An Investigation on Measuring Accuracy of Explicit Knowledge Sources in Universities

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Abstract
At present, e-libraries contain huge volumes of articles that may be irrelevant or inaccurate to academics' research areas. The academics may spend extensive time and efforts to retrieve knowledge contents from these articles. Thus, universities need to manage their articles' libraries effectively to deliver the most suitable explicit contents based on academics' research areas. Consequently, in this paper, we identify potential factors that could contribute to candidate relevant and accurate articles that meet employees need. These factors work on measuring the accuracy of articles to identify the most relevant articles from the huge resources of online articles. Therefore, the search time and efforts could be reduced through classifying articles based on the contents' knowledge using practical measurement factors. To address the objectives of this research, quantitative and qualitative studies are made to collect data using questionnaire survey and interview of experts in knowledge management. The results of the data analysis are used to identify the relevant factors and to compute the accuracy of articles based on these factors.
Keywords: knowledge management, explicit knowledge, knowledge measurement.

1. Introduction

Articles are the major source of references for universities' academic staff to acquire new knowledge and eventually improve their teaching and research capabilities. To support this need, universities attempt to secure various e-libraries and publication databases. However, new problem arises when these libraries include thousands of articles that contain different levels of knowledge that could be high, medium, or low (McInerney, 2002). In other words, these libraries contain huge volumes of articles that may be irrelevant or inaccurate to academics' research areas. The staff may spend extensive time and efforts to retrieve knowledge contents from these articles. Thus, universities need to effectively manage their articles' libraries to deliver the most suitable explicit knowledge contents for their staff based on their work activities (Al-oqaily et al., 2014).

To do so, in this paper, we attempt to resolve the above mentioned problem by identifying potential factors that contribute to the identification of relevant and accurate candidate articles. These factors measure the accuracy of articles to identify the most relevant articles from the huge resources of online articles. Therefore, search time and efforts could be reduced by classifying articles based on their contents'. In this paper, we define accuracy as the ability of an article to provide relevant and useful knowledge for a researcher to significantly advance his/her research. Consequently, measuring the accuracy of an article is an important issue in teaching and research.

There are three main objectives of this study; (i) to investigate the importance of explicit knowledge (articles) in universities, (ii) to analyze the challenges that face universities to evaluate the accuracy of the articles, and (iii) to explore the methods that could be used to measure the accuracy level of articles.

To address the first two objectives of this research, quantitative data using questionnaire are collected from 59 academic staff in Mu'tah University in Jordan as a case study of a university environment. To address the third objective, qualitative data using interview are collected from experts in knowledge management.

The outcome of this paper shows that there are limitations in measuring the accuracy of articles. The significance of this outcome is the need to simplify academic staff processes of knowledge acquisition and retrieval in supporting their research and teaching activities via classifying articles accuracy levels to High, Medium, and Low.

The next section dwells upon the related work of the knowledge measurement domain. Section 3 presents the research methods and Section 4 presents the data collection processes. In Section 5, we discuss the data analysis of the questionnaire and interview. Section 6 discusses the data analysis findings and Section 7 summarizes the research processes and outcomes.

2. Related Work

Alavi and Leidner (2001) define knowledge as the necessary information that is needed to complete organizations tasks of daily activities. Debowski (2006) classifies knowledge as two main types, tacit and explicit knowledge. Tacit knowledge is knowledge that is stored in a human brain where the human formulates

his/her own knowledge depends on his/her skills and experiences and gains explicit knowledge. The explicit knowledge is the written knowledge either in electronic or manual form. It is formulated based on people and real life experiments and considered as the main important source to develop tacit knowledge.

In general, knowledge is important to support staffs' activities and eventually deliver useful outcomes (Bartes, 2009; Hamel & Green, 2007). Thus, organizations focus on developing their staffs' knowledge for competitive advantages over other organizations. Knowledge development is achieved via sharing explicit knowledge among staff (Al-Oqaily et al., 2015). But some of this explicit knowledge is not guaranteed to be useful or valuable.

The large number of explicit knowledge resources maximizes the difficulty of extracting and sharing the appropriate knowledge that satisfies staffs' needs in the context of their working environment. Thus, managing explicit knowledge is required for better knowledge acquisition. Knowledge measurement is one of the most important success factors of knowledge management implementations (Al-Oqaily, 2015; Mathi, 2004). AACSB (2012) argues that the knowledge sources' properties play the main role in knowledge measurement.

Factors that are considered to determine the knowledge resources' properties are as follows (Huang et al. 1999; AACSB 2012):

1. Knowledge essentiality: the knowledge needs to be related to the organizations' context of activities, contain reliable information in order to ensure the efficiency of knowledge implementations.
2. Context of knowledge: the knowledge is up-to-date to meet the current working tasks, complete and related contents, and linked with proposed tasks.
3. Knowledge performance: the contents need to be clear with simple format i.e. writing styles. some knowledge contents may written in ambiguous styles which increase the difficulty of understand the meaning of written knowledge. For example, the sentence of "The SPSS is useful tool to provide many analysis based on quantitative data such as (1) descriptive analysis and (2) correlations analysis" is more clear than the sentence of "I analyze with SPSS efficient things and SPSS good tool and the correlation need to be analyzed "

The knowledge content's accuracy can be measured via several methods as follows (Al-Oqaily, 2015; Robert, 2013; Wu, 2013; Redman, 2005; Huang et al., 1999):

- Intuitive: the explicit knowledge contents are evaluated by the staff themselves through several factors such as evaluation ranking of the explicit knowledge, e.g. 1-10 rank. Staffs evaluate the knowledge based on the benefits that are gained from the contents in their working tasks.
- Systematic: this method is applied by knowledge administrators in order to ensure that explicit contents are compatible with the strategic activities of organizations. Thus, explicit knowledge is collected according to organizations visions of work aims and outcomes.
- Empirical: this method evaluates the knowledge accuracy based on the effects of the shared knowledge on staffs' skills and working behaviors. The most acceptable approach of this method is supervisors' observations. Thus, a supervisor observes staffs' activities before and after knowledge is shared to evaluate the effects of knowledge implementations.

According to (Al-oqaily, 2015), the explicit knowledge could be evaluated using two measurement variables; (i) managers' ranking: the explicit knowledge (articles) levels could be evaluated by knowledge managers based on the matching between articles contents and businesses strategies, and (ii) employees' ranking: employees' evaluation of the gained value from explicit knowledge could be useful to measure the usefulness of explicit knowledge content. On the other hand, Roberta (2006) argues that the explicit knowledge could be evaluated through the compatibility between the explicit contents and organizations work strategies.

McElroy (2003) mentions that explicit knowledge could be evaluated using three main approaches; (i) a self-method, which allows employees to evaluate the gained value of the retrieved knowledge, (ii) a systematic process, such as measuring the most accessed explicit knowledge by staff, and (iii) an empirical method through observing staff working performance after applying the explicit knowledge.

3. Research Methods

We collect quantitative and qualitative data from Mu'tah University as a case study of a university's working environment. Mu'tah University is located in Karak Governorate in Jordan; it was founded on 22 March 1981 by Royal Decree, to be a national institution for military and civilian higher education. Nowadays, Mu'tah university campus includes 12 academic colleges in various fields such as medical, science, educational and financial.

The quantitative and qualitative data of this research are collected to ensure the validity of the research outcome. The questionnaire approach is used to collect quantitative data from academic staff to analyze challenges facing the accuracy measurement of explicit knowledge. The qualitative data approach of this research uses interview based on open-closed and open-ended questions to collect data from expert academics about the expected features and solutions of accuracy measurement of explicit knowledge.

The questionnaire is distributed to academics of different qualification levels, i.e. PhDs and Masters and different job experience levels. Sixty four responses are collected from various colleges. There are 59 responses considered as valid for the purpose of this research; the number of rejected responses is five due to incomplete answers. Therefore, the valid responses represent 92% of all collected responses. According to Glenn (2013), the collected sample is enough to represent the academics community.

The interview is conducted by collecting data from expert academics about the expected features and solutions of measuring the accuracy of explicit knowledge. Table 1 shows the profiles of expert panel.

Table 1: General profiles of experts panel

Name	Current Position	Years of Experience
Dr. Bassam A. Y. Alqaralleh	Dean for the Faculty of Information Technology in Al-Hussein Bin Talal University in Jordan.	22 Years
Dr. Ahmad B. A. Hassanat	Assistant Professor in IT Dept., Mu'tah University, Jordan.	19 years
Dr. Mouhammd Al-kasassbeh	Head of Information Technology Dept., Mu'tah, University, Jordan.	16 years
Moha'med O. Al-Jaafreh	Head of Software Engineering, Al-Hussein Bin Talal University.	15 years

The interview content has three main parts; (i) Background of knowledge management to ensure the compatibility between research directions and experts' visions, (ii) Importance of explicit knowledge, such as articles, in the working environment, and (iii) Measurement of explicit knowledge to analyze the variables that could be used to measure the accuracy of explicit knowledge sources.

4. Data Analysis

This section analyzes the questionnaire and interview data which addresses the main objectives of this study.

4.1 Questionnaire Findings

The questionnaire consists of five main parts which are; (1) demographic data, (2) culture, (3) explicit knowledge acquisition, (4) explicit knowledge conversion, and (5) knowledge measurement of accuracy. The following sections provide the data analysis of the questionnaire parts.

4.1.1 Questionnaire Reliability

The questionnaire reliability is defined as the stable interrelation between items responses (Waters, 2002). For example, the random answers of items are considered as unstable responses. The Cronbach Alpha is a statistical indicator of a reliability measure of the questionnaire responses. The acceptable alpha coefficient should be more than 0.7 (Waters, 2002). Table 2 shows that the alpha coefficient of our questionnaire survey responses is 0.84 based on 59 responses and 25 scaled items of the questionnaire. Thus, the questionnaire results are reliable.

Table 2: Coefficient Alpha of Questionnaire

Questionnaire Items	Responses Number	Coefficient alpha
25	59	0.84

4.1.2 Demographical Data

The male respondents' number is 45 and the female respondents' number is 14. Thus, the questionnaire responses reflect the opinions of different gender types. Figure 1 illustrates the percentage of respondents based on gender classification. The male respondents represent 76% of the respondents' total number while the female respondents represent 24% of all respondents.
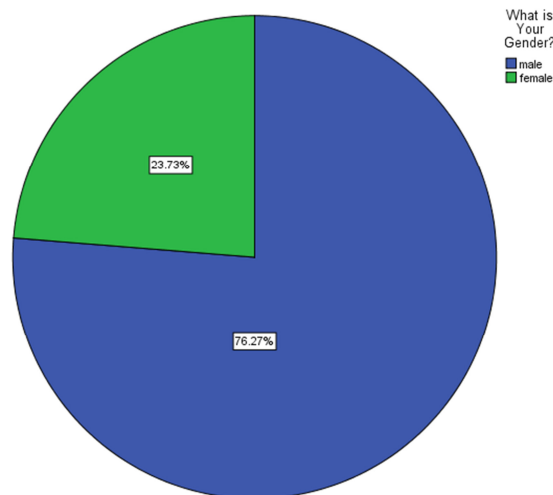
Figure 1: Gender percentages

The number of respondents whose ages are less than 25 years is nine respondents. The number of respondents whose ages are between 25-35 years is 36 respondents. The number of respondents whose ages are between 36-46 years is 13 respondents. The number of respondents whose ages are more than 46 years is 1 respondent. Therefore, the responses of the questionnaire reflect the opinions of the current and future working environment, i.e. young employees. Figure 2 illustrates the percentages of respondents' ages.
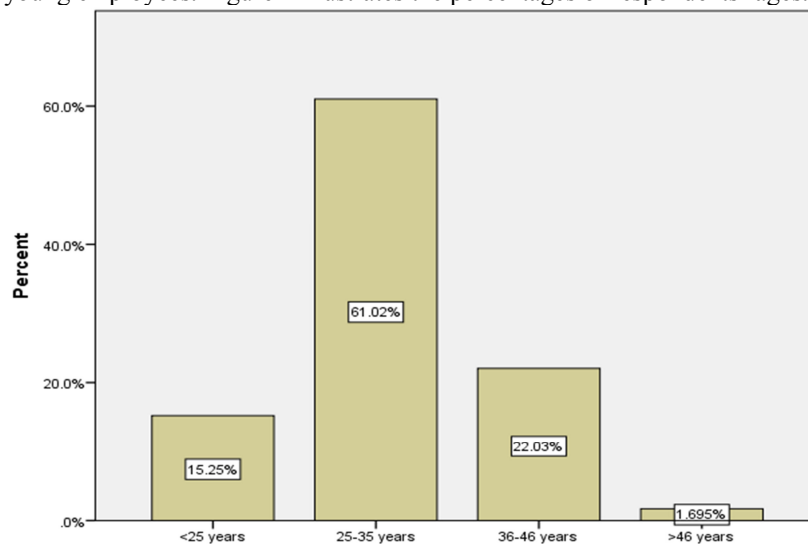

Figure 2: The percentages of respondents' ages

The number of respondents who have experience of less than 2 years is nine. On the other hand, the number of respondents who have experience of between 2-4 years is 35. Meanwhile the number of respondents who have experience of between 5-7 years is 12. Additionally, the number of respondents who have experience of more than 8 years is 3. Thus, most of respondents have enough experiences to provide responses to support this research. Figure 3 illustrates the percentages of respondents' experience of years.
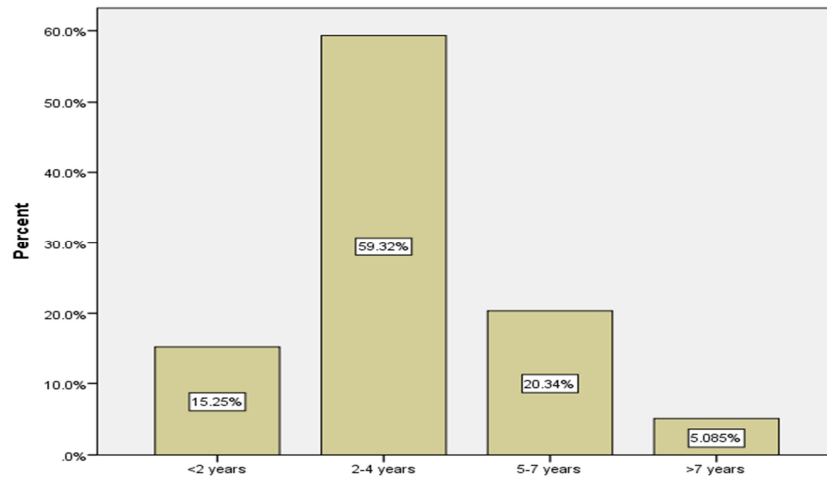
Figure 3: Experience years' percentage

The daily use of search engines is considered as an important indicator of knowledge searching by employees to satisfy their work needs. Figure 4 show that most respondents use the search engines 2-7 hours daily. Thus, the explicit knowledge sources is the main source to feed employees needs of knowledge.
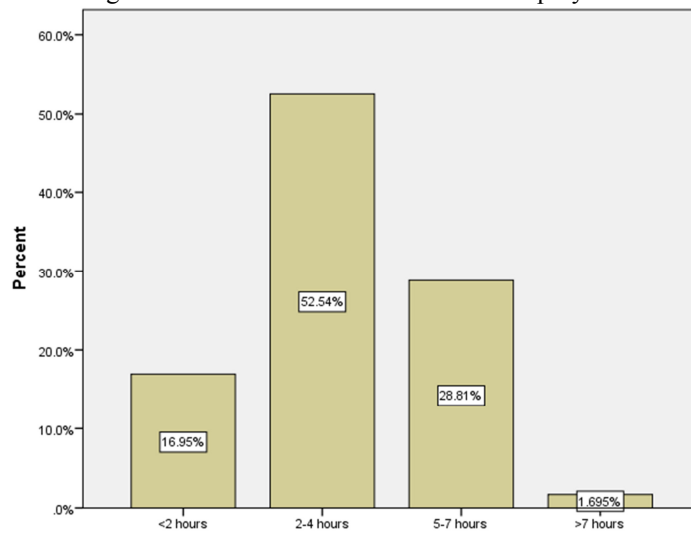

Figure 4: The rate of daily Use of Search Engines

From Figure 5, most of respondents have PhD and Master qualifications. The PhD respondents represent 46% of all respondents (27 respondents). The Master respondents represent 46% of all respondents (27 respondents) and the Bachelor respondents represent 8% of all respondents (five respondents).
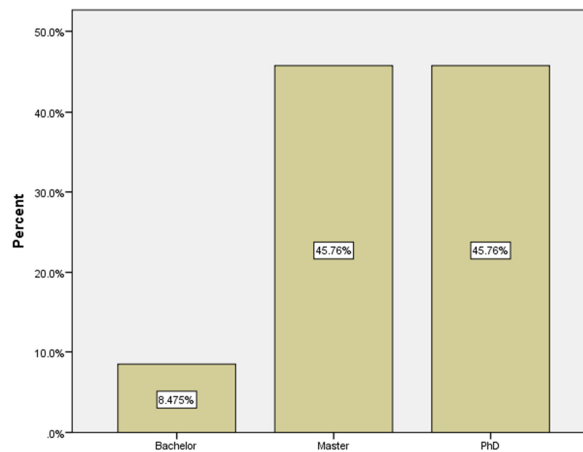

Figure 5: Qualification levels percentages

4.1.3 Culture

This quantitative data is collected according to 5-Likert scale; 1 for Strongly Agree (SA), 2 for Agree (A), 3 for Neutral (N), 4 for Disagree (D), and 5 for Strongly Disagree (SD). The mean of participants' responses are calculated based on the responses frequencies to analyze the directions of the participants' opinions of each item. This factor measures the ability of academics to adopt the knowledge management implementations in their working environments. Table 3 shows the frequencies and means of the items of staffs' culture; the responses means are agreeable with all items. The overall mean of this factor is 1.76. Thus, the respondents have the ability to adopt new implementations of knowledge management in their working environments in order to improve the performance of their work outcomes.

Table 3: Descriptive Analysis of Employees' Culture

No.	Item	SA	A	N	D	SD	Mean
1	The design of Knowledge is seen as a strength.	28	23	8	0	0	1.66
2	Knowledge sharing is seen as a strength and knowledge hoarding as a weakness.	28	24	5	1	1	1.69
3	Change in management of knowledge systematic processes is accepted as part of working life.	24	29	3	3	0	1.74
4	Good knowledge management behavior like sharing, reusing knowledge is actively promoted on a day-to-day basis.	20	31	4	2	2	1.89
5	People at all levels do recognize knowledge as a key resource in their daily works.	23	23	9	2	2	1.93
6	Recording and sharing knowledge is a routine like any other daily habits for the employees.	21	27	9	1	1	1.88
7	People in the organization are aware of the need to proactively manage knowledge assets.	24	26	7	1	1	1.79
8	There is a knowledge base used to share knowledge in an informal manner (non-routine, personal and unstructured way).	30	22	7	0	0	1.61
9	Poor knowledge management behavior is actively discouraged.	26	27	6	0	0	1.66
Means Average							1.76

4.1.4 Explicit Knowledge Acquisition

This factor measures the efficiency of acquiring explicit knowledge to support the academics' activities. The process of acquiring explicit knowledge needs to be effective to prepare accurate knowledge to satisfy the staffs' needs. Table 4 shows the frequencies and means of the items of acquiring explicit knowledge. The overall mean of this factor is 1.95. Thus, the respondents agree that the university has organized processes for acquiring explicit knowledge, generating new knowledge from existing explicit knowledge, focuses on books, journals, and articles as main sources to improve staffs' skills, has processes for acquiring books and articles to support services in the working environment, and encourages the employees to document their experiences. These processes are effective to acquire relevant explicit knowledge to support the academics activities.

Table 4: Descriptive Analysis of Explicit Knowledge Acquiring

No	Item	SA	A	N	D	SD	Mean
10	Our organization has processes for acquiring explicit knowledge (journal, books, and articles) from external sources.	31	19	6	1	2	1.71
11	Our organization has processes for generating new knowledge from existing explicit knowledge.	24	24	8	2	1	1.84
12	Our organization focuses on books, journals, and articles as main sources to improve staffs' skills.	31	18	6	2	2	1.74
13	Our organization has processes for acquiring books and articles to support services in our working environment.	26	22	8	2	1	1.81
14	Our organization has processes for acquiring books and articles based on competition with other universities.	23	23	7	3	3	1.98
15	The organization carries out environmental scanning for the purpose of acquiring explicit knowledge (books and articles).	18	22	11	5	3	2.20
16	The organization encourages the employees to document their experiences.	26	20	7	5	1	1.89
	Means Average						1.95

4.1.5 Explicit Knowledge Conversion

This factor measures the efficiency of explicit knowledge conversion to improve the staffs' skills. Explicit knowledge conversion needs to be effective to share the right knowledge to the right staff at the right time. Table 5 shows the frequencies and means of the items of explicit knowledge conversion. The overall mean of this factor is 1.92. Thus, the respondents agree that the explicit knowledge (books and articles) are recorded in a structured way, books and articles are catalogued for ease of retrieval, there are processes to create knowledge from different sources of books and articles, books and articles are organized in a useful way, and there are processes for filtering books and articles (i. e., extracting only the most useful knowledge). These processes are effective to convert the explicit knowledge for the staffs.

Table 5: Descriptive Analysis of Explicit Knowledge Conversion

No	Item	SA	A	N	D	SD	Mean
17	In our organization, the explicit knowledge (books and articles) are recorded in a structured way, e.g. a knowledge base.	26	19	12	0	2	1.86
18	In our organization, books and articles are catalogued for ease of retrieval.	25	20	8	5	1	1.93
19	Our organization has processes for creating knowledge from different sources of books and articles.	23	23	7	4	2	1.96
10	In our organization, books and articles are organized in a useful way.	24	19	11	4	1	1.96
21	Our organization has processes for filtering books and articles (i. e., extracting only the most useful knowledge).	25	21	8	2	3	1.93
	Means Average						1.92

4.1.6 Explicit Knowledge Measurement of Accuracy

This factor analyzes the methods of measuring the accuracy of explicit knowledge. Table 6 shows the frequencies and means of the items of measuring the accuracy of explicit knowledge. The responses means are neutral with Items number 22 (Explicit Knowledge objectives forming, results measurement and feedback are designed) and 23 (The contents of books and articles are evaluated in the organization). On the other hand the respondents disagree with Item number 24 (The organization share accurate contents of books and articles to support staffs' working activities). Moreover, the respondents strongly disagree with Item number 25 (There are defined variables to ensure books and articles contents accuracy in the organization such as academics' evaluations). Therefore, there is a real problem in measuring the accuracy of explicit knowledge sources in the University.

Table 6: Descriptive Analysis of Explicit Knowledge Measurement of Accuracy

No	Item	SA	A	N	D	SD	Mean
22	Explicit knowledge objectives forming, results measurement and feedback are designed.	9	9	17	12	12	3.15
23	The contents of books and articles are evaluated in the organization.	5	10	15	14	15	3.40
24	The organization share accurate contents of books and articles to support staffs' working activities.	2	4	21	20	12	3.61
25	There are defined variables to ensure books and articles contents accuracy in the organization such as managers' evaluations.	1	4	15	20	19	3.88
Means Average							3.51

4.2 Interview Findings

This section provides the analysis of the interview; (1) knowledge management background, (2) importance of explicit knowledge, and (3) measurement of explicit knowledge.

4.2.1 Knowledge Management Background

The aim of this section is to provide experts' visions of knowledge management to confirm the compatibility between their visions and the directions of this research. The findings of this part are as follows:

- The management of knowledge resources is necessary in universities to maximize the performance of working activities. Knowledge is one form of the most important key power shifters in organizations. Thus, knowledge management improves the competitive advantage of organization over other organizations in the same field.
- Tacit knowledge is the main source to complete work activities. Explicit knowledge is the main source to feed the tacit knowledge. Therefore, universities improve staffs' skills through relevant explicit knowledge.
- Accurate explicit knowledge leads to accurate tacit knowledge which is reflected as accurate working activities and vice versa.
- Thus, explicit knowledge needs to be acquired, evaluated and shared efficiently to improve staffs' tacit knowledge.
- The current best way to check the accuracy of explicit knowledge is via manual revisions by knowledge experts. However, this method consumes costs and time.
- It is very necessary to develop auto measurement methods of explicit knowledge sources and contents.

4.2.2 Importance of Explicit Knowledge

Universities are considered as the main source of human skills to support organizations in various sectors. Thus, universities care about developing skills and knowledge for undergraduate and postgraduate students to ensure efficient outcomes of the learning process. Classrooms are the foundation of transferring knowledge from lecturers to students, and lecturers are responsible for preparing accurate materials using many knowledge sources. Therefore, lecturers represent the main elements of transferring accurate knowledge to develop students' skills and ensuring the implementation of universities learning strategies. Universities support lecturers' knowledge by providing accurate explicit knowledge sources. Explicit knowledge is considered as the main foundation of staffs' knowledge and skills development. In other words, universities should prepare, evaluate, and share the explicit knowledge efficiently to maximize their performance outcomes.

4.2.3 Explicit Knowledge Measurement

This section analyzes the proposed solution to measure the accuracy of explicit knowledge based on auto approach through practical variables. The findings of this analysis are as follows:

- Explicit knowledge sources, i.e. articles can be classified into number of levels based on its contents accuracy; (1) very accurate, (2) accurate, (3) less accurate, and (4) not accurate.
- The articles accuracy is measured through many publication parameters such as impact factor of a journal, number of citation of an article, and number of articles that are published by the same author.

5. Analysis Findings

Based on the questionnaire data analysis, it is noticed that the demographic data of the questionnaire is considered as the basis to provide responsible responses to support the research development. On the other hand, the staffs of Mu'tah University have the ability to adopt new implementations of knowledge management. However, there are some problems in measuring the accuracy of the explicit knowledge resources in the University.

Therefore, the main question behind the questionnaire findings is how to measure the accuracy of explicit knowledge resources? The interview findings provide some answers about this question; the explicit knowledge resources, i.e. the articles, can be classified into levels based on their contents' accuracies; (i) very accurate, (ii) accurate, (iii) less accurate, and (iv) not accurate. This classification is results from several

measurement variables of explicit knowledge which are as follows:

- Journal Impact Factor: The impact factor of an article indicates the accuracy contents of these articles. High impact factor journals apply many blind revisions to confirm articles' contents.
- Article publishing age: The publishing age of an article represents the content's accuracy based on the current working environment. Older articles may have accurate knowledge but may not be applicable to the current work environment.
- Number of citations of an article: The number of citations represents the importance of the article's contents. Researchers should be aware of citing accurate contents of articles in their publications.
- Number of articles that are published by the same author in journals with high impact factor: Authors who frequently publish in high impact journals are considered as professionals or experts in their fields. Thus, a researcher provides related and accurate knowledge based on his/her experience.

6. Conclusion and Future Work

Management of knowledge resources is necessary in universities to maximize the performance of work activities. Knowledge is one of the most important key power shifters in organizations. Thus, knowledge management improves the competitive advantage of an organization over other organizations in the same business. Accurate explicit knowledge leads to accurate tacit knowledge which is translated into accurate activities.

There are problems in measuring the accuracy of explicit sources in universities. Articles accuracy can be measured through several publication parameters such as impact factor of a journal, number of citation of an article, and number of articles that published by same author.

In our future work, we shall develop a model to manage the accuracy measurement processes of articles based on the suggested publication parameters. The evaluation scales and values of each parameter will be analyzed and the measurement formulas will be developed.

References

McInerney, C. (2002). Knowledge management and the dynamic nature of knowledge. Journal of the American Society for Information Science and Technology, 53(12), 1009-1018.

Al-oqaily, A. T., Hassan, Z. B., Rashid, A. M., & Al-sulami, Z. A. (2014). Success Factors of Knowledge Management in Universities (A Case Study: Jordanian Private Universities). Middle-East Journal of Scientific Research,22(7), 994-1002.

Alavi Maryam, and Dorothy E. Leidner," Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues", MIS quarterly, vol. 25, no. 1, 2001, pp. 107-136.

Debowski, S 2006, Knowledge Management, John Wiley & Sons, Milton, Queensland, Australia.

Bartes, F. (2009). Paradigma inovací a hodnotové inženýrství. Brno: VÚT.

Hamel, G. & Green, B. (2007). The Future of Management. Boston: Harvard Business School Press.

Al-oqaily, A. T., Hassan, Z. B. AL-DALA'IEN, A.A., &. (2014) Rashid, A. M.. Develop practical methods of knowledge measurement in universities. Journal of Theoretical and Applied Information Technology 20th March 2015. Vol.73 No.2. ISSN: 1992-8645

McElroy, MW, The New Knowledge Management: Complexity, Learning, and Sustainable Innovation. 2003. Butterworth-Heinemann, USA

Roberta Katz. 2006. "Change Management and Strategic Planning", Associate Vice President of Strategic Planning, Stanford University.

Mathi, K. (2004). Key success factors for knowledge management. University of Applied Sciences, Offenburg, thesis, Master of Business Administration in International Business Management and Consulting.

AACSB. 2012. "Impact of ResearchTask Force", Final Report of the AACSB International. South Harbour Island Boulevard.USA, 2012.

Huang,K, Lee.Y, & Wang.R, 1999. "Quality information and knowledge", Upper Saddle River, N.J.: Prentice Hall..

Redman, T. C. , "Measuring data accuracy: A framework and review" , in Wang, R. Y., Pierce, E. M., Madnick, S. E. and Fisher, C. W. (eds.) Information quality. New York: M. E.Sharpe, 2005, pp. 21-36.

Robert.S. 2013. "PARAMETRIC EXPLICIT KNOWLEDGE MAPPING IN A LEARNING ENVIRONMENT". Management and learning international conference 2013. Zadar, Croatia.

Wu. S. 2013. "A model for assessing the quality of Gene Ontology". iConference 2013 Proceedings (pp.953-956). doi:10.9776/13492.

Glenn, I. (2013). Determining Sample Size. Agricultural Education and Communication Department, UF/IFAS Extension. University of Florida. USA.

Waters, E. (2002). The "Goodness" of Attachment Assessment: There Is A "Gold Standard" But It Isn't As Simple As That . ww.psychology.sunysb.edu/attachment/measures/ content/_validity.html .

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