



International Journal of Engineering, Business and Enterprise Applications (IJEBA)

www.iasir.net

Impact of ATAD system on the simplification process of administration procedures in Ministry of Education, Sultanate of Oman

Younis Said Al-Hajri ¹, Dr. A. Mohamed Abbas ²

¹Post Graduate Student, Mazoon College, Muscat, Sultanate of Oman.

²Assistant Professor, Mazoon College, Muscat, Sultanate of Oman.

Abstract: This study examined the impact of ATAD system on the simplification process of administration procedures in Ministry of Education, Oman. The directorates and department employees are considered for study in the Ministry of Education. The SPSS package is used for finding the arithmetic mean, median, mode and the relationships between variables in the questionnaire. Subsequently, recommendation was made to develop the ATAD system in Ministry of Education in speeding up the transactions, follow its implementation and evaluation in line with the mission and goals of the Ministry, to improve the organizational structure of the information, operation systems and draw clear plans for it, providing a fast network with the help of local telecommunications companies and media coverage for all ATAD's programs by sending a video by mail to all the people affiliated with the Ministry of Education and providing a written user guide for ATAD that will be practical and updated instantaneously.

Keywords: ATAD, SPSS, Telecommunication, Ministry of Education.

I. INTRODUCTION

Information system is considered as important sources that help in making appropriate decisions. This in turn will be the solution of many problems facing the human at the same time have a significant impact on the speed of completion of the duties and improve the work.

Oman is a developing country that is looking for a prominent place among the countries of the developed world, prompting them to search and promote positive aspects through observable information revolution that is sweeping the world today. This in turn, makes them reflect on the promotion, pay attention to information that has become a very important factor in the renaissance and provide systems to strengthen its position among the countries of the world. In this regard, the Information Technology Authority urges all ministries in the Sultanate, including the Ministry of Education to create a database to help and contribute to the achievement and facilitate procedures and transactions services in the ministry. The ministry creates a portal to the Ministry of Education in the Sultanate of Oman, which contains lot of services for the student, guardian and staff in the ministry to accomplish their work. The ministry determines the needs of departments and directorates of the ministry for the design and creation of specialized programs for each department and the Directorate, which helps to accomplish and facilitate their work in their respective fields.

The Ministry of Education, represented by the Directorate-General for Information Technology has implemented the ATAD system, a software that provide many services to facilitate the employee work in ministry of Education, that will shift the old paper-based system to a modern electronic system. The ATAD system has been planned and designed well to suit the needs of the ministry and the simplification of procedures for users and accomplish the tasks of administrative business departments and directorates.

Technical support is a service provided by the ATAD system and this service has many tasks. In the old system, when a Computer needs to be fixed up, one should apply to the boss, who, in turn, conveys to the department manager. Then department director sends the request to the relevant department and the concerned person repairs the machine. This process takes a long time, from two days to a week. On the other hand, in the ATAD system, the employee can log in, choose the type of service and fills empty cells with data for service request. This information passes to the employee concerned through the manager to meet the requests for technical support process.

Various types of Technical Support include:

1. Request for a new device.
2. Remove a device.
3. Request to add a new piece.
4. Connecting a printer.
5. Installation of programs in the machine.
6. Delete programs in the machine.

With these details in mind, an attempt was made to measure the extent of user satisfaction for this program through the achievement of the expected application of the ATAD system goals and focus on the strengths and weaknesses in the ATAD system. This will guide those responsible for program improvement and address the weaknesses and strengths for development and promotion. This will help the Ministry to identify the strengths and weaknesses of the ATAD system that can help in saving money and effort.

II. THEORETICAL BACKGROUND

Search through previous studies on the subject, researcher found some studies, but it is not identical with the current study, for several reasons:

1. Either these studies were applied to sectors other than Educational or government and firms.
2. Some studied information systems from the fundamental side without the application of a specific reality.
3. There is one study of management information systems in the Ministry of Education in the Kingdom of Saudi Arabia where a program of modern software systems is applied and compared with the period of application of the previous study.

C. R. Coombs *et. al* [1], the ultimate level of success or failure of systems development projects depending on the academic literature. This paper presents the results of a survey of IM&T managers within Community Trusts to gain insights into the factors affecting the success of Community Information Systems.

Winkler *et. al* [2], the allocation of information technology (IT) decision rights between business and IT units at the application level, including the governance of applications delivered on-premise versus those delivered with a software-as-a-service (SaaS) model.

Benlian and Alexander [3], different viewpoints on IS service quality in organizations, little or no attention has been paid to the role of perceptual congruence or incongruence in the dyadic relationship between IS professionals and users in forming user satisfaction with the IS function.

Shirley Gregor [4], five different types of theory are distinguished: (i) theory for analysing and describing, (ii) theory for understanding, (iii) theory for predicting, (iv) theory for explaining and predicting, and (v) theory for design and action. Illustrations of relevant work in Information Systems are provided, as are relevant research methods, and the form of contributions to knowledge in each.

Ronnie Jiaa [5], IT service quality using survey data from both IT units and their clients. The IT service climate instrument, when incorporated into employee feedback initiatives, can provide guidance to IT executives about practices to improve service quality.

Shaan Daifallah Shammari [6], focused to know the reality of future knowledge for the information systems in each of the Ministry of Education and the Ministry of Education and culture in the Kingdom of Saudi Arabia and the National directorates of Education in Jordan with proposals for development.

III. METHODOLOGY

The research design used in this study is the survey research design. The population of the study includes the ATAD users numbering 112 who are administratively the employees of Ministry of Education. The sample size for the study was 30 respondents with majority of them in the age group of 30-40 years (73.3%). The data on qualification of the respondents conveys 15 of them are diploma holders, six respondents have a Bachelor's degree, eight respondents hold a Master's degree and one respondent holds Doctoral degree.

Researcher followed the following steps to design and build a study of the questionnaire tool.

Setting targets questionnaire:

The questionnaire addressed to users of hardware system and designed to :

1. Recognize the reality of hardware system in the simplification procedures at the Ministry of Education.
2. Access the ability of the ATAD system to accelerate communication between staff and management.
3. Proposals for the development of ATAD system in the Ministry of Education.
4. Detect differences between the averages of the study sample responses depending on the variables of the study.

Researcher adopted a questionnaire on the construction of the following:

1. With open questions a prospective study on a sample of the study group to stand up to the reality of the problem, the size and proposals.
2. Interview a group of specialists in this field to take advantage of their expertise.

The researcher, based on the problem of the study, its objectives, its questions in the theoretical framework and previous studies, and the former steps mentioned, drafted questionnaire in the initial form that was presented to the supervisor in order to express his opinion and his remarks. Based on the views and guidance from a group of specialists, the questionnaire was validated and drafted in the final form. Likert scale was used to measure the impact of ATAD system on the simplification process and SPSS (Statistical Package for the Social Sciences) to

find the arithmetic mean, median and mode and the relationships between variables in the questionnaire. Percentage analysis was used to interpret the data.

IV. DATA ANALYSIS AND INTERPRETATION

The following Table 1 displays the significance of using ATAD system by the employees of Ministry of Education based on various attributes as shown.

Table 1: Responses for the attributes of ATAD system

Attributes	Responses in %				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The importance of using ATAD system is recognized	3.3	10.0	0.0	46.7	40.0
The administration is aware of the importance of relying on the ATAD system to improve the performance in the ministry	0.0	10.0	10.0	40.0	40.0
Employees are aware of realize the benefits of the ATAD system program in raising the level of performance and increasing productivity	0.0	13.3	20.0	33.3	33.3
The administration recognizes that the use of the ATAD system reduces time and effort consumption	3.3	10.0	16.7	33.3	36.7
The use of the ATAD system reduces the use of paper	0.0	3.3	3.3	40.0	53.3
The use of the ATAD system helps in accomplishing work faster than before	6.7	10.0	0.0	43.3	40.0
Using the ATAD system gives the administration a comprehensive overview of what has been accomplished	0.0	10.0	16.7	40.0	33.3
The ATAD system accelerates communication between administrations and their employees	0.0	0.0	16.7	40.0	43.3
The high cost of installing the ATAD system is one of the obstacles in developing of the system	0.0	3.3	46.7	26.7	23.3
The Ministry provides comprehensive training in using ATAD's system for its staff	23.3	10.0	20.0	20.0	26.7
Staff are using ATAD system efficiently	3.3	23.3	20.0	30.0	23.3
The staff has adequate skills to use computers and take advantage of the ATAD system	0.0	6.7	16.7	56.7	20.0
The ATAD system improves work environment in terms of the sequence of procedures	0.0	3.3	20.0	53.3	23.3
Workers are reluctant to use ATAD system because of slow internet	10.0	3.3	13.3	33.3	40.0
Some employees do not trust the system and still engaged with paper work	3.3	16.7	20.0	30.0	30.0

Based on the responses from the sample, it is evident that majority of the employees agree to the fact they are aware of the importance of ATAD system, its role in increasing performance and productivity and improving the work environment, thus reducing time and effort and use of paper. However, due to slow internet during peak time and familiarization of employees to the paper work, some employees resort to telephone and old system for communication.

V. CONCLUSION AND RECOMMENDATION

To conclude, the research discussed ATAD system and in particular, the scope of the effect of the system on facilitating and accelerating the administrative processes in the Ministry of Education and the degree of users' satisfaction. The notable points are given below:

1. One of the main conclusions that the researcher draws from the study is that ATAD has a great importance in facilitating and simplifying the processes and improving the quality of work in the Ministry of Education and its affiliated directorates and departments.
2. ATAD system does work faster than before, thus huge loads of work are done in record time.
3. ATAD system improves the work environment for employees by making the communication between them quicker, as quick reply is made by the officials for the data sent.
4. ATAD system plays an important role in reducing the time frame for the reception and reply of applications. Its role is clear in reducing the use of paper which drains the Ministry's budget. Thus, ATAD is a practical system that does process fast and reduces time and effort.
5. The researcher found that the Internet which is used to operate ATAD is sometimes a big obstacle due to system slow down in peak time. Some employees declined from using the system and used the interphone instead. However, in regular time, it is very fast.
6. Some of the officials use the old-fashioned paper-based system with ATAD because they don't trust the system, they fear losing the data and they are accustomed to using the old-fashioned paper-based system.

7. The analysis done also showed important results such as improving the level of performance, enhancing and increasing office work productivity and reducing time, effort and the use of paper.

Through improving the local network through which ATAD works, one can find that the system works with high performance, thus doing transactions faster. Also, if more than one employee responsible of operating ATAD is available in each directorate, the work of the employees will not be harmed when an employee operating ATAD is absent.

In light of previous conclusions, the following recommendations can be made:

1. Stressing the importance of ATAD in speeding up the transactions in the Ministry of Education and emphasizing on information, its organization and its processing in the Ministry in order to improve the organizational structure of the information and operation systems and draw clear plans for it.
2. The importance of making a suitable strategy for the information systems in accordance with the General Strategy of the Ministry of Education to follow its implementation and evaluation in line with the mission and goals of the Ministry.
3. Increasing the number of employees using ATAD because if the employee operating ATAD is absent, the work of the other employees will not be hindered.
4. Educating the employees about the importance of information systems and its role in doing and facilitating transactions in the Ministry of Education.
5. Improving the ATAD's performance through providing a fast network with the help of local telecommunications companies.
6. Providing necessary media coverage for all ATAD's programmes by sending a video by mail to all the people affiliated with the Ministry of Education and providing a written user guide for ATAD that will be practical and updates instantaneously.

REFERENCES

- [1] C. R. Coombs, N. F. Doherty & J. Loan Clarke. (1999). "Factors Affecting the Level of Success of Community Information System", *Journal of Management in Medicine*. Vol. 13, No. 3, pp. 142 – 453.
- [2] Winkler, Till J and Brown, Carol V, (2013) "Horizontal Allocation of Decision Rights for On-Premise Applications and Software-as-a-Service", *Journal of Management Information Systems*, Vol 30 No. 3 pp. 13-48.
- [3] Benlian and Alexander (2013), "Effect Mechanisms of Perceptual Congruence between Information Systems Professionals and Users on Satisfaction with Service", *Journal of Management Information Systems*, Vol. 29 No. 4, pp. 63-96.
- [4] Shirley Gregor (2002), "A Theory of Theories in Information Systems ", *Information Systems Foundations: Building the Theoretical Base*.
- [5] Ronnie Jiaa, Blaize Horner Reichb (2013), "IT service climate, antecedents and IT service quality outcomes: Some initial evidence", *The Journal of Strategic Information Systems* Vol. 22, No. 1, pp 51–69.
- [6] Daifallah, Shaan , (2008) "the development of management information systems at the Departments of Education for Boys Kingdom of Saudi Arabia From the perspective of Education managers and their assistants, heads of departments".

ACKNOWLEDGMENT

Our sincere thanks to Dr. Juma Saleh Al-Ghailani, Managing Director, Dr. Jamal Dawood Salman, Dean, Dr. Nassir Ahmed Khan, Head-Quality Assurance Department of Mazoon College, Muscat for having provided the opportunity to carry out this article.

We deem it a great privilege to offer our sincere thanks to the Research and Development Center, Mazoon College, Muscat for their constant encouragement and support.