular unit does not make a demonstrable added-value contribution to the organisation when compared to outsourcing, then such services should be bought in. The quality of traditional HR has improved due to the implementation of HRIS.

According to Tansley et al. (2001), HR professionals' role and responsibilities exist same but HRIS improves the quality of their operational and tactical decision-making. In using IT to reproduce, extend and improve on the HR process by automating HR data, HR specialists were able to add some value to the operational and tactical/decision-making activities inherent in HR work. In doing this there was an effect on the jobs of HR specialists, since the costs of the IT had to be offset by a reduction in headcount. There were no fundamental changes to the roles and responsibilities of HR specialists, line managers or employees more generally (Tansley et al., 2001:367). Alvarez-Suescun (2007) has analysed and tested the impact of some resource-based determinants on sourcing decisions in an IS domain in detail.

According to him, firm size or technical skills do not affect outsource decision. Firm's internal factors, such as the HRIS implementation capability and the strategic contribution of the HRIS, determine whether that activity is undertaken internally or outsourced, whereas the technical skill set and the firm size do not affect that decision.

Alvarez-Suescun (2007) find that the perceived performance of IS resources, unlike the strategic role of IT, is a significant determinant of IS sourcing decisions. Alvarez-Suescun (2007) also found that the HRIS implementation sourcing decision may be influenced by previous experiences in the implementation of other systems, e.g. accounting, financial, MIS, and so on, either because a capability that could be applied to different areas without significant additional effort may be developed based on that cumulative knowledge or because the HRIS is part of an ERP and its implementation is strongly conditioned by the sourcing mode chosen for other modules.

As said by Alvarez-Suescun (2007) superior IS function capabilities (relative to vendors) were positively associated with the insourcing of those functions; if a capability has not been developed or is not strategic, firms should rely on external providers in order to focus on those IS functions that yield strategic value to the organization. Organisations gain competitive and strategic advantage if HRIS activities are undertaken internally



(Alvarez-Suescun, 2007). Researchers merely highlight in which circumstances organisations outsource their HRIS than its contributes to HR planning.

## **2.2.7. Human Resource Information System roles**

### **2.2.7.1. Human Resource planning**

Human resource planning is about ensuring that the correct number and mix of employees is available at the right place at the right time (Parker and Caine, 1996). The success of HRP is paramount to the survival of the organization and the complexities associated with the planning process are enormous (Parker and Caine, 1996). According to Parker and Caine (1996), large organizations established HRP systems, some trying to use the emerging body of human resource techniques based on Markov chain theory.

Parker and Caine (1996) were under the impression that the recent non-academic literature for practical descriptions of human resource planning yielded only 24 articles and none of these descriptions involved explicit use of the mathematical tools developed by D.J. Bartholomew and his colleagues, although several of them involved the use of computer packages based on these tools. This statement emphasised that computer packages based on mathematical tools are replacing the manual calculations, which are time consuming, and lacks expertise.

According to Parker and Caine (1996), though human resource techniques based on Markov chain theory are appropriate, they are often unusable by the average practitioner. Markov analysis is shown to be complicated, communicating little to the decision maker. Therefore, a new approach: holonic modelling is required which combines the rich problem structuring approach of systems thinking with the flexible analytical power of the more traditional quantitative techniques. This is facilitated by harnessing modern spreadsheet technology to implement the previously esoteric tools of analysis.

Holonic modelling is not merely an alternative philosophy it is also a practical recognition that modern computer power and the flexibility of software packages allow problems to be structured in a flexible manner, recognizing the richness of their context

and allowing analysis to be carried out using simple formulae or built-in, analytical and graphical tools. Non-mathematical managers can now use the armoury of techniques, which were previously the preserve of the expert and apply them to rich descriptions of their real problem. The holonic, systems dynamics approach proves easier to build and provides a richer picture for the decision maker (Parker and Caine, 1996).

Markov type models can be easily solved using a variety of application software, such as Percom, and evidence suggests that the use of such software is increasing in popularity, especially since the later part of the 1980s (Parker and Caine, 1996). Parker and Caine (1996) discuss more complex models based on Markov illustrating how simple planning models can be developed using a spreadsheet.

A simple, hypothetical HRP model will be used to demonstrate Markov analysis and replicate the analysis using a much simpler approach combining the principles of system dynamics flowcharting with the convenience and flexibility of spreadsheet power. This approach can achieve the same results as Markov analysis much more easily and effectively (Parker and Caine, 1996).

Though Parker and Caine (1996), studied about the software packages such as spreadsheet use most of Markov's analysis and holonic modelling features they have not studied the HRIS features to fulfil the same requirements.

#### **2.2.7.2. Training and development**

Training and development could no longer be based on the good will of the senior employee to train his/her subordinates (Glaveli and Kufidu, 2005). The training and development intervention needed to be carefully designed and implemented and linked to organisational goals and strategy, for the training investment to pay-off (Glaveli and Kufidu, 2005).

Glaveli and Kufidu (2005) said that the training and development function is essential for changing behaviour and culture and reinforcing the new behaviour and culture. Training was the tool for enhancing the knowledge of employees on the new employee role and expectations and the services and products offered through induction courses. Training

was also a tool for improving the skills in need (sales skills, communication skills, service skills, etc.), the productivity and effectiveness of employees (Glaveli and Kufidu, 2005). There are differences between training and development practices relative to organisation size, and small firms face unique barriers, including access to, time for, and the cost of training (Sambrook, 2005).

According to Glaveli and Kufidu (2005) the training approach is continuous, systematic and strategy oriented. The training process consists of four phases Training needs analysis (TNA), The design phase, which involves the creation of the training activity. During this phase, formulates and implements a detailed training plan, referring to: training objectives and content, staff subject to training, involved resources, methodological options, training delivery channels-media, centralisation/decentralisation of the activity, specific objectives and outcomes etc, The implementation phase, which refers to the understanding of the participants' background and characteristics, the close observation of the instructor's behaviour, measurement of participants' perception level and participants' satisfaction, The training evaluation. It is necessary to ensure that the training activity is progressing towards the intended objectives. The evaluation phase measures mainly participants' satisfaction with the training program.

Training resources, like other resources in the organization, are limited. To utilize training resources to the best advantage, companies must put a fair amount of effort in training needs assessment (Tao et al., 2006). Tao et al. (2006) defined need as a gap between a current set of circumstances and some changed or desirable set of circumstances, and needs assessment as the process of measuring (as scientifically as possible) or appraising that gap.

The word circumstance in this definition can be substituted with words such as proficiency (knowledge, skills, and attitudes), performance or situation. Tao et al. (2006) advocated that though companies may adopt various training models or processes, they all need to establish a training information system as a reference for determining an effective training plan. HRIS consists of one of the automated training needs assessment

tools. Tao et al. (2006) have presented an integrated framework of a web-based training needs assessment system to effectively and efficiently assist organisations in their pursuit of competitive core competencies. It shows that HRD professionals do recognise the power of web technology in helping them become more efficient. Though Tao et al. (2006) presented a framework of a web-based training needs assessment system, they have not studied whether the existing HRIS TNA support for HR planning which is going to address by this research study.

According to Glaveli and Kufidu (2005), an electronic model based on skills development and the evaluation of employees sustains the training and development effort. The advantages expected are to: Put the right employee to the right job, profile the best people in each area and create personality and skill traits, make a valid and fair evaluation, allow people see and understand who they are and their future training and development needs, help to know at which rate each employee is capable of learning, and help to build effective teams.

### **Training and development needs assessment model**

The Al-Khayyat (1998) model has discussed the main elements of T&D information system. The limitation of this model is that it has not depicted how the new technology contributes to T&D. The model could have been perfect if it showed the effect that comes from organisational HRIS system to enhance the each steps of Al-Khayyat's (1998) Training and Development Needs Assessment Model.

However, Al-Khayyat (1998) model has identified the evaluation and feedback element as one of the most important elements in training and development, which was studied in detail by Yadapadithaya in 2001. According to Yadapadithaya (2001), evaluation of training is normally used in a broad sense to mean any attempt to obtain information (feedback) on the effects of a training program and to assess the value of the training in the light of that information. Furthermore, Yadapadithaya (2001) argued that though some experts on the evaluation of training make a distinction between validation (the assessment of whether the training has achieved its intended objectives) and evaluation

(the measurement of the total effects of the training program) in practice, this distinction is not always meaningful. Since it may be almost impossible to obtain information on the total effects of training, which may be extremely complex.

Yadapadithaya (2001:265) has stated that the training needs analysis and evaluation trends as follows; a sound training and development program should contain specific, measurable, achievable, relevant, timely (SMART) objectives based on a systematic training-needs analysis conducted at three levels, Individual (acquisition of proper knowledge, skills, and attitudes), Operational (what an employee must do to meet organisation objectives), and Organisation (organisation objectives, resources, and allocation of resources). A very important aim of the evaluation process is to determine whether the predetermined objectives are being met.

Yadapadithaya (2001:266) has highlighted two basic aims of evaluation: assessing training effectiveness and using it as a training aid. The primary aim of evaluation is to improve training by discovering which training processes are successful in achieving their stated objectives (to sort out the good training from the bad'). Since evaluation 'affects learning', it can also be used as a training aid (knowledge of results facilitates good learning). Evaluation data can be obtained prior to training, during training, immediately after training, or at a specified time after the end of training. In most of the cases, evaluation was done immediately after the training (Yadapadithaya, 2001). As he points out, the various levels of evaluation reactions, learning, job behaviour, organisational unit, and ultimate value act as powerful links in a chain of cause and effect.

Training leads to reactions, which lead to learning, which leads to changes in job behaviour, which lead to changes in the organisational unit, which lead to changes in the achievement of the ultimate goals of the organisation (Yadapadithaya, 2001). At the same time he argued according to his finding that this chain can be broken at any link when trainees have learnt something but not going to apply them to achieve objectives of the organisation. He concluded other deficiencies in corporate training and development system as lack of a clear-cut written training and development policy, weak interaction between the industries seeking training provision and the institutions providing training, lack of a systematic and comprehensive training needs assessment, and failure to evaluate

the effectiveness of training and development programs. However, he has not focused on how new technology: HRIS can be used to increase the effectiveness of evaluation stage of training and development.

### **2.2.7.3. Succession planning**

Succession planning can be defined as the attempt to plan for the right number and quality of managers and key-skilled employees to cover retirements, death, serious illness or promotion, and any new positions which may be created in future organisation plans (Sambrook, 2005). It forms part of the human resource plan, which should contribute to the overall business plan human resource planning (HRP) attempts to ensure there is a match between the demand and supply of labour, from the internal (ILM) and/or external (ELM) labour markets (Sambrook, 2005).

A key factor influencing succession planning is the role of human resource development, which includes organisational development, career development and the learning and development of potential successors (Sambrook, 2005). However, Sambrook (2005) has not discussed how IS, especially HRIS can be used in succession planning.

### **2.2.7.4. Recruitment and selection**

Recruitment represents one of the core staffing activities that need to be efficiently and effectively planned and conducted for organizations to attain success (Darraget al., 2010). Darraget al. (2010) identified recruitment as the process of discovering potential candidates for actual or anticipated organizational vacancies or, from another perspective, it is a link activity-bringing together those with jobs to fill and those seeking jobs. According to Selden et al. (2000) a fair number of studies focus on the performance effects of specific human resource management practices, such as training, and selection.

The different stages of the recruitment and selection process were identified by Fill and Moreland (1999) as: department (contextual) analysis, job analysis, job description and person specification, the seeking of applicants, attracting applicants, screening applicants, interviewing candidates and appointment.

The process of recruitment may begin with advertising vacancies, this may be done internally or externally or both and can be achieved using a range of media, which may involve using the company web site (El-Kot and Leat, 2008). The use of the Internet for recruitment purposes has become very popular (El-Kot and Leat, 2008). However, El-Kot and Leat (2008) has identified the different level of technical sophistication found among organisations in relation to the use of new technology in selection. Organisations may also make use of state run job centres or employment agencies or their own database of speculative enquiries.

According to El-Kot and Leat (2008), there is a range of selection practices that may be used including: applications forms, curriculum vitae, one-to-one and panel interviews, psychometric testing, assessment centres, job trials, job specific aptitude or knowledge tests, graphology, group-based activities and references. El-Kot and Leat (2008) concluded that the selection interview had probably been the single most used technique in most countries throughout the twentieth century. El-Kot and Leat (2008) draw a distinction between countries in which an empirical predictive model is the norm for selection and those in which the selection system is designed to eliminate unnecessary risk.

Though Darraget al. (2010) and El-Kot and Leat (2008) have all studied recruitment and selection methods in detail they have not focused their attention on how new technology, specially HRIS could enhance and strengthen the recruitment and selection process of an organisation. Selden et al. (2000) in their study focused on evaluating the effectiveness of human resource management system, offering a framework and methodology filling this knowledge gap: human resource management system is often an invisible asset that creates value by enhancing government's capacity to recruit and retain employees. However, they addressed the ability to design an effective evaluation system given an existing set of criteria and constructed a survey instrument aligned with the identified criteria but they did not try to measure the effectiveness of recruitment and selection features of Human resource management system.

## **2.3. Human Resource Information System models**

### **2.3.1. Hyde-Shafritz model**

Albert C. Hyde and Jay M. Shafritz were among the first to attempt a conceptual framework for the HRIS (McLeod and Anctis, 1995). In a 1977 journal article, they identified sixteen database modules, which were integrated in that they had the capability of exchanging data (McLeod and Anctis, 1995). It was a very primary model, which listed the modules as sixteen inputs and outputs (Figure 2.5). Both position and person data are entered into the HRIS to enable management to perform the planning function. The HRIS produces reports organized along the lines of the modules, which facilitate accountability.

A feedback loop enables the objectives to be modified to reflect actual performance. This is a typical closed-loop systems model, consisting of input, processing, output, and feedback loop (McLeod and Anctis, 1995).

### **2.3.2. The Simon input/data maintenance/output model**

In 1983, Sidney H. Simon presented a conference paper to human resources systems professionals that viewed the HRIS in terms of input, maintenance, and output functions (McLeod and Anctis, 1995). This model consisted of data validation, error correction and common database features such as adding, editing and changing records. The output function uses the database contents to produce information, primarily in the form of periodic reports.

### **2.3.3. The Manzini-Gridley hardware network model**

Andrew Manzini and John D. Gridley viewed the HRIS in terms of interfaces with a corporate human resources database (McLeod and Anctis, 1995). According to this model, users interface with the system by means of on-line devices, such as PCs or terminals, and receive outputs in the form of hardcopy reports and responses to ad hoc queries (McLeod and Anctis, 1995).

An administrative function called HRIC (for Human Resources Information Centre) exists within HR for the purpose of assisting users, providing database security, and



enforcing privacy controls (McLeod and Anctis, 1995). This model was a much improved model than the earlier models since it consisted of ad hoc queries.

#### **2.3.4. The Fisher, Schoenfeldt, and Shaw application modules**

Cynthia D. Fisher, Lyle Schoenfeldt, and James B. Shaw identified nine major application areas of the HRIS in 1990 namely planning, job analysis, equal employment opportunity (EEO), recruitment, selection, training and development, performance appraisal, compensation and benefits and organizational exit. The first two applications deal with the planning that provides the basis for all the firm's human resources activities. The third application (equal employment opportunity) consists of the reporting that occurs during the time that employees work for the firm. The remaining six applications are concerned with activities that occur during the employment cycle, beginning with recruitment and ending with organizational exit (McLeod and Anctis, 1995).

#### **2.3.5. The components of a resource-flow HRIS model**

The resource-flow model illustrated in Figure 2.6 consists of three subsystems devoted to data input, a HRIS database, and six subsystems devoted to transforming the data into information and making it available to users. The input data obtained from both internal and environmental sources, and the users consist of individuals and organizations both inside and outside the firm. This model was presented by HRSP (Human Resource Systems Professionals) and McLeod and Anctis in 1995.

Input subsystems Three input subsystems enter data into the database. They are data processing, human resources research, and human resources intelligence. In certain cases, the input subsystems also include software that transforms input data into the required format for storage (McLeod and Anctis, 1995). HRIS input subsystems consist of data processing subsystem, human resource research subsystem and human resource intelligence subsystem. Human resource research subsystem can generate new data for the job analyses purposes and use existing information for succession planning.

Human resource intelligence subsystem is responsible for interfacing with the environmental elements of any functional area such as government, suppliers, labour unions, local community, competitors, financial community, etc.

**Data processing subsystem** This subsystem consists of those systems residing both in the accounting department and HR, which process data relating to human resources (McLeod and Anctis, 1995). The data consists of personnel data describing human resources transactions that occur during the resource flow, and also payroll data. The data processing subsystem gathers the data both from internal and environmental sources (McLeod and Anctis, 1995).

**Human resources research subsystem** This subsystem has the responsibility for conducting special studies to provide data on the firm's human resource-related activities (McLeod and Anctis, 1995). The human resources research subsystem is the introspective view taken by HR of its own operations (McLeod and Anctis, 1995). As with the data processing subsystem, input data can come from both inside and outside the firm (McLeod and Anctis, 1995). **Human resources intelligence subsystem** This subsystem has the responsibility for keeping current on environmental activities that are especially important to human resource activities (McLeod and Anctis, 1995). Data and information are gathered describing activities of the government, labour unions, suppliers, the local and financial communities, and even competitors (McLeod and Anctis, 1995). Employment firms function as suppliers, funnelling applicants to the firm. Applicants can also come from the local community and from competitors (McLeod and Anctis, 1995). The financial community provides data and information concerning the economic climate, which influences the human resource plans (McLeod and Anctis, 1995). Much of the intelligence data can be obtained from commercial databases (McLeod and Anctis, 1995).

**The HRIS database** All of the data and information provided by the input subsystems is held in computer storage (McLeod and Anctis, 1995). The storage units can reside in IS, HR, or other locations (McLeod and Anctis, 1995). The data relates primarily to the firm's employees, but also can describe the environmental elements with which HR interfaces (McLeod and Anctis, 1995).

**Database management system (DBMS)** software performs the maintenance processes (McLeod and Anctis, 1995).

HRIS Database consists of number of databases such as employee database, executive search firm databases, university databases, employment agency databases, public access databases, corporate job banks...etc.

**Output subsystems** the output subsystems consist of various types of software that transform data in the database into information outputs. The software can include report writers, mathematical models, office automation packages such as e-mail and desktop publishing, and applications of artificial intelligence such as expert systems. According to the model, the output subsystems represent the six groups of HRSP applications.

**Workforce planning subsystem** is one of the output subsystems in HRIS model, which enables the manager to identify future personal needs (Figure 2.6). It facilitates organization charting, salary forecasting, job analysis or evaluation, planning and work force modeling.

**Recruiting output subsystem** enables applicant tracking and internal search.

**Workforce Management output subsystem** work on performance appraisal, training, position control that ensures headcount does not exceed budgeted limits, relocation, skills or competency measuring, succession planning and disciplinary. Compensation output subsystem works on merit increases, payroll, executive compensation, bonus incentives and attendance. Benefits output subsystem defined contribution, benefits and claims processing.

**Environmental reporting output subsystem** work on reporting firm's personnel policies and practices to the government. Reports like union increases, health records and toxic substance produce through this system. According to McLeod and Anctis (1995), the HRIS has provided strong support in the compensation and benefits areas, but other activities that occur during employment demand greater attention. For example, little attention has been directed at activities relating to organizational exit, or termination. Many firms have neglected applications for workforce management and recruiting. They

further emphasized, if HRIS resources were aimed at building strong planning systems, up-to-date HRIS databases, and responsive information output systems, then the HRIS would support management in each of its workforce-related activities.

This direct management support would contribute to the firm's strategic objectives, whatever they might be. As the HRIS does a better job of providing management with information about people and their jobs, it will solidify its position in the firm as a valued information system (McLeod and Anctis, 1995).

#### **2.4. The Relationship between Human Resource Information System (HRIS) Functions and Human Resource Management (HRM)**

In today's knowledge-economy, organizational success depends tremendously on the performance of human resource management (HRM) (Lippert and Swiercz, 2005; Troshani et al., 2011). Furthermore, Human Resource Management (HRM) has recently turned its concentration on knowledge sharing and strategic workforce analysis and has been increasingly evolving into a significant contributor on the organizational strategic management (Rodriguez and Ventura, 2003; Troshani et al., 2011).

This turn in HRM practices is partially attributed to technologies enablers, such as human resource information system (HRIS) which consists of systematic procedures and functions to acquire, store, retrieve, analyze, manipulate, and disseminate relevant information concerning organizational HR (Lippert and Swiercz, 2005; Troshani et al., 2011). To increase the effectiveness of HRM, organizations are becoming more and more dependent on HRIS (Ball, 2001; Lippert and Swiercz, 2005; Troshani, et al., 2011). At the functional level, HRIS can keep track of employees', applicants', and contingent workers' qualifications, demographics, performance evaluation, professional development, payroll, recruitment, and retention (Harris and Desimone, 1995; Troshani et al., 2011). With HRIS, the administrative efficiency maintains faster information processing, improved employee communications, and greater information accuracy (Overman, 1992; Beadless, et al., 2005), lower HR costs and overall HR productivity improvements (Beadles et al., 2005; Dery et al., 2009; Wiblen et al., 2010; Troshani et al., 2011). Strategic value can be derived using HRIS tools that assist decision-making concerning vital HR functions (Farndale et al., 2010; Troshani et al., 2011). For example, an HRIS can be considered as a tool that provides strategic planners with the needed

information enabling them to forecast future workforce demand and supply requirements. Moreover, it can be considered as a tool that helps employers in retaining the right employees. This can be done by paying them competitive salaries compared to the market, and training them to develop their skills and abilities to carry out their existing and future jobs.

Human Resource Management (HRM) In today's knowledge economy, the success of organizations depends mainly on the performance of their human resources (HR) (Lippert and Swiercz, 2005). Human resource management is about the procedures and practices that encompass the human resource aspect within organizations (Dessler and Al Ariss, 2012). Such practices should be connected to the overall strategy of the organization. This was discussed by Bratton and Gold (2003) who stated that "the strategic approach to managing employment relations which emphasizes that leveraging people's capabilities is critical to achieving sustainable competitive advantage" (p. 7). Many researchers supported this and commented that the change from a primarily administrative personnel function to a more strategic position attends to re-design the nature of the HRM functions (see for example Ulrich, 1997; Sheehan and Cooper, 2011).

The functions re-design is estimated to provide HRM with a better opportunity of impact on strategic decisions in order to eventually improve organizational performance (Bowen and Ostroff, 2004; Sheehan and Cooper, 2011). Such functions are planning, recruitment, selection, appraisal and performance management, reward management, development, employee relations, health and safety, and union- management relations (DeCenzo and Robbins, 2010). Furthermore, Akhtar and his associates (2008) added that training, participation, result-oriented appraisals and internal career opportunities considered a valid human resource management (HRM) practices.

As mentioned above, many researchers have discussed the issue of HRM and its functionalities. For example, Martinsons (1997) and Beulen, (2009) investigated the issue of HRM functionalities and commented that distinguishing these functionalities arises from the perspective of organizational and employee-centric view. They added that the

strategic dimension for organizational continuity and prosperity relies immensely on value and importance of the human capital which identifies the knowledge as a significant part of this capital. These functions are human resource planning, staff development and regulatory compliance, benefits administration, performance appraisal, and recruitment and selection.

**Human Resource Planning:** the process of making a decision about what positions inside the firm to fill and how to fill them (Dessler and Al Ariss, 2012). It is also the process of identifying current and future HR needs for an organization to achieve its goals as well as forecasting a firm's future demand and supply (DeCenzo and Robbins, 2010).

This function serves as a link to the overall strategic plan of an organization. Human resource planning is a continuous process that works on both long-term and short term.

**Staff development:** Development of existing staff needs to be maintained as different industries and sectors continue to implement new technologies. Supporting employees in identifying their professional development options and targets is the purpose of education and training tools (Beulen, 2009). As such, it contributes radically to retention management. HRIS can be used in a staff development and facilitating employees identification and enrollment of adequate or required training courses that are related to their current job or to develop their skills and abilities that enable them to carry out new jobs (Martinsons, 1997; Beulen, 2009).

**Benefits Administration:** Benefits administration is considered an important function for human resource management, since; it is part of retention management and can be used to motivate employees. It involves the creation and management of employee benefits, as well as providing means for employees to be trained in understanding how the benefits work (Dessler, 2013). It also involves what types of standards employees must meet in order to qualify for the benefits (Dessler, 2013; Dessler and Al Ariss, 2012).

**Performance Appraisal:** Performance appraisals are used for administering remunerations and salaries, and identifying individual employee strengths and weaknesses (Mathis and Jackson, 2010). It is variously called employee rating, employee evaluation, performance review, or result appraisal. It is used to assess an employee's performance and provide feedback about past, current, and future performance expectations (Beulen, 2009).

**Recruitment and Selection:** Gatewood and his colleagues (2008) defined HR selection as "... the process of collecting and evaluating information about an individual in order to extend an offer of employment" (p. 3).

They added that this process "is performed under legal and environmental constraints and addresses the future interest of the organization and of the individual" (p. 3). Mathis and Jackson (2010) summarized this and commented that the selection process is concerned with choosing qualified persons to fill those jobs. The aim of recruitment is to provide a satisfactory pool of qualified individuals to fill jobs in a firm (DeCenzo and Robbins, 2010). Employees, job design, and job analysis set the foundation for recruitment by identifying what various people do in their jobs and how they are affected by them. Through HR planning, managers anticipate the current and future demand of employees and the nature of workers issues, including the retention of employees. These factors are used when recruiting applicants for job opening.

## **2.5. Contribution of HRIS to Monitoring and Evaluation**

Monitoring is the routine and systematic collection of information against a plan. The information might be about activities, products or services, users, or about outside factors affecting the organization or project. It is also the systematic collection, analysis and use of information from projects and programmes for different purposes, i.e. learning from the experiences acquired, accounting internally and externally for the resources used and the results obtained, and taking decisions (PSO, 2004).

Evaluation is about making judgments about the value of any component part of an organization or its products, services or benefits, or about the organization as a whole. Evaluation is assessing as systematically and objectively as possible an ongoing or

completed project, program or policy. The object is to be able to make statements about their relevance, effectiveness, efficiency, impact and sustainability.

Based on this information, it can be determined whether any changes need to be made at a project, program or policy level, and if so, what they are. What went well, where is there room for improvement

Monitoring and evaluation are complementary. During an evaluation, as much use as possible is made of information from previous monitoring. In contrast to monitoring, where emphasis is on the process and results, evaluation is used to provide insight into the relationships between results (for example, the strengthened capacity of an organization), effects (for example, improved services / products) and impact.

Monitoring and evaluation (M&E) of development activities provide government officials, development managers, and civil society with better means for learning from past experience, improving service delivery, planning and allocating resources, and demonstrating results as part of accountability to key stakeholders. (World Bank, 2004, Monitoring & Evaluation, Some tools & approaches)

Since HRIS is a software which enable users/organization to handle their resource or data by minimizing costs, in a very systematic and automated/computerized, accurate and in time, thus it has a great contribution in the use of monitoring and evaluation process of an organization



## **2.6. Chapter Summary**

HRIS is one of the information systems which transforms the contributions of the HRM department incorporating records for employee resource, rewards, training, etc. Many studies cited HRIS benefits, such as improvements in accuracy, cost saving, timely and quick access to information through HR reports, decision-making and increased competitiveness. Lack of top management support, funds, HR knowledge of system designers and HRM solutions, are the main factors keeping organizations away from HRIS. According to various literatures firm size or technical skills do not affect organizational sourcing decisions. The HRIS implementation sourcing decision may be influenced by previous experiences in the implementation of other systems and strategic contribution of the HRIS on the internal organization.

HRIS facilitates training and development and recruitment and selection processes of the organizations. The training and development function is essential for changing behavior and culture and reinforcing the new behavior and culture in an organization. Generally, organizations will gain competitive and strategic advantage if HRIS activities are undertaken internally.

## **CHAPTER THREE**

### **3. RESEARCH DESIGN AND METHODOLOGY**

#### **3.1. Research design**

The purpose of this study is to assess the contribution of HRIS in human resource management throughout recruitment, selection, training and development within the perception of Senior HR Executives of Addis Ababa City Administration Education Bureau. Therefore, in this study a descriptive survey research design was employed. Seyoum and Ayalew (1989) mentioned that descriptive survey method becomes useful when the purpose of the research is to picture the current situation.

It also allows collection of the data using tools and documentary analysis describes and interprets what it is. In addition, it is concerned with conditions or relationships that exists, opinions that are held, processes that are going on, effects that are evident, or trends that are developing. Basically, survey method helps to obtain first-hand information from small samples representing large size population and also enables the researcher to have access to multiple methods of collecting of information.

#### **3.2. Data Sources**

Primary and secondary data sources were used in this study. The primary data sources are executive administrative and human resource staff members of the Addis Ababa Education bureau. The secondary data sources are documents such as policies, rules and regulations, journals, research papers, and various websites were consulted in attempting to solidify the review of related literature and also to gather additional information for the study.

#### **3.3. Sample Size and Sampling Techniques**

Addis Ababa City Administration Education bureau has 240 employees (63 administrative staff and 177 general service staff). Out of this the researcher took 50 (44.25 %) sample respondents out of 177 general service staffs by using simple random sampling technique. Besides, all 63 (55.75 %) of administrative staffs, and totally 113 (100 %) employees are included in the study.

Because they were considered as potential informants and major stake holders in achieving the objective of the study under taken. The following table shows the population, and sample size of Bureau heads, main and sub process heads and owners of the city administration of Addis Ababa Education Bureaus.

**Table 1. Population and Sample Size**

No	Category	Population	Sample Size	100%
<b>Administrative staff</b>				
1	Head of Bureau and deputy bureau heads	5	5	4.43%
2	Educational Quality management & institutional	8	8	7.07%
3	Teachers & Educational Institutions Mgt, professional licensing and renewal	8	8	7.07%
4	Educational management & Teachers Development main process	12	12	10.62%
5	Human Resource management sub process	8	8	7.07%
6	Research, planning & budget sub process	8	8	7.07%
7	Information communication & Technology sub process	7	7	6.3%
8	Communication sub process	7	7	6.3%
<b>Sub total</b>			63	55.75%
<b>General Service Staff</b>				
9	Educational communication center main process	37	22	19.47
10	Teaching and learning main process	11	8	7.08%
11	General service workers sub process	73	20	17.7%
<b>Sub total</b>			50	44.25%
<b>Grand total</b>			113	100%

### 3.4. Sampling Techniques

As it is shown in table 3.1, there were 5 Head of Bureau and deputy bureau heads, 58 main process owners, and 50 sub process owners were selected using systematic sampling techniques and random sampling techniques. In this study the total sample size was 113 (47%) of the total population. This gives proportional representations for Head of Bureau and deputy bureau heads, main process owners, and sub process owners the sample size (113) is proportionally allocated to each groups of population. To do so, sampling fraction ( $n \times 0.47$ ) will be used to choose the separate samples from Head of Bureau and deputy bureau heads, 58 main process owners, and 50 sub process owners.

Simple random sampling is used because it used to cull a smaller sample size from larger population and use it to research and make generalization. Therefore, 5 Head of Bureau and deputy bureau heads, 8 Educational Quality management & institutional, 8 Teachers & Educational Institutions Mgt, professional licensing and renewal, 12 Educational management & Teachers Development main process, 8 Human Resource management sub process, 8 Research, planning & budget sub process, 7 Information communication & Technology sub process, 7 Communication sub process, 22 Educational communication Centre main process, 8 Teaching and learning main process, and 20 General service workers were selected as respondents of the research. This sample size is assigned because it is manageable with respect to complexity of tools and nature of study.

### **3.5. Data Collection Instruments and Procedures**

The researcher generally employed three types of data gathering tools. These are questionnaire, interview and document analysis.

### **3.6. Data Gathering Instruments**

#### **Questionnaires**

The rationale behind using these questionnaires was to provide sufficient, valid descriptive information about views and attitudes of the respondents. Questionnaire could also be used to clarify the various connections between variables and to explain statistically the difference found. Another advantage of questionnaire study is that the researcher could reach large numbers of respondents in short period of time than other data gathering instruments (Wellington, 1996).

Questionnaires were administered because it is easy to address many people in a short period of time. To obtain adequate information both open-ended and close-ended types of questionnaires will be prepared. Questionnaires are prepared in English. In order to test the clarity of each question in the questionnaire a pilot test is conducted in Education Bureau other than the sampled Bureau. Based on the feedback obtained from the pilot testing some improvements had been made and finally it is administered to the final subjects of the research.

To supplement the information gathered through other instruments as well as for clearing of some unforeseen data, interview was conducted with work process owners of Addis Ababa Education Bureau. The rationale behind having interview was to identify variables and relationships and to triangulate the other tools which were used in the study, Kerlinger (1970), cited in Cohen, *et al* (2000) suggested that, interview might be used to follow up unexpected results to validate other methods, or to go deeper into the motivations of respondents and their reasons for responding as they do. Besides, various literatures related to the practice and problems of HRIS and HRM were consulted and included in the data analysis.

In doing so the research tried to address the following key points/items in the questioner, that is How is the current practice of HRIS in HRM process of the organization? what is the overall contribution of HRIS in HR planning through its various parts of the management? What are the major challenges the organization faced during the implementation process of HRIS? And what are the solutions they will used to overcome the major challenges the organization faced during the implementation process? If any? At the same time, it tries to assess the contribution of HRIS in human resource management throughout various parts of the HRM i.e, Recruitment, selection, training and development within the perception of selected employees of Addis Ababa City Administration Education Bureau.

### **Document Review**

Apart from data that were gathered from questionnaires, observation and document analysis was also used to obtain additional data through reviewing the different documents and records such as Police, Rule and regulations manuals, Journals, Research papers (if any), and website and government strategic plan. Therefore, questionnaires, observation and document analysis were the major data collecting tools to accomplish the objective of this research paper.

### **3.7. Data Collection Procedures**

Once the selection and development of data collection instruments were finalized, the instruments were have commented by the researcher's advisor and improvement will be made based on the feedback.

Data collected through different tools were analyzed and interpreted both quantitatively and qualitatively. The quantitative data that was obtained through questionnaires was

coded, tallied, tabulated, organized and treated with different statistical techniques for analysis and inferences. More specifically different statistical tools like,

Frequency counts, mean average, weighted mean values, percentages, standard deviation was calculated using software called SPSS version 20 to compare one set of scores to another. Thematic analysis was carried out for information obtained through interview and document analysis to enrich the quantitative data obtained and finally Analysis of the questionnaire were made based on the five-point Likert scale.

Respondents' answers were crated on a five-point Likert scale, which is grouped as strongly, agree, agree, undecided, disagree, and strongly disagree. The likert scale was used because the data are attitudinal measurement of continuous nature (Singh, 2007). For better interpretation and analysis mean scores of the five scales will be categorized into, the mean score of respondents which is close to 5 = strongly agree, close to 4 = agree, close to 3 = uncertain, close to 2 = Disagree and close to 1 = strongly disagree. This way of scaling will enable the researcher to analyses each response of respondents individually and to address the respondent's opinion towards the given question.

## CHAPTER FOUR

### 4. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This chapter contains the presentation, analysis and interpretation of data. The points dealt with in the chapter are the general characteristics of the sample population and the computed results for study of the contribution of human resource information system in human resource management practices in Addis Ababa City Administration Education Bureau.

#### 4.1. Analysis of the Characteristics of Respondents

A total of 113 sample respondents (63 administrative and 50 general staffs) were drawn from the total of 121 population of general service and administrative staffs of the Addis Ababa City Administration Education Bureau. Consequently, 113 paired questionnaires were distributed for sample respondents. At the end of the day, all the questionnaires distributed for general service and administrative staffs were filled in and returned.

Items	Sex	Frequency	%	Valid Percent		Educational Qualification	Frequency	Percent
Admin Staffs	M	48	42.5%	42.5	Admin Staffs	Diploma	3	2.7%
	F	15	13.3%	13.3		BA/BSc	52	46%
						MA/MSc	8	7.1%
G.service Staffs	M	37	32.7%	32.7	G.service Staffs	Diploma	19	16.8%
	F	13	11.5%	11.5		BA/BSc	31	27.4%
						MA/MSc	-	-
Total	M	85	75.2%	75.2	Total	Diploma	22	19.5%
	F	28	24.8%	24.8		BA/BSc	83	73.5%
						MA/MSc	8	7.1%

**Table1. Characteristics of Respondents by Sex and Educational qualification**

Table 1 deals with sex distribution of respondents. Accordingly, 48 (42.5 %) of the administrative staff respondents were male and 15 (13.3 %) of the rest were female. On the other hand, 37 (32.7 %) of the general service staff respondents were male and 13 (11.5 %) were female. The data shows that, female participation in both staffs were very low. Therefore, immense efforts are expected from the bureau to encourage female participation in the areas.

Table 1 depicts the educational qualifications of respondents. Consequently, there were a total of 50 general and 63 administrative staffs who were involved in the study. As a result, from the administrative staff respondents eight (7.1 %) were MA/MSc, 52 (46 %) were BA and the rest three (2.7 %) were Diploma in educational qualifications. Concerning the educational qualifications of the general staffs, the data revealed that there were 31 (27.4 %) BA/BSc and eight (16.8 %) Diploma staffs who involved in the provision of information through questionnaires. From these data, the majority 65 (65 %) of the respondents had an academic qualification of BA and above. Generally, from the data one can conclude that, this study tried to cover respondents from high educational qualifications.

**Figure I. Respondents by Service Year**

<b>Service year</b>	<b>% of employee</b>
5 and below	15%
6-10 years	80%
11-15 years	15%
16-20 years	0.9%
Above 20 years	1.8%

Figure I show characteristics of respondents by service years. As indicated in the figure, the majority 80 (70.8 %) of the respondents were between six to ten years, 15 (13.27 %) were between 11-15 years, 15 (13.27 %) were 5 and below years, two (1.8 %) were above 20 years and the rest one (0.9 %) of the respondents were served between 16-20 years. It can be concluded that, data for this study were collected from least experienced to more experienced respondents.

#### **4.2. Analysis and Interpretation of the Findings**

The questionnaires of this study were filled by respondents of different departments of the administrative and general service staff of the bureau. For the sake of simplification of the presentation and analysis of the data the respondents were grouped into administrative staffs and general service staffs based on their responsibilities. The calculated average mean values were interpreted as 0.50-1.49 for strongly disagree, 1.50-



2.49 for disagree, 2.50-3.49 for moderately agree, 3.50-4.49 for agree, and 4.50-5.00 for strongly agree based on the rating scores obtained.

**Table 4A: HRIS Role in Recruitment and Selection**

No	Items	No	Response	Response Alternatives					Mean	SD
				1	2	3	4	5		
1	HRIS supports development of recruiting plan.	113	Frequency	42	37	21	13	-	2.04	1.012
			Percent	37.2	32.7	18.6	11.5	-		
2	HRIS maintains skill inventory.	113	Frequency	35	51	14	13	-	2.04	.949
			Percent	31.0	45.1	12.4	11.5	-		
3	HRIS forecasts supply of human resources	113	Frequency	42	51	6	14	-	1.93	.961
			Percent	37.2	45.1	5.3	12.4	-		
4	HRIS estimates future human resources requirement of the organization.	113	Frequency	43	43	6	21	-	2.04	1.089
			Percent	38.1	38.1	5.3	18.6	-		
5	HRIS identifies human resources need to achieve organizational goals	113	Frequency	50	43	20	-	-	1.73	.744
			Percent	44.2	38.1	17.7	-	-		
6	Future supply and demand of labor can be forecast using What-If analysis function of HRIS	113	Frequency	28	58	14	13	-	2.11	.910
			Percent	24.8	51.3	12.4	11.5	-		

*NB. 1= Strongly Disagree 2= Disagree 3= Moderately 4= Agree 5= Strongly Agree*

As indicated in table 4A item 1, the respondents asked whether HRIS supports development of recruiting plan or not. Accordingly, 79 (69,9 %) of the respondents disagree, and 21 (18.6%) of the respondents moderate on this point with mean score of 2.04. Only 13 (11.5%) of the respondents agree on this issue. Therefore, from these one can have concluded that the development of recruiting plan was not supported by human resource information system in the organization.

In table 4A item 2, the respondents asked their level of agreement whether HRIS maintains skill inventory or not. Accordingly, while 86 (76.1 %) of the respondents disagreed and, on this issue, the rest 14 (12.4%) and 13 (11.5%) of the respondents moderate and agreed respectively. This indicated that, to a very few extent HRIS maintains skill inventory in the organization.

In table 4A item 3, the respondents asked whether HRIS forecasts supply of human resources in the organization or not. Accordingly, 93 (82.3 %) of the respondents disagree, and 6 (5.3%) of the respondents moderate and 14 (12.4 %) agree with mean score of 1.93. Therefore, from the above result, one can have concluded that supply of human resources in the organization was not forecasted with help of human resource information system.

In item 4 of the same table, the respondents asked their level of agreement whether human resource information system estimates future human resources requirement of the organization or not. Accordingly, except 21 (18.6%) of the respondents, the rest all disagreed on this point with mean sere of 2.04. This indicated that future human requirements of the organization were not estimated with the help of human resource information system.

In table 4A item 5, the respondents asked whether human resource information system identifies human resources need to achieve organizational goals. Accordingly, majority of the respondents disagreed on this issue with mean score of 1.73 (i.e 93 (82.3 %) disagreed, and 20 (17.7%) moderate. Based on this finding, one can have concluded that

human resources need to achieve organizational goals in the organization was not identified human resource information system.

In item 6 of the same table, the respondents asked whether future supply and demand of labor can be forecasted using what-If analysis function of human resource information system or not. Accordingly, 86 (76.1 %) of the respondents disagreed, and 14 (12.4%) of the respondents moderate on this issue with mean score of 2.11. Therefore, from this result one can concluded that what if analysis function of human resource information system was not functional in Addis Ababa City Administration Education Bureau.

**Table 4B: HRIS Role in Recruitment and Selection**

No	Items	N	Response	Response Alternatives					Mean	SD
				1	2	3	4	5		
1	HRIS identifies unfilled positions accurately	113	Frequency	28	58	14	6	7	2.17	1.06
			Percent	24.8	51.3	12.4	5,3	6.2		
2	HRIS analyses each job position and its job title in an organization	113	Frequency	42	51	14	6	-	1.86	.833
			Percent	37.2	45.1	12.4	5.3	-		
3	HRIS analyses the employees in each position	113	Frequency	35	44	34	-	-	1.99	.785
			Percent	31.0	38.9	30.1	-	-		
4	HRIS constantly analyses and matches the demand for human resources.	113	Frequency	28	36	35	7	7	2.37	1.11
			Percent	24.8	31.9	31.0	6.2	6.2		
5	HRIS ensures organization has right kind and numbers of employees at right place at right time	113	Frequency	50	35	21	7	-	1.87	.931
			Percent	44.2	31.0	18.6	6.2	-		

**NB. 1= Strongly Disagree 2= Disagree 3= Moderate 4= Agree 5= Strongly Agree**

As indicated in table 4B item 1, the respondents asked whether their organization identifies unfilled positions accurately by using human resource information system or not. Accordingly, while majority 58 (51.3%) of the respondents disagreed, 28 (24.8%) of the respondents strongly disagreed on this issue with means care of 2.17. This indicated that human resource information system was not used to identify unfilled positions.

In item 2 of the same table, the respondents asked their level of agreement whether the organization analysis each job position by using human resource information system or not. Accordingly, except 6 (5.3%) of the respondents the rest all disagreed on this point with mean score of 1.86. This showed that, human resource information system was not functional in the organization in analysis of each job positions.

In table 4B item 3, the respondents asked whether human resource information system analyses the employees in each position on the organization or not. Accordingly, all the respondents agreed on this issue in different level of agreement with mean score of 1.99. Therefore, from this result one can concluded that the organization has not done the analyses of the employees in each position with the help of human resource information system.

In item 4 of the same table, the respondents asked their level of agreement whether human resource information system constantly analyses and matches the demand for human resources in the organization. Accordingly, 64 (56.7 %) of the respondents disagreed, and 35(31.0%) of the respondents moderately agreed on the issue with mean score of 2.37. Therefore, from this result, one can have concluded that the organization has not constantly analyses and matches the demand for human resources using human resource information system.

In table 4B item 5, the respondents asked their level of agreement whether the organization ensures the right kind and numbers of employees at right place or not by using human resource information system. Accordingly, majority 50 (44.2%) of the respondents strongly disagreed and 35 (31%) of the respondents disagreed on this issue with mean score of 1.87. This indicated that the organization has not ensured the

placement of employers at the right place with the help of human resource information system.

**Table 4C: HRIS Role in Recruitment and Selection**

No	Items	N	Response	Response Alternatives					Mea n	SD
				1	2	3	4	5		
1	Organization uses HRIS recruitment subsystem at an optimum level	113	Frequency	29	57	27	-	-	1.98	.707
			Percent	25.7	50.4	23.9	-	-		
2	HRIS performs comprehensive reporting and tracking of applicants efficiently.	113	Frequency	35	43	35	-	-	2.00	.791
			Percent	31.0	38.1	31.0	-	-		
3	Candidates are recruited through HRIS e-recruiting.	113	Frequency	14	35	51	7	6	2.61	.968
			Percent	12.4	31.0	45.1	6.2	5.3		
4	HRIS maintains relationships with individuals who register in a talent warehouse.	113	Frequency	21	50	29	6	7	2.36	1.04 4
			Percent	18.6	44.2	25.7	5.3	6.2		
5	HRIS reduces recruiting costs.	113	Frequency	28	22	43	20	-	2.49	1.05 3
			Percent	24.8	19.5	38.1	17.7	-		

**NB. 1= Strongly Disagree 2= Disagree 3= Moderate 4= Agree 5= Strongly Agree**

As indicated in table 4C item 1, the respondents were asked their level of agreement whether their organization uses human resource information system recruitment subsystem at an optimum level or not. Accordingly, all the respondents disagreed in this issue in different level of agreement 86 (76.1 %) disagreed, and 27 (23.9%) moderate

with mean score of 1.98). This showed that the use of human resource information system recruitment subsystem was not at an optimal level in the organization.

In item 2 of the same table, the respondents asked whether the organization performs comprehensive reporting and tracking of applicants efficiently using human resource information system or not. Accordingly, majority of the respondents disagreed on this issue with mean score of 2.00 (31% strongly disagreed and 43% disagreed). Therefore, from this result one can concluded that the organization has not found performing comprehensive reporting and tracking of applicants efficiently with the help of human resource information system.

In table 4C item 3, the respondents were asked whether candidates are recruited through human resource information system recruiting in the organization or not. Accordingly, while 51 (45.1%) of the respondents were moderate, 35 (31%) disagree and 14 (12.4%) strongly disagreed on this point with mean score of 2.61. This indicated that even if the organization recruited candidates through human resource information system recruiting there was a gap in its application.

In item 4 of the same table, the respondents were asked whether human resource information system maintains relationships with individuals who register in a talent ware house in the organization or not. Accordingly, while majority 50 (44.2%) disagreed and 21 (18.6%) of the respondents strongly disagreed, only 29 (25.7%) of the respondents were moderate on the issue. This indicated that the organization has not maintains relationships with individuals who register in a talent ware house using human resource information system.

In table 4C item 5, the respondents were asked whether human resource information system reduces recruiting costs in the organization or not. Accordingly, except 20 (17.7%) of the respondents the rest all disagreed on this issue with men score of 2.49. Therefore, from this result one can concluded that human resource information system has not reduced recruiting costs of the organization.

**Table 4D: HRIS Role in Recruitment and Selection**

No	Items	N	Response	Response Alternatives					Mean	SD
				1	2	3	4	5		
1	HRIS eliminates unsuitable applicants early and focuses on promising candidates.	113	Frequency	29	57	7	6	14	2.28	1.257
			Percent	25.7	50.4	6.2	5.3	12.4		
2	HRIS leverages employee's talent in the right place at the right time.	113	Frequency	28	72	6	7	-	1.93	.741
			Percent	24.8	63.7	5.3	6.2	-		
3	HRIS evaluates the recruiting processes effectively.	113	Frequency	21	51	28	6	7	2.35	1.043
			Percent	18.6	45.1	24.8	5.3	6.2		
4	HRIS manages external information outside the organization.	113	Frequency	21	36	43	13	-	2.42	.924
			Percent	18.6	31.9	38.1	11.5	-		

**NB. 1= Strongly Disagree 2= Disagree 3= Moderate 4= Agree 5= Strongly Agree**

In table 4D item 1, the respondents were asked their level of agreements whether human resource information system eliminates unsuitable applicants early and focuses on promising candidates in the organization or not. Accordingly, majority 57 (50.4%) of the respondents disagreed and 29 (25.7%) strongly disagreed on the issue. This showed that the selection of candidates was not done with the help of human resource information system in the organization.

In item 2 of the same table, the respondents were asked whether human resource information system leverages employee's talent in the right place of the right time or not. Accordingly, the majority, 72 (63.7%) of the respondents agreed negatively. The mean score 1.93 of this item also indicated that the applicable of human resource information system has not functional for this purpose.

In table 4D item 3, the respondents were asked whether the organization evaluates the recruiting processes effectively with the help of human resource information system or not. Accordingly, 51 (45.1%) disagreed 21 (18.6%) strongly disagreed and 28(24.8%) of the respondents moderate in this issue with mean score of 2.35. This showed that the evaluation of the recruiting process has not done in the organization with the help human resource information system.

In item 4 of the same table, the respondents were asked whether human resource information system manages external information outside the organization or not. Accordingly, except 13(11.5%) of the respondents, the rest all respondents negatively agreed on this issue with mean score of 2.42. Therefore, based on the results of the study one can concluded that human resource information system has not played a vital role in recruitment and selection processes in Addis Ababa city Administration Education Bureau.

**Table 4E: HRIS Role in Recruitment and Selection**

No	Items	N	Response	Response Alternatives					Mean	SD
				1	2	3	4	5		
1	HRIS has improved the quality of my decisions	113	Frequency	30	42	34	7	-	2.16	.892
			Percent	26.5	37.2	30.1	6.2	-		
2	As a result of HRIS, I can better set my HR decision-making priorities	113	Frequency	30	56	20	7	-	2.10	1.000
			Percent	26.5	49.6	17.7	6.2	-		
3	Through HRIS, more relevant information has become available to me for decision-making	113	Frequency	43	43	20	7	-	1.92	.898
			Percent	38.1	38.1	17.7	6.2	-		
4	Through HRIS, the speed at which I analyze decisions has increased.	113	Frequency	21	65	27	-	-	2.05	.652
			Percent	18.6	57.5	23.9	-	-		

**NB. 1= Strongly Disagree 2= Disagree 3= Moderate Agree 4= Agree 5= Strongly Agree**



As indicated in table 4E item 1 and 2, the respondents were asked their level of agreement whether human resource information system supports the human resource decision making of the organization or not. Accordingly, except 7 (6.2%) of the respondents, the rest all respondents negatively agreed for the issues of both items with mean score of 2.16 and 2.10 respectively. In item 3 of the same table, the respondents were asked whether they have got more relevant information through human resource information system for their decision-making process or not. Accordingly, 86 (76.2 %) disagreed, and 20(17.7%) of the respondents were moderate on the issue with mean score of 1.92. This indicated that they were not supported by human resource information system for their decision making of the organization Human resources functions.

In table 4E item 4, the respondents were asked their level of agreement whether the speed at which they analyze decisions has increased through human resource information system or not. Accordingly, all the respondents negatively agreed on this issue with mean score of 2.05. Therefore, based on the results of the study one can concluded that human resource information system has not play a vital role by supporting them in their decision-making process of the organization recruiting and selection functions.

**Table 5A: HRIS Role in Training and Development**

No	Items	N	Response	Response Alternatives					Mean	SD
				1	2	3	4	5		
1	HRIS provides insight into organizational training needs	113	Frequency	28	72	7	6	-	1.92	.721
			Percent	24.8	63.7	6.2	5.3	-		
2	The outcomes of HRIS training needs analysis (TNA) are accurate	113	Frequency	29	57	21	6	-	2.04	.812
			Percent	25.7	50.4	18.6	5.3	-		
3	Managers find HRIS detailed training plan relevant to their needs	113	Frequency	28	51	21	13	-	2.17	.934
			Percent	24.8	45.1	18.6	11.5	-		
4	HRIS assesses the budget of training and development programs	113	Frequency	42	50	15	6	-	1.87	.840
			Percent	37.2	44.2	13.3	5.3	-		

**NB. 1= Strongly Disagree 2= Disagree 3= Moderate Agree 4= Agree 5= Strongly Agree**

In table 5A item 1, the respondents were asked their level of agreement whether HRIS provides insight in to organizational training needs or not. In connection to this, while 72

(63.7%) of the respondents disagreed, 28 (24.8%) of the respondents strongly disagreed in this point. The mean score 1.92 off this item also indicated that HRIS has not providing insight into organizational training needs of the organization. In item 2 of the same table, they were asked about the outcomes of HRIS training needs analysis are accurate or not. Accordingly, 57 (50.4%) of the respondents disagreed and 29 (25.7%) of the respondents were strongly disagreed on this issue. This means that the outcomes of the HRIS training needs analysis was not accurate or the system was not functional in the organization.

In table 5A item 3, the respondents were asked their level of agreement whether managers find HRIS detailed training plan relevant to their needs or not. Accordingly, 51 (45.1%) of the respondents disagreed and 28(24.8%) of the respondents strongly disagreed. This indicated that managers of the organization have not found HRIS detailed training plan. In item 4 of the same table, they were asked whether HRIS assesses the budget of training and development programs. The result of this item also indicated that the budget of training and development programs have not assessed with the help of HRIS, because, while 42 (37.2%) of the respondents strongly disagreed, 50 (44.2%) of the respondents disagreed on this point with mean score of 1.87.

**Table 5B: HRIS Role in Training and Development**

No	Items	N	Response	Response Alternatives					Mean	SD
				1	2	3	4	5		
1	Organization uses HRIS training and development subsystem at an optimum level	113	Frequency	35	50	22	6	-	1.99	.850
			Percent	31.0	44.2	19.5	5.3	-		
2	HRIS selects right person to be trained at right time	113	Frequency	42	51	14	6	-	1.86	.833
			Percent	37.2	45.1	12.4	5.3	-		
3	HRIS eliminates skill gaps across the organization	113	Frequency	35	44	14	13	7	2.23	1.188
			Percent	31.0	38.9	12.4	11.5	6.2		
4	HRIS plays a vital role administrating training programs.	113	Frequency	43	50	14	6	-	1.85	.837
			Percent	38.1	44.2	12.4	5.3	-		
5	HRIS makes better and faster decisions about successor rankings	113	Frequency	49	36	21	7	-	1.88	.927
			Percent	43.4	31.9	18.6	6.2	-		

**NB. 1= Strongly Disagree 2= Disagree 3= Moderate Agree 4= Agree 5= Strongly Agree**

As indicated in table 5B item 1, the sample respondents were asked whether their organization uses HRIS training and development sub systems at an optimum level or not. Accordingly, majority 85 (72.2%) of the respondents were disagreed on this point. The mean score 1.99 of this item also showed that the subsystem of HRIS has not used at an optimum level in the organization under study.

In item 2 of the same table, they were asked their level of agreement on whether their organization selects the right person to be trained with the help of HRIS or not. Accordingly, while 51 (45.1%) disagreed 42 (37.2%) of the respondents strongly

disagreed on this point with mean score of 1.86. this indicated that the Addis Ababa City Administration Bureau was not selecting the right person to be trained at the right time with the help of HRIS.

In table 5B item 3, the respondents were asked whether HRIS eliminates skill gaps across their organization or not. The result of this item also indicated that their organization has not used HRIS to eliminate skill gaps across the organization, since majority 79 (69.9%) of the respondents disagreed on this point with mean score of 2.23 and standard deviation 1.19.

In item 4 of the same table, they were asked whether HRIS plays a vital role in administrating training programs or not. Accordingly, except 20 (17.7%) of the respondents, all the rest were disagreed on this issue with mean score and standard deviation of 1.85 and 0.82 respectively. This indicated that the organization has not found using HRIS for this purpose.

In item 5 of the same table, the respondents were also asked whether HRIS makes better and faster decisions about success rankings in their organization or not. Accordingly, except 28 (24.8%) of the respondents, majority 85(75.3%) of the respondents did not support this idea. Therefore, based on the results of the findings, one can have concluded that HRIS has not functional in Addis Ababa city Administration Education Bureau.

**Table 5C: HRIS Role in Training and Development**

No	Items	N	Response	Response Alternatives					Mean	SD
				1	2	3	4	5		
1	HRIS evaluates the effectiveness of training programs.	113	Frequency	28	44	21	13	7	2.35	1.157
			Percent	24.8	38.9	18.6	11.5	6.2		
2	Employees find HRIS training programs relevant to their needs	113	Frequency	43	50	14	6	-	1.85	.837
			Percent	38.1	44.2	12.4	5.3	-		
3	HRIS identifies specific key positions and target specific employees as potential successors	113	Frequency	21	65	20	7	-	2.18	.947
			Percent	18.6	57.5	17.7	6.2	-		
4	HRIS minimizes costs associated with succession planning or applicant tracking.	113	Frequency	21	57	35	-	-	2.12	.696
			Percent	18.6	50.4	31.0	-	-		

**NB. 1= Strongly Disagree 2= Disagree 3= Moderate Agree 4= Agree 5= Strongly Agree**

As indicated in table 5C item 1, the sample respondents were asked whether their organization evaluates the effectiveness of training programs with the help of HRIS or not. Accordingly, while 72 (63.7%) of the respondents negatively agreed this point, 41 (36.3%) of the respondents positively agreed on the issue. This indicated that to some extent the organization uses HRIS to evaluate the effectiveness of training needs (X = 2.35).

In item 2 of the same table, the respondents were asked their agreement on whether employees in their organization find HRIS training programs relevant to their needs or not. Accordingly, except 20 (17.7%) majority 93 (82.3%) of the respondents were disagree on this issue with mean score of 1.85. this showed that either employees of the organization have not found HRIS training programs relevant to their needs or the training programs of the organization was not undertaken with the help of HRIS.

In table 5C item 3, the respondents were asked whether their organization identifies specific key positions as potential success with the help of HRIS or not. Accordingly, majority 86 (76.1%) of the respondents disagreed on this point. This means that the organization has not identified specific key positions as potential successors with the help of HRIS. In item 4 of the same table, they were asked their level of agreement on whether HRIS minimizes costs associated succession planning or not. Accordingly, while majority 57(50.4%) of the respondents disagreed, 21(18.6%) were strongly disagreed on this question. Therefore, based on the findings one can concluded that because of that the organization has not used HRIS for training functions, it is not specifically known whether it minimizes the cost or not for the organization.

**Table 5D: HRIS Role in Training and Development**

No	Items	N	Response	Response Alternatives					Mean	SD
				1	2	3	4	5		
1	HRIS manages internal information within the organization	113	Frequency	35	58	14	6	-	1.92	.803
			Percent	31.0	51.3	12.4	5.3	-		
2	HRIS provides an opportunity to become a strategic partner with top management	113	Frequency	28	65	13	7	-	2.05	.962
			Percent	24.8	57.5	11.5	6.2	-		
3	HRIS connects employee to required position and keep track of their movements.	113	Frequency	21	72	7	13	-	2.11	.838
			Percent	18.6	63.7	6.2	11.5	-		
4	HRIS identifies a logical progression path and the steps required for advancements.	113	Frequency	35	57	21	-	-	1.88	.696
			Percent	31.0	50.4	18.6	-	-		
5	Role of HRIS aligns with the organization's HR Strategy.	113	Frequency	28	43	29	13	-	2.24	.957
			Percent	24.8	38.1	25.7	11.5	-		
6	Role of HRIS aligns with the organization's Information System strategy	113	Frequency	28	57	15	13	-	2.12	.914
			Percent	24.8	50.4	13.3	11.5	-		

**NB. 1= Strongly Disagree 2= Disagree 3= Moderate Agree 4= Agree 5= Strongly**

**Agree**

As indicated in table 5D item 1, the sample respondents were asked their agreement whether their organization manager internal information with the help of HRIS or not. On the result of this point, since majority 93 (82.3%) of the respondents were responded negatively with mean score of 1.92, it is obvious that the organization has not managed internal information with the help of HRIIS.

In item 2 of the same table, they were asked whether HRIS provides them an opportunity to become a strategic partner with top management or not. Accordingly, 93 (82.3%) of the respondents disagreed on this point. This indicated that they have not got an opportunity since HRIS was not functional in their organization.

In table 5D item 3, the respondents were asked whether HRIS connects employee to required position in their organization or not. Accordingly, majority 93 (82.3%) of the respondents disagreed. Similarly, 92 (81.4%) of the respondents also disagreed for the question raised under item 4 of the same table. This showed that the employees of the organization have not beneficial of HRIS in their organization.

In table 5D item 5 and 6, the respondents were also asked the role of HRIS in their organization aligns with the organization's Human resource and information system strategy or not. Accordingly, majority 71 (62.9%) and 85(74.4%) of the respondents responded negatively for the points raised under these items respectively. Therefore, based on the results of the study, one can have concluded that the human resource function of the organization has not supported with information system technology.

**Table 6: Importance of HRIS to Different Functions of HRM**

No	Items	N	Response	Response Alternatives				Mean	SD
				1	2	3	4		
1	Recruitment of staff	113	Frequency	99	-	7	7	1.31	.846
			Percent	87.6	-	6.2	6.2		
2	Selection of staff	113	Frequency	78	21	-	14	1.56	.999
			Percent	69.0	18.6	-	12.4		
3	Training & Development of staff	113	Frequency	79	7	21	6	1.59	.970
			Percent	69.9	6.2	18.6	5.3		
4	HR planning	113	Frequency	72	-	21	20	1.90	1.239
			Percent	63.7	-	18.6	17.7		
5	Decision Making	113	Frequency	65	21	7	20	1.84	1.154
			Percent	57.5	18.6	6.2	17.7		
6	Monitoring to Evaluation	113	Frequency	86	-	14	13	1.59	1.091
			Percent	76.1	-	12.4	11.5		

**NB. 1= Less Important 2= Important 3= More Important 4= Most Important**

As indicated in table 6 items 1 to 6, the respondents were asked the importance of HRIS to different functions of HRM such as recruitment, selection, training and development, planning, decision making and monitoring processes. As the results of the 6 items under this table indicated in average more than 75% of the respondents disagreed on the issues raised on all items. This showed that since the HRIS was not practiced in the organization it was difficult for them to rank the importance of HRIS to different functions of HRM.



## **CHAPTER FIVE**

### **5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

This chapter deals with the summary of major findings, conclusions and recommendations.

#### **5.1. Summary of Major Findings**

This study was aimed at assessing the contribution of human resource information system for human resource functions at Addis Ababa City Administration Education Bureau. Consequently, the study also tried to answer the basic research questions.

To address these basic questions, questionnaires, observation, interviews and document analysis were employed to gather information. 113 questionnaires were administered to the sampled respondents and all the questionnaires distributed were properly filled and returned. At last the study came up with the following major findings.

The current practice of Addis Ababa City Administration Education Bureau was not supported by HRIS rather every department of the administration handles its activities manually without the use of HRIS system. As the results of the findings indicated in average more than 75% of the respondents disagreed on the issues raised on all items. This showed that since the HRIS was not practiced in the organization it was difficult for them to rank the contributions of HRIS to different functions of HRM.

In addition to this the evaluation of the recruitment and selection process has not done in the organization with the help human resource information system Therefore, based on the results of the study the human resource information system has not played a vital role in recruitment and selection processes in Bureau. With regard of the training and development because of the organization has not used HRIS for training and development functions, it is not specifically known whether it minimizes the cost or not for the organization

All group of respondents negatively agreed on this issue of management and decision-making process of the organization over all human resource planning and management

functions with mean score of 2.05. Therefore, based on the results of the study one can concluded that human resource information system has not play a vital role.

As per the responses of the open-ended questions and the interviews held with some of the staff and top-level management members of the organization, they were not found practically implementing HRIS in their organization. According to the findings of the interview, the Addis Ababa City Administration Education Bureau had tried to start HRIS system in the year 2005 and 2006 E.C for this purpose it has selected some of its staff members and trained them in HRIS software. Unfortunately, all these trained persons left the organization because of that they had got chance of employment to other organizations. For the sake of these reasons the organization could not able to run the system according to its plan.

Finally, the mechanisms they used to overcome the major challenges by the Addis Ababa City Administration Education Bureau was to wait for the coming new software and its implementation that was prepared by the city administration office for all the bureaus. In doing so the city administration education bureau already select participants for this new program

## **5.2 Conclusions**

A Human Resources Information System (HRIS) not only helps automate a large portion of routine HR tasks, it can also save valuable time and resources for employees and managers. Allowing individuals within an organization to complete a variety of day-to-day, administrative tasks without direct contact with HR personnel can result in more effective management. For employees, an online, self-service HR portal can process a variety of requests, such as payroll look-up, paid time off requests, employee handbook access and even annual benefits enrollment.

Utilizing an HRIS can also positively affect an organization's internal work environment by creating time for HR staff to allocate toward more impactful employee programs or issues. Managers can streamline their HR-related tasks by utilizing an HRIS for time and attendance tracking, employee data collection, benefits administration, performance reviews and application processing for potential employees.

The main purpose of this study is an initial attempt to determine whether HRIS has reached these potential benefits. Based on responses from a sample of employees and top management from Addis Ababa city administration Education bureau, the results concerning the contributions of HRIS in AACAEBS situations are not encouraging. All employees are willing to use the system (HRIS) as a tool, however due to the implementation problem the required benefit and package of the system cannot be observed practically.

An indication of another potential problem was revealed in the answers to open-ended questions on the survey seeking additional feedback. Frequently mentioned by the respondents was the need for more training on the system. They believed that additional and better training would lead to better results. Several of the responses also reinforced the notion that the system was being underutilized and that they were not taking full advantage of the capabilities. They believed that other applications were needed and that the system could be more effectively utilized with the addition of some other features that were not currently part of the system. So, the potential contributions of HRIS are recognized, but further advances are needed before the potential can be realized.

In addition to this responses in my interview showed that the city administration education bureau was not the fully owner of the program whereas its owned by MOE, thus lack of the sense of ownership by itself create a big problem and only a focal person was assigned and there was lack of follow up and proper monitoring and evaluation and feedback. On top of this the delivery of the training for the selected staffs and the way how those employees selected was also another source of problem in the practical implementation and consequently lead to loosing of the proposed benefits and the contribution of HRIS AEB expecting to its overall Human Resource Management.

The study concludes that HRIS as a tool is an excellent tool for Human Resource management (HRM). It enhances and contributes a lot in the identification of unfilled positions accurately and analyzes each job position with its title in an organization. It also provides insight into organizational training needs, selects the right persons to be trained and evaluates the effectiveness of training and development programs, it plays great roll in recruitment and selection but has the challenges of available trained man power, lack of ownership, high turnover of those trained employees the way how the first time training was delivered administered i.e that is more of theoretical than practical.

### 5.3 Recommendations

Based on the findings obtained and conclusions reached the researcher would like forward the following recommendations;

- The first and the most one is the organizations must take over the full ownership of the program from MoE and come to an agreement directly with the vendor on HRIS features when they invest on it. This enables the organization to make full monitoring and evaluation of the system periodical and it also helps them to forward on time feedback and support if needed and taking the required action.
- EAB should make ready the Required subsystems need to be planned and ordered beforehand to avoid malfunctions due to incompatible infrastructure and higher upgrading cost. Making proper preparation ahead of time was the most important thing when an organization is planning to introduce such a big information system change in its HRM functions.
- The organization must give due attention to the high employee turnover by providing different fringe benefits like, promotion, recognitions or award, self-development trainings, medical coverage to employees and if possible to their families as well. This will help to retain well trained and senior staff to make much easier in using HRIS
- The training must be given to all employees as per their roll and responsibility instead of giving to a very few and selected employees by doing so the organization will get the full sense of belongingness and high commitment of all employees to the program. Moreover, it reduces time and cost.
- The training must be given more of practical than theoretical and the trainers or providers of the tool should have a constant follow-up on the system while they are doing their actual work for some period which helps them to customized as per the need of the organization. Instead of taking the full package and trying to implement as it is.

A future researcher can find the contribution of HRIS to cooperate planning to gain a broader understanding. This research was mainly based on human resource planning, recruiting, selection and training and development subsystems. Future research may be based on other subsystems as well. How well HRIS reengineer the organization.

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**APPENDIX**  
**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES**  
**DEPARTMENT OF EDUCATIONAL PLANING AND MANAGEMENT**  
**Questionnaire to be filled by Respondents**

**Dear Respondent:**

This questionnaire is designed to solicit the relevant information for the research carried out on the topic “the contribution of HRIS in human resource management throughout recruitment, selection, training and development”. Accordingly, the purpose of this study is to assess the contribution of HRIS in human resource management throughout recruitment, selection, training and development within the perception of Senior HR Executives of Addis Ababa City Administration Education Bureau. Besides, the study is conducted for academic purpose. Hence, your responses will be kept confidential. The soundness and the validity of the findings highly depends on your kind and genuine responses. Therefore, I kindly request you to fill the questionnaire carefully and back to me as much as possible as per the indicated time. /To be returned within ten days/

Thank you in Advance!



**General Directions**

1. No need of writing your name
2. Please put a tick (✓) mark in the box for your answer and for the number of your choice for the alternatives given in part II.

**Part I. Information about Demographic Data**

1. Sex                    A. Male     B. Female
2. Educational Qualification  
     A. BA/BSC                                C. PhD                      
     B. MA/MS                                D. If any, Please specify -----
3. Service year-----

**Part II. HRIS Related Questions**

Read each statement carefully and indicate your opinion about the HRIS implemented by the organization, use the following rating scale, and put “✓” mark for each rating.

**1= Strongly Disagree 2=Disagree 3= Moderately Agree 4= Agree 5= Strongly Agree**

No	Items	1	2	3	4	5
	<b>HRIS Role in Recruitment and Selection</b>					
1	Organization uses HRIS recruitment subsystem at an optimum level					
2	HRIS identifies unfilled positions accurately					
3	HRIS analyses each job position and its job title in an organization.					
4	HRIS analyses the employees in each position					
5	HRIS supports development of recruiting plan.					
6	HRIS maintains skill inventory.					
7	HRIS performs comprehensive reporting and tracking of applicants efficiently.					
8	Candidates are recruited through HRIS e-recruiting.					
9	HRIS maintains relationships with individuals who register in a talent warehouse.					
10	HRIS reduces recruiting costs.					
11	HRIS eliminates unsuitable applicants early and focuses on promising candidates.					
12	HRIS leverages employee’s talent in the right place at the right time.					
13	HRIS evaluates the recruiting processes effectively.					
14	HRIS manages external information outside the organization.					
15	HRIS constantly analyses and matches the demand for human					

	resources.					
16	HRIS forecasts supply of human resources.					
17	HRIS estimates future human resources requirement of the organization.					
18	HRIS ensures organization has right kind and numbers of employees at right place at right time.					
19	HRIS identifies human resources need to achieve organizational goals.					
20	HRIS has improved the quality of my decisions					
21	As a result of HRIS, I can better set my HR decision-making priorities.					
22	Through HRIS, more relevant information has become available to me for decision-making.					
23	Through HRIS, the speed at which I analyze decisions has increased.					
24	Through HRIS, the speed at which I analyze decisions has increased.					
25	Future supply and demand of labor can be forecast using What-If analysis function of HRIS.					

**1. What major challenges your organization faced in the process of recruitment and selection?**

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**2. What are the solutions your organization used to overcome the challenges the organization faced in the process of recruitment and selection?**

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### Part III.HRIS Role in Training and Development

	<b>HRIS Role in Training and Development</b>	1	2	3	4	5
1	Organization uses HRIS training and development subsystem at an optimum level					
2	HRIS provides insight into organizational training needs.					
3	The outcomes of HRIS training needs analysis (TNA) are accurate.					
4	Managers find HRIS detailed training plan relevant to their needs.					
5	HRIS evaluates the effectiveness of training programs.					
6	Employees find HRIS training programs relevant to their needs.					
7	HRIS selects right person to be trained at right time.					
8	HRIS eliminates skill gaps across the organization					
9	HRIS plays a vital role administrating training programs.					
10	HRIS assesses the budget of training and development programs					
11	HRIS makes better and faster decisions about successor rankings.					
12	HRIS identifies specific key positions and target specific employees as potential successors					
13	HRIS minimizes costs associated with succession planning or applicant tracking.					
14	HRIS manages internal information within the organization					
15	HRIS provides an opportunity to become a strategic partner with top management					
16	HRIS connects employee to required position and keep track of their movements.					
17	HRIS identifies a logical progression path and the steps required for advancements.					
18	Role of HRIS aligns with the organization's HR Strategy.					
19	Role of HRIS aligns with the organization's Information System strategy.					

**1. What major challenges your organization faced in the process of training and development?**

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**2. What are the solutions your organization used to overcome the challenges the organization faced in the process of training and development?**

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**Thank You!!**

## SEMI STRUCTURED INTERVIEW GUIDE LINE

### ORGANIZATIONAL INFORMATION

- Name Of The Organization:
  - Name Of Department/Unit
1. How many employees work in the organization?
  2. Does the organization have a separate HR department/group/unit?
  3. Have you outsourced any HR functions?
  4. Do you currently maintain a HR Information System (HRIS)?
  5. How is the current practice of HRIS in the process of HRM?
  6. What are the major challenges of the organization faced during implementing HRIS?
  7. Have you computerized any of the other functional area of the organization?
  8. Does the HRIS support the organizations HRM Strategy?
  9. Does HRIS work effectively?
  10. HR Management
    - a. Do you maintain an automated system for time and attendance recording?
    - b. Have you automated the payroll process?
    - c. Have you automated leave management system?
    - d. Is it with online facilities?
  11. Workforce Planning
    - a. Does the organization have a workforce plan?
    - b. Does HRIS help to create a workforce plan? If yes how?
    - c. Understand current workforce trends and plan future needs
    - d. Support all workforce cost-planning tasks
    - e. Empower HR executives to develop effective strategies
    - f. Measure standard workforce processes
  12. Recruitment and Selection
    - a. Is the recruitment process automated?
    - b. Do you use e-recruiting facilities? If not, why?
    - c. Does HRIS help to improve the efficiency and effectiveness of recruitment processes?
    - d. Perform comprehensive reporting and tracking of applicants and candidates
    - e. Does HRIS help to reduce recruiting costs?

13. Employee Retention

- a. What kinds of programs exist for employee retention? Are they sufficient?
- b. Does HRIS help to identify and develop an attractive benefit program that can retain employees? If yes, how?

14. Training and Development

- a. Does the company have a clear development or training plan?
- b. How do you evaluate the effectiveness of HRIS in development or training context?  
Does it help to select the right person to be trained?
- c. Does HRIS help to do Training Need Analysis (TNA)?

15. Performance Management

- a. What types of performance management system do you use? Please describe.
- b. What kind of a role does HRIS play there?
- c. Analyze employee skills and qualifications
- d. Evaluate the efficiency of your recruiting processes
- e. Monitor the progress of aligning employee goals with corporate goals

16. Employee Communication

- a. Do you create an environment of open communication between employees and management?
- b. Does HRIS improve efficiency, accuracy and provide up to date information on HR?
- c. Do you think HRIS plays a vital role in decision making within your organization?
- d. Does HRIS reengineer the entire HR function?
- e. Do you think that HRIS provides functionality to meet the organizational goals and objectives?