



Educational Portals and Employee Performance in the Sultanate of Oman

Mohamed Osman Shereif Mahdi Abaker^{1*}, Hanan Ali Al-Shehhi²

¹ Assistant Professor of Management, Department of Management, School of Business, American University of Ras Al Khaimah, P.O. Box 10021, Postal Code 10021, Ras Al Khaimah, United Arab Emirates

² Graduate Assistant, Ministry of Education, Directorate of Musandam, P.O. Box 332, Postal Code 811, Khasab, Sultanate of Oman

ABSTRACT

Objective – This study investigates the impact of the educational portal on employee performance in the Ministry of Education (MOE) in the Sultanate of Oman. It examines employee perceptions of the benefits of the educational portal used by the MOE. The educational portal provided by the MOE is the main gateway for various types of educational related online services to users. This research focuses on the factors of educational portal services, which facilitates work, and improve employee performance.

Methodology/Technique – The research adopts a quantitative methodology and collects data by means of questionnaires.

Findings – The findings suggest that the educational portal technology has a positive impact on employee performance. The results also reveal that the employee performance has increased since the introduction of educational portal services compared with employee performance based on the previous manual system.

Novelty – This calls for a systematic and periodic review of the educational portal services, to update the technology and accommodate for new requirements.

Type of Paper: Empirical.

Keywords: Educational Portal; Online Services; Portal Technology; Information Technology; Employee Performance; Sultanate of Oman.

JEL Classification: M10, M12, M19.

1. Introduction

The Sultanate of Oman has experienced both social and economic changes in setting new goals for the needs of Omani society.

* Paper Info: Revised: August 12, 2018

Accepted: December 12, 2018

* Corresponding author: Dr. Mohamed Osman Shereif Mahdi Abaker

E-mail: mohamed.mahdi@aurak.ac.ae

Affiliation: Department of Management, School of Business, American University of Ras Al Khaimah, P.O. Box 10021, Postal Code 10021, Ras Al Khaimah, United Arab Emirates

Further, technology has had a great impact on society and has contributed to the achievement of higher standards. As part of the global requirement, the Ministry of Education (MOE) implemented an educational portal to enhance the educational services provided in Oman (MOE, 2009). Educational portals are an emerging tool used to enhance learning and facilitate communication. Those portals provide dynamic opportunities that connect educational stakeholders, including students, teachers, administrators, policymakers, and parents, to valuable educational resources (Robert et al., 2007). Beyond these institutional benefits, educational portals offer benefits to students, teachers, parents, and other stakeholders (MOE, 2009).

In Oman, the MOE has more than 1,093 schools, 56,986 teachers and administrators, and 564,165 students, distributed across 11 educational zones (MOE, Sultanate of Oman, 2018). These zones are dispersed all over the country, with a land area of approximately 309,500 and a population over four million. A great deal of information is communicated daily across these areas, and there is often difficulty in communicating and exchanging information between staff, teachers, students, and parents. In Oman, the educational portal is the main gateway to provide electronic services to all users within the MOE. It is offered as a multi-function website including public and private sections, data retrieval sections, submissions tools, personalized content, and links to education related systems and services (MOE, 2009).

Previous studies have focused on the importance of e-services (Mahdi, 2012), online education, and the benefits of technology in educational services. However, there are no significant studies to date that examine the impact of the educational portal on employee performance within the MOE. Nonetheless, those studies have paved the way to conduct further research and examine other critical factors impacting user performance such as quality, cost, and time (Kositanurit, Ngwenyama & Bryson 2006; Bruquea & Moyano 2007).

Research Objective

This research aims to examine the impact of the educational portal on employee performance within the MOE in the Sultanate of Oman. The study examines the factors that facilitate employee work, and how employee performance can be improved.

Research Questions

Q1: How do education portals impact employee performance in the MOE of Oman?

Q2: What can be added to the portal to improve employee performance?

Q3: What is the value of improving employee performance in the MOE of Oman?

The paper draws attention to the benefits of the use of portal technology services, and the features that should be considered to improve employee performance in a developing country such as Oman. The study also contributes to the limited literature on portal technology, by providing empirical evidence and valuable insight to academics, educational managers, and technology practitioners. The article is structured as follows: an introduction and an outline of the research objectives, a brief examination of the literature on portal technology, the presentation of the research methodology, and a discussion of the findings, and, finally, the a conclusion to the paper.

2. Literature Review

The literature shows that information technology has an influential role in all fields of development such as educational industries, banking, and communications (Timothy & McDowell, 1984). The educational portal technology is a result of advancement in technical knowledge and online services, which contributed to

the development of educational employees, in addition to the significant role it played in the progress of nations. The literature suggests that educational portal technology improves employees productivity, as well as improves time efficiencies and reduces costs (Urbach et al., 2010). The educational portal has a positive effect on employee workloads, and ensures better control over errors that typically occur in manual systems (Robert et al., 2007). In addition, the system is easy to use and allows users to reach relevant information rapidly, thus enabling employees to deliver better quality services (Owston et al., 2011). In the last two decades, the use of portal technology in the departments of the Ministry of Education in the Sultanate of Oman has rapidly increased (MOE, 2018). The research indicates that once an educational portal has been integrated and used properly, student performance improves considerably (Wideman et al., 2007).

According to Hawryszkiewicz (2002), educational portals can be considered as gateways to educational information and services targeting certain communities, providing them with a virtual meeting place to communicate and interact in order to learn from each other. Further, Ahmadirozai (2011) points out that investment in technology results in better facilities to customers and time saving for both customers and employees.

Aliyu and Tasmin (2012) also state that advancements in technology, in global and local competition, has changed the knowledge and attitudes of customers, thus paving the way for the restructure of the industry. Some research states that IT has become a critical resource. Further, some research points out that advancements in technology provide more opportunities to organizations (Aliyu and Tasmin, 2012). Rajakumaran (2014) concludes that employee performance increases following the introduction of information technology, in comparison to their performance when using a manual system. The advent of information and communication technologies has inevitably redefined the education model for all learners, teachers, parents, and policymakers alike.

It is clear that learning communities no longer require a physical location or environment to review and share learning resources and information repositories. The technical acumen of the intended community members must be considered along with their access to technology. Hendricks et al. (2007) examine the impact of technology on an organization and the individual - considering strategies, structure, productivity, work design and individual tasks. The study reveals that the attitude of the individuals towards adopting innovative technology is determined by their perception and beliefs, and the qualities/advantages that such technology may bring about. Further, the acceptance of technology is decided by its ease-of-use, its utility, its compatibility, the image it creates for the user, and the possibility of experimentation. Moreover, investing in information technology results in a reduction in payroll expenses, however, there is no impact on the overall expenses of an organization. This study suggests that investment in information technology increases the productivity of employees, as well as market share, revenue, and profitability (Hendricks et al., 2007).

On the other hand, the system itself may affect user productivity and perception. Previous studies have established strong links between the system, task satisfaction, and performance. The relationship between information systems and user performance is an ongoing concern in technology research. Kim and Lee (2009) indicate that both researchers and practitioners have a clear interest in enhancing their knowledge of technology and user performance. Similarly, an organization's investment in technology increases motivation and improves employee morale, and decreases turnover and fosters innovation. In addition, technology enables firms to be more adaptive to implementing organizational change (Bruquea and Moyano 2007; Kim and Lee, 2009). Based on the above literature, it can be assumed that the introduction of the educational portal has a positive impact on employee performance in the MOE in the Sultanate of Oman.

AI Musawi and Akinyemi (2002) states that the Ministry of Education should work in partnership with universities and technology companies to develop new teaching strategies and learning methodologies that use information technology in education. The MOE should also use these systems in teacher training centers in the Sultanate of Oman (MOE, 2009).

The Omani interest to compare and assess the standard system with the traditional one is a genuine concern that must be considered before any e-learning program can be developed on a larger scale and introduced into higher education institutions (AI Musawi & Akinyemi, 2002; Bruquea & Moyano, 2007).

In this study, there are two key concepts: the educational portal and employee performance. Some variables of the key concepts have been used in the study, and the operationalization model has been presented below.

Figure 1. Operationalization Model

Concept	Variable	Indicator	Measurement
Technology	Educational Portal Services	Parent Support Services Teacher Support Services Employee Support Services User Service Systems	Questionnaire
Employee Performance	Quality of Work Accuracy Time Management Cost Management Communication Improvement	Required Level Manual Errors Speed Cost Saving Information Sharing Improved Services	

3. Research Methodology

This study examines employee perceptions of the benefits of educational portals used by the MOE of Oman. This section describes the research methodology used for data collection and analysis. The study uses a quantitative methodology to identify employee perceptions of the impact of the educational portal on their performance. A questionnaire survey was distributed to employees in the MOE seeking their opinion on specific aspects of the educational portal. The survey was conducted in the Omani MOE Head Office and involved 103 employees. The selected sample consists of 87 employees, 12 departments heads, and four managers with a minimum of two years' of professional working experience with the Oman Ministry of Education.

A structured questionnaire was sent to the selected employees in the MOE and was completed by all respondents. The questions were designed to give employees an opportunity to rate and provide their opinion on the impact of the educational portal on their performance. The questions were based on the general interpretations of the best features and services provided by the portal to different stakeholders (see Table 1 below). The survey was divided into five sections. The first section contained a topic related to the general usefulness of the portal to be answered before the subsequent survey questions.

The analysis of the study was based on a quantitative analysis method. Percentages and means were used to analyze the data of the study. The following procedures were used to analyze the data: first, the survey was analyzed to obtain descriptive statistics/data and second, the quantitative data was analyzed to support the research findings (Mahdi, 2008).

4. Research Findings and Discussion

This study was designed to investigate the impact of the educational portal on employee performance, and the extent to which employees believe that the portal improves their performance.

Survey Results

In the following section, the results of the survey are presented. The survey results for each section are illustrated in Table 1 and 2.

Table 1: Usefulness of Educational Portal Services

Description	Most Useful		Least Useful	
	N	%	N	%
Time and cost reduction benefit	94	91.3	9	8.7
Instant access to information	91	88.3	12	11.7
Easy record maintenance (Storage of documents, files etc.)	91	88.3	12	11.7
Automated processes	100	97.1	3	2.9
Simplified routine work for staff	94	91.3	9	8.7
Easy Sharing of knowledge	91	88.3	12	11.7

Table 2: Web Portal Benefits to Employee Performance

Benefits of educational portal to employees	Strongly Disagree		Disagree		Not Sure		Agree		Strongly Agree		NIA	
	N	%	N	%	N	%	N	%	N	%	N	%
Reduce paper work	-		10	9.7	10	9.7	33	32	50	48.5	-	
Easy interaction with users & depts.	-		6	5.8	5	4.9	54	52.4	38	36.9	-	
Easy access to information	-		-		9	8.7	51	49.5	43	41.7	-	
Centralized data system	-		-		3	2.9	63	61.2	37	35.9	-	
Complaint and feedback system	2	1.9	8	7.8	12	11.6	52	50.5	29	28.2	-	
Security & portal system support	2	1.9	8	7.8	16	15.5	51	49.5	26	25.2	-	
Benefits of parent support services												
Student transfer services	-		3	2.9	20	19.4	24	23.3	50	48.5	6	5.8
Student registration services	-		3	2.9	8	7.8	27	26.2	59	57.3	6	5.8
Parents enquiry services	-		9	8.7	8	7.8	34	33	46	44.7	6	5.8
Edit student data services	-		6	5.8	11	10.7	32	31.1	48	46.6	6	5.8
Mobile services	-		3	2.9	13	12.6	46	44.7	38	36.9	3	2.9
Benefits of inter depts./divisions support services												
Facilitate work-based collaborations	-		3	2.9	14	13.6	46	44.7	40	38.8	-	
Facilitate resource interaction	-		3	2.9	11	10.7	49	47.6	40	38.8	-	
e-correspondence	-		-		3	2.9	34	33	56	54.4	10	9.7
Mail management system	-		3	2.9	9	8.7	29	28.2	62	60.2	-	
Benefits of employee support services												
Vacation planning	-		-		9	8.7	34	33	28	27.2	32	31.1
Supervision	-		-		15	14.6	41	39.8	45	43.7	2	
Training	-		5	4.9	11	10.7	35	34	50	48.5	2	
e - Request forms	-		3	2.9	8	7.8	36	34.9	56	54.4	-	
Attendance	-		3	2.9	14	13.6	42	40.8	44	42.7	-	
Authorization for related services	-		3	2.9	14	13.6	42	40.8	44	42.7	-	
e- correspondence	-		-		14	13.6	30	29.1	59	57.3	-	

Table 1 represents employee opinions on the most and least useful features of the portal. The respondents state that educational portal features such as automated process (97.1%), time and cost reduction benefit (91.3%), and simplified routine for staff (91.3%) were the most useful features of the educational portal. In addition, 88.3% of employees also rated instant access to information, easy record maintenance, and easy sharing of knowledge as useful features of the educational portal.

With respect to the benefits of the web portal for employee performance, the respondents agree that the centralized data system (97.1%), easy access to information (91.1%), and easy interaction with other users and departments (89.3%) were beneficial to employee performance. The reduction of paperwork (80.5%), complaint and feedback system (78.7%), and portal security and system support (74.5%) were also reported to improve employee performance. Nonetheless, some respondents (25.5%) expressed concerns over the portal security and system support. Overall, the respondents believed that the educational portal has improved their performance (Table 2).

With reference to the respondents' perceptions on the educational portal features related to parent support services, the majority of employees (83.5%) agree that student registration and mobile services (81.6%) were supportive to parents. The parent enquiry, editing student data, and students transfer services were also useful to parents. However, few employees (12 – 19%) stated that they are not sure if the portal services such as student transfer and mobile services had improved their performance.

With respect to the benefits of inter departments/divisions support services, the vast majority of employees (96.4%) agree that the portal facilitates inter-departments interaction. Student achievement follow up services also had a positive impact on employee performance. Moreover, 88.4% of employees agree that the mail management system, e-correspondence (87.4%), and work-based collaboration (83.5%) were also useful features of the educational portal. Only 60.2% of employees agree that they benefited from the portal when planning vacation. Overall, the employees believe that the portal departmental and divisions support services have improved their performance.

From the survey, the related benefits to employee support services reveal that a vast majority of employees (89.3%) agree that the e-request forms and supervision (84.4%) were very helpful in improving their services. In addition, attendance (83.5%), authorization for related services (83.5%), and training (82.5%) were also supportive of their performance. Nonetheless, 10 to 14% of employees were not sure whether the educational portal support services have improved their performance.

The literature review indicates that the educational portal is described by various theoretical concepts and reported in some previous empirical studies. In this context, the objective of this study is to investigate the impact of the educational portal on employee performance in the Ministry of Education (MOE) of Oman. The quantitative data collected from the Sultanate of Oman generated meaningful findings and confirmed that the educational portal technology improves the productivity of employees, saves time and reduces costs (Tables 1 and 2). The scores of the results indicate that the educational portal features, such as automated processes, time and cost reduction benefits, and simplified routines, were the most useful features of the portal (Robert, et al., 2007; Wideman, et al., 2007; Urbach, et al., 2010). In addition, instant access to information, easy record maintenance, and easy sharing of knowledge were also identified as useful features of the educational portal (Hawryszkiewicz, 2002; Ahmadirozai, 2011).

The literature also indicates that investment in technology results in better services to the customer and saves time for both customers and employees (Ahmadirozai, 2011; Aliyu and Tasmin, 2012). The findings reveal that the centralized data system, easy access to information, and easy interaction with other users and departments were beneficial to employee performance. The reduction of paperwork, improved complaint and feedback systems, and portal security and system support were also reported to improve employee performance. As such, the Omani Ministry of Education may benefit from the educational portal technology. Therefore, MOE should consider establishing a partnership with technology companies and universities to pilot, evaluate, and develop new teaching strategies and learning methodologies that employ information technologies in education (AI Musawi and Akinyemi, 2002; Bruquea and Moyano, 2007; Kim and Lee, 2009). The findings also indicate that parent enquiries and editing student data services were also useful to parents.

Nonetheless, the results do reveal some concerns about portal technology services such as student transfer, and mobile services. As such, it is important to review the effectiveness of the portal technology services for

both employees and parents, with a view to updating and meeting new service requirements, such as vacation planning, student transfer, mobile services, and security and portal system support.

5. Conclusion

The findings of this study reveal that the educational portal improves employee performance. The study highlights the benefits of portal technology services, and the features that are considered to improve employee performance. From the findings, it is evident that employee perceptions of the effectiveness of portal technology varies according to the different types of services and features available in the educational portal. The findings show that employees have a very positive attitude towards the use of portal technology. The educational portal features, such as automated processes, time and cost reduction benefits, simplified routines for staff, centralized data systems, easy access to information, and easy interaction with other users and departments, were the most useful in enhancing employee performance. Nonetheless, the findings demonstrate that there is a need to review the effectiveness of the portal technology services for both employees and parents, with a view to updating and meeting new services requirements, such as vacation planning, security and portal system support, student transfer, and mobile services.

This study is important for the Ministry of Education in the Sultanate of Oman to understand the benefits of providing advanced services using technology to improve the education system. Technological developments should be closely monitored by the MOE for continuous improvement. All stakeholders should also be given the opportunity to provide opinions during the planning and design of technology services. Further, the evaluation of current educational portal services should consider users and employee perceptions. Updated technology services, such as mobile applications need, must also be provided. The periodic evaluation of technology services and the use of effective methods and proper instruments that comply with international standards and new requirements, should be followed.

The limitations encountered in this study include the difficulty to encourage employees to provide their opinions freely, due to the time constraints and disruption by frequent internet failures. In addition, employees were slow in responding to the survey. To overcome these difficulties, the researchers adopted a follow-up method which involved calling the respondents several times and encouraging them to complete the questionnaire.

This study did not consider the perception of users and other stakeholders; this may be an area of further examination. In order to reveal more about user perceptions of educational portal services, further research is needed. Future research and development programs should consider factors such as system improvements and the diverse requirements of various users and stakeholders including students, teachers, parents, employees, and researchers.

References

- Ahmadirezaei, H. (2011). The effect of information technology in Saderat banking system. *Procedia-Social and Behavioral Sciences*, 30, 23-26.
- Al Musawi, A., & Akinyemi, A. (2002). Issues and Prospects of E-Learning in Oman. In P. Barker and S. Rebelsky (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypertext and Telecommunications 2002*, pp.17-18, Retrieved May 10, 2018, <http://www.editlib.org/9281/proceeding/p/9281/>.
- Aliyu, A.A., & Tasmin, R.B. (2012). The Impact of Information and Communication Technology on Bank's Performance and Customer Service Delivery in the Banking Industry. *International Journal of Latest Trends in Finance and Economic Sciences*, 61-67.
- Barker & Rebelsky, S. (2002). *Proceedings of World Conference on Educational Multimedia. Hypermedia and Telecommunications*, 2, 17-18.
- Bruque, S., & Moyano, J. (2007). Organisational determinants of information technology adoption and implementation in SMEs: The case of family and cooperative firms. *Technovation*, 27(5), 241-253.

- Timothy, H., & McDowell, J. (1984). The Determinants of Technology Adoption: The case of the Banking firm. *RAND Journal of Economics*, 15(3), 328-335.
- Hawryszkiewicz, I. T. (2002). Customizable knowledge portals for teaching. In *Informing Science and IT Education Conference* (pp. 705-713).
- Hendricks, K. B., Singhal, V. R., & Stratman, J. K. (2007). The impact of enterprise systems on corporate performance: A study of ERP, SCM, and CRM system implementations. *Journal of operations management*, 25(1), 65-82.
- Lee, S., & Kim, B. G. (2009). Factors affecting the usage of intranet: A confirmatory study. *Computers in Human Behavior*, 25(1), 191-201.
- Kositanurit, B., Ngwenyama, O., & Osei-Bryson, K. M. (2006). An exploration of factors that impact individual performance in an ERP environment: an analysis using multiple analytical techniques. *European Journal of Information Systems*, 15(6), 556-568.
- Mahdi, M. O. S. (2008). The value of multi-strategy research methodology in conducting fieldwork study into information technology implementation in Sudanese banks.
- Mahdi, M. O. S. (2012). Usage Differences in Electronic Banking Services Between Saudis and Non-Saudis in Saudi Commercial Banks. *China-USA Business Review*, 11(1).
- MOE (2009). JCT and Education Plan, MOE Technical Report, MOE: Muscat.
- MOE (2009). The educational portal. Retrieved April 10, 2017, from: <http://www.moe.gov.om/portal/sitebuilder/sites/E PS/English/MOE/portal.aspx>.
- MOE (2018). The educational portal. Retrieved May 10, 2018, <http://home.moe.gov.om/english/module.php?modul=pages>
- Owston, R., Lupshenyuk, D., & Wideman, H. (2011). Lecture capture in large undergraduate classes: Student perceptions and academic performance. *The Internet and Higher Education*, 14(4), 262-268.
- Rajakumaran, M. T. (2014). Impact of Information Technology on employees' Performance in Education Department, Jaffna Zone. *JRMBSS*, 2(1), 17-20.
- Robert G.B., Watson K., & Oliver J.E. (2007). Technological innovation and organisational culture: an exploratory comparison of larger and smaller firms. *Journal of Organizational Change Management*, 2(3), 65-74.
- Urbach, N., Smolnik, S., & Riempp, G. (2010). An empirical investigation of employee portal success. *The Journal of Strategic Information Systems*, 19(3), 184-206.
- Wideman, H. H., Owston, R. D., Brown, C., Kushniruk, A., Ho, F., & Pitts, K. C. (2007). Unpacking the potential of educational gaming: A new tool for gaming research. *Simulation & gaming*, 38(1), 10-30.