Electronic Records Management: The Development of A Model of Education and Training for Record Keepers

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Abstract: This paper reviews a model that has been developed that has emerged from a research project undertaken in Malaysia, United Kingdom and other leading advocates of electronic records management. The model is devoted to general patters in the education and training in electronic records management for the record keepers defined in the study namely the archivists, administrators, records managers and IT personnel. It begins with the development of a generic model for vocational and professional education and training for electronic records management and concludes with the testing of the generic model to the situation in Malaysia. This paper concludes by considering the value of the model that has been created to populations beyond the sampled record keepers.

Key words: Archivists, education and training, electronic records, IT personnel, records manager, records management, Malaysia.

INTRODUCTION

The model discussed in this paper emerged from a research project funded by the Northumbria University, United Kingdom that broadly investigated the education and training in electronic records management in the leading advocates' countries and Malaysia. This model was developed on ideas forwarded by Nachmias & Nachmias (1993) who suggested that in social science research a model can be used to represent the characteristics of some empirical phenomenon. In this context, such a model may be defined as an attempt to identify and describe knowledge and skills required for the effective management of electronic records. Initially, this paper explains a global search for models and best practice for education and training in electronic records management before a new model for the Malaysian record keepers, based on the research, is developed and described.

Methodology:

The technique employed in the study were selected in response to the research questions, aims and objectives and their implications helped to determine qualitative or case study research as the strategy of the research project, quantitative data were also collected to gather information. Yin's (2004) suggests the relevance of qualitative research methods including "survey" and "case study" strategies used for this particular work. Thus, the nature of the topic (electronic records management), the perspective taken (four groups of record keepers) and the orientation of the work (exploration) make this study a naturalist rather than the positivist as regards to the methods adopted. Qualitative data gathered and analysis techniques were selected to allow detailed exploration of the context of record keepers' needs for education and training in electronic records management.

The study was carried out in four (4) phases. The first phase involved identifying pragmatic examples of best practice models on education and training on electronic records management with the aim of establishing conceptual underpinnings of the study. The second phase involved the development of a generic model. A vocational and professional model for education and training on electronic records management was developed in phase three of the project and followed by the development of a model suitable for the Malaysian record keepers in the fourth phase.

Qualitative data was collected via five (5) focus group discussions and 34 individual interviews and questionnaires were sent to 97 professional organizations (related to records, archives, administration, IT) and 24 archival institutions in leading advocates on electronic records management. For focus group discussions and interviews, each data collection session was tape recorded and verbatim transcripts prepared soon after the completion of the dialogue. Although individual interviews and focus groups formed the principal methods of data gathering, where possible the data contributed by the informants or respondents was verified against documentary sources. In particular, data pertaining to the strategic planning of electronic records management in government and the policies on electronic records management was checked against the relevant published information.

The qualitative data gathered was explored at two-levels (contiguous and multi-dimensional). At a contiguous level, even though Nvivo version 6 was used, the writers need to make sense of the data in which

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patterns apparent in relation to various types of education and training and their contents were examined. At the multi-dimensional level of analysis, the writers explored patterns that were evident across different types of record keepers need for education and training types revealed by the different record keepers by their words and ideas.

Findings:
Previous Models and Pragmatic Examples:
In order to identify and examine education and training models for record keepers and current international best practices or pragmatic examples, an exhaustive wide ranging literature review and a high level survey of the national archives and professional organizations of Australia, Canada, Europe, United Kingdom and the United States of America, was conducted. As the target group was spread across the world, data was collected through web survey questionnaires sent to professional organizations of records, archives, administration and IT and national archival institutions. The data did not reveal any single implemented comprehensive model which embraced the various groups of sampled record keepers. The data also suggested that little had been done in terms of education and training specifically for electronic records management, despite the push for electronic government in many of the countries surveyed. What exists is merely a combination of in-house 'on-the-job' training programs combined with specialized courses.

With regard to the training and education needed by the stakeholder groups in order to manage electronic records in government, there was neither clear defined and accepted body of knowledge nor an agreed training curriculum, except for the e-TERM (European Education and Training for Electronic Records Management) program funded under the European Union's Leornardo Project; the Five Day Seminar Cycle (FDSC) developed by the Netherlands Archives School; the rm3 programs developed by the National Archives of UK, University of Liverpool and Northumbria University; and training programs offered by Information Management University (IMU) in UK. It also appeared that the lack of serious interest on the part of archival institutions and professional organizations in supporting the small number of universities worldwide offering courses in records management was hindering the development of a best practice education and training program for record keepers in the e-environment. There was however an awareness and acknowledgment of the need to develop such program, not least because of the high profile of electronic recordkeeping requirements.

Model Developed for the Malaysian Record keepers in this Study:
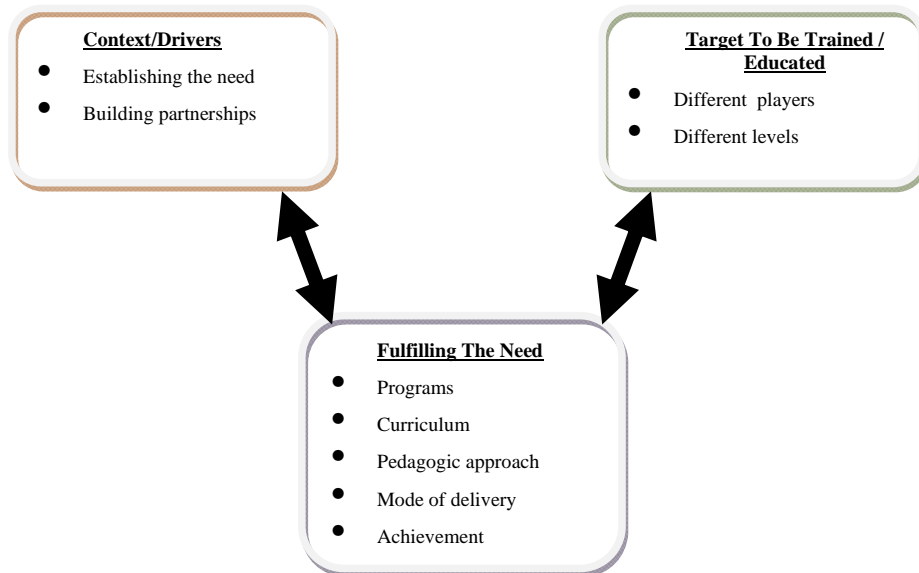
Fig. 1: Model for vocational and professional education and training in electronic records management.

The overall framework of the generic model for vocational and professional education and training in ERM which was applicable to the record keepers in the Malaysian context consisted of the following conceptual underpinnings:

Key Concepts of Education and Training:
In order to achieve the first aim and objective of the study i.e to analyze the education and training programs in ERM and develop a model, first and foremost, key concepts of education and training were

identified as the basis for the construction of a model. The differences and similarities between the various concepts underpinning education and training as put forth by Darkenwald & Merriam (1982), Dearden (1984), Jarvis (1985), Noe (1986), Goldstein & Gesner (1988), Barrow & Milburn (Tight, 1996), Tight (1996), Pring (1993), Brookes (1995), Tight (1996), Cowling (2003), Konrad (2004) and many others were used to establish the conceptual foundation explaining the phenomenon of education and training. From the various concepts emerged three distinct dimensions of education and training namely "context/drivers", "target to be educated and trained" and "fulfilling the need for education and training" which explained the causal relationships of education and training activities.

Key Concepts of Vocational and Professional Education and Training:

Upon examining the needs of record keepers in terms of knowledge and skills required to manage electronic records in the specific context of Malaysia i.e the second aim of the study, a model suitable to address problems associated with records practitioners and professionals should be based on vocational and professional education and training. To achieve this objective, the various concepts of vocational and professional education and training forwarded by Jessup (1990 & 1991), Tight (1996), Hoyle & John (1995), Becher (1994), Jones & Joss (1995), Hyland (1994), Schon (1988), Siegrist (1994), Bines & Watson (Tight, 1996), Raggatt & Williams (1999), UNESCO (in British Council 2004) and the Malaysian Education Ministry and many others were mapped against the generic model of education and training explained above. Thus a generic model of vocational and professional education and training was established. However, the first aim and objective of the study to develop a generic model of education and training for ERM had yet to be achieved completely.

Key Concepts Underpinning The Pragmatic Examples of Education and Training in ERM Developed in Europe and UK:

In order to fully achieve the first aim and objective of the study, the concepts which underpinned the pragmatic examples of education and training in ERM developed in Europe and UK (which were identified through high level survey of national governments and related professional organizations in Phase One and data collected through in-depth interviews in Phase Two of the study), were analyzed and subsequently mapped against the elements of the generic model of vocational and professional education and training. Thus in Phase Three of the study, a generic model of vocational and professional education and training for ERM was established based on three elements, namely these common elements of the pragmatic examples that match the generic elements of the generic model, non-common elements that match the generic elements of the generic model, and new elements that were common to the pragmatic examples.

Issues Emerged from the Focus Group Discussions When Testing the Generic Model of Education and Training for ERM:
Context/Driver:
Establishing the Need:

According to the evaluation of the Model in Figure 1, the administrators and IT personnel believed ERM did not constitute their core responsibility. Therefore, they did not feel compelled to attend any educational programs in ERM. They suggested a general awareness training program would serve them well enough.

In the final focus group discussions, the participants justified the need for education and training in their own terms. Only one justification matched the generic model elements, i.e professional development (the factor cited earlier by archivists). The records managers in contrast, did not regard professional development as a reason to acquire knowledge and skills, as they did not consider themselves to be professional records practitioners. They were assigned roles and responsibilities through administrative directives, and they could even be assigned some other responsibilities upon transfer to any other agencies.

There was a certain amount of overlap and differences in their accounts of the purposes for education and/or training in ERM. The EG provided the common rationale for the archivists, administrators and IT personnel to be trained in ERM, but its degree of importance differed. The archivists and IT personnel both cited EG as the main driver for their educational and training needs. In contrast, the administrators cited the EG as the least important justification for training, as they believed that their main task was to ensure the efficiency of administration for which they were accountable. Despite this, in the Malaysian context, it is generally evident that the EG constituted an important "context/driver" for the different record keepers to learn about ERM, whereas the generic model was a response to a wider electronic environment as evident in the pragmatic examples programs. The data also suggests that the IT personnel regarded ERM to be an inevitable extension of their existing job. This matched the generic model elements.

Building Partnerships:

In the generic model, the element of building partnerships was explicit especially in e-TERM whose main objective was to provide the different target groups with the opportunity to gain knowledge of ERM through a

common education and training program. This was explicit not only in the stated objectives of the program, but also in the orientation of the curriculum towards building partnerships. This was in line with the suggestion in the literature that the different record keepers needed to learn together so that they could understand their roles and responsibilities in regard to ERM.

However, the Malaysian record keepers perceived building partnerships from a different perspective. It is evident from the Malaysian focus group discussions that merely building partnerships among the record keepers for common education and training was not enough. Instead, they emphasized establishing partnerships among the stakeholders at a more strategic level. For the archivists on the other hand, it was important to forge partnerships with the various Ministries and Departments. This was natural, for the records managers' partnership with the National Archives was central to their work. The administrators and IT personnel also recommended partnership with the highest authorities as this was of paramount importance, unlike the case of the generic model. This data was verified in the final focus group discussion when the participants further explored this issue. Instead of focusing on how to develop partnership among themselves, (the different record keepers) their discussion centered on ways to develop partnership with the policy makers at the strategic level as they believed that ERM needs high level support.

Target to Be Educated and Trained:
Different Types of Record Keepers:

In the generic model, the target groups were limited in the sense that education and training were meant only for archivists, records managers, administrators and IT personnel at the tactical, managerial, supervisory and operational levels. In the Malaysian case, even though education was limited to the records practitioners, training included almost everyone across the Malaysian government. This is because everyone needs to know, understand and/or be skillful in ERM in order to make a success of the EG. This was not the case in the pragmatic examples as EG did not provide a strong case for knowledge and skills to be imbibed across the board, even though the context of the electronic environment provided a good driver. Thus the context differs between the generic model and the Malaysian case.

The data reveals that the different record keepers focused their attention on target groups in their respective schemes of service. Among the record keepers, only the archivists confirmed that archival staff should be educated and trained to a measure commensurate with their respective length of service to ensure fair opportunity for education and training, so that this would enable them to be placed within, or transferred to any division in the Archives to be in charge of electronic records, a scenario that is likely in view of the EG. By comparison, the functional groupings suggested by the records managers and administrators match the generic model elements. However, the categorization of IT personnel according to their roles and responsibilities would enable them to be trained in ERM in their respective areas of concern. In the final focus group discussion, the representatives of the different record keepers confirmed their belief that government staff at all levels need knowledge and/or skills in ERM to support their respective roles and responsibilities.

Fulfilling the Need for Education and Training:
Programs:

The archivists made use of the opportunity in the final focus group discussion to inform the participants of the National Archives' legitimate role and responsibility in the area of ERM in all government departments. The archivists further suggested that for records practitioners a modular accredited program was suitable as this could break down boundaries between subjects and courses, thereby enabling individuals to choose subjects relevant to their respective responsibilities.

In the final focus group discussion, participants agreed that only the archives and record staff (at certain levels) needed to have accredited educational qualifications in ERM, as ERM constitutes their core business. The administrative staff and IT personnel should receive the relevant training as suggested in their individual focus group discussions. However, the records managers were skeptical that the Administrative Officers who were assigned the job as departmental records officers would be interested to be formally educated in ERM. This is because their present scheme does not reward such qualifications.

Even though the administrators and the IT personnel argued in their respective focus group discussions that they did not need accredited education, in the last focus group discussions, however, they acknowledged this need. They suggested that the new recruits (administrators and IT personnel) in the civil service should be provided with accredited education. This could be done by incorporating subjects in ERM into the existing in-service educational and training programs provided by the training institute for civil servants. It is generally true that for the administrators and IT personnel, education refers to nothing more than the programs organized by this institute. To all intents and purposes the courses can lay no claims to the name 'education' as such. These programs cannot be said to be accredited as there are no professional bodies in Malaysia that are able to provide accreditation to any such educational program.

Even though the IT personnel and administrators have a big role to play in ERM (and should as such be educated in ERM), they were not aware of their role. This is understandable, as ERM is generally seen by the IT people and the administrators as merely constituting a small part of the overall administration of both archives and records. The generic model considered vocational competence-based and on-the-job learning to be the most effective method of providing the target groups with skills and competence. In the Malaysian context, vocational competence-based training, based on the needs for skills of the different levels of the target groups was suggested and cited in several different ways by the different record keepers.

Curriculum:

Even though the curriculum or subjects suggested by the different record keepers differed, there was similarity in the subject content proposed for inclusion by the archivists and records managers. The inclusion of information management as a subject was considered crucial by all of the record keepers as it is closely associated with ERM. The archivists suggested the target groups should have knowledge and skills in relation to all types of records, but the records managers' concerns were specifically confined to electronic records which posed a challenge to them.

In the Malaysian case, the core skills and specialist skills required differed according to specific roles and responsibilities. The archivists were more concerned about requisite skills for the management of their existing archival materials (consisting, almost completely, of traditional or conventional records) for the benefit of posterity. The records managers and administrators felt that the target groups needed to learn how to manage electronic records (electronic version of paper records and paper versions of electronic records), as these records are commonly created and used in the agencies. The administrators emphasized the primacy of subjects pertaining to legal issues, policy guidelines and standard procedures, as they were more concerned with administrative procedures, and assignment of roles and responsibilities to their subordinates. The IT personnel were concerned with digital preservation, metadata and migration as these are closely linked to systems development and maintenance. The emphasis varied according to the respective areas of responsibilities. This is a natural outcome, arising from the independent concerns of the different professions.

The administrators in the final focus group discussion suggested that e-mail management should be included in their training, as e-mail has become a convenient form of communication in the government. The representatives of the archivists, records managers and IT personnel supported the idea as they discussed the issue of e-mail official copy versus convenience copies. Other than e-mail management, legislation and policy were also mentioned by the Malaysian record keepers as these were common issues.

Pedagogic Approach :

Upon testing the generic model elements among the Malaysian record keepers, learning approaches similar to Kolb's (1984) were suggested for education. Even though these approaches were cited in a number of different ways, the fundamentals remained the same.

In their group discussions, the archivists suggested that the learning approach must be able to convey knowledge on ERM to the target groups, in that the archivists and the assistant archivists would gain an understanding of ERM concepts and theory to be applied in their real work situation. They argued that the learning process should include some case studies on the EG recordkeeping systems, and believed that understanding could be acquired through practical training under the supervision of facilitators. At the same time the target groups must participate in knowledge sharing sessions, where facilitators should provide guidance through feedback.

The records managers cited two learning outcomes, namely the acquisition of knowledge and secondly competence in ERM. They emphasized that the academic programs should help records officers to: (a) gain conceptual understanding of ERM, (b) bring their working experience to the classroom and relate them to concepts and standards procedures, (c) gain detailed understanding of ERM to tackle the assigned roles and responsibilities, and (d) acquire ability to exploit the knowledge that they have acquired for strategic planning in the area of ERM.

By comparison, the administrators' discussion on the pedagogic approach centered around the need-to-know basis. They believed that the policy makers as well as executives at the managerial levels needed half-day awareness briefing sessions on policy and procedures, as it was deemed necessary for them to get involved, and to allocate appropriate roles and responsibilities to their subordinate staff. The archivists argued that the training programs must be able to transfer skills, specifically on ERM to the archival staff. They suggested that these skills were to be acquired through formal face to face instruction, as well as practical learning through problem solving techniques. On the other hand the records managers emphasized that records officers and the registry staff needed skills, as most of the records staff have basic knowledge of the principles of conventional records management. They believed that the most appropriate learning approach in training was hands-on practical training, aimed at gaining skills.

The administrators suggested that administrative staff can gain or acquire skills in ERM through on-the-job training, off-the-job training, instructions by facilitators on specific tasks, skills gained through demonstrations, and observation of real examples such as handling of filing systems for electronic records. The IT personnel felt that skills in the area of ERM could be gained in a laboratory setting; and through coaching by experts, practical training and systems demonstrations. They believed that the best approach was to devise a process of evaluation by experts on the level of competence gained by the IT staff who had undergone the training.

Mode of Delivery:

The archivists cited several modes of delivery they believed to be suitable for the archival staff to gain knowledge and skills in ERM. Flexibility involving learning methods such as distance learning, web based learning; independent study and part time study other than face to face mode were recommended. The participants of the archivists' focus group felt that they should be given the freedom to choose the mode of delivery most suitable for them. However, classroom face to face instructions and on-the-job learning were considered to be the most suitable means of transferring skills on ERM through training sessions.

The records managers believed that it was important for trainers to adopt as many approaches as possible to provide flexibility in ERM education and training. The reason for this was that the target groups may not be able to find time outside their working hours. Their special needs should be taken into consideration when designing and developing education and training programs. They were in favor of the classroom face-to-face approach, distance learning, internet learning and open learning modes of delivery for education. They felt, however, that if such training was not incorporated into the public services training institute's programs, the staff would not be interested. This is because they were not professional records managers, and the expected qualifications were not seen to guarantee them any prospects for promotion. The situation might be considered positively if there was a place for records managers within the overall scheme of service in the public sector. The records managers agreed that classroom face to face approach and laboratory work were suitable modes of delivery for training, as the target groups needed to gain skills through practical hands-on sessions. By comparison, the administrators felt that the most effective mode of skills transfer was classroom style face to face on-the-job learning. On the other hand the IT personnel emphasized the importance of gaining skills through laboratory work and face to face interaction. For mode of delivery, the final focus group agreed on the various possible modes of delivery in order to ensure some degree of flexibility in education based on the concept of life-long learning.

Achievement:

Academic qualifications constitute a common element of achievement in education. The generic model is based on a modular credit based qualification that is professionally recognized. In the Malaysian case, the archivists believed that they needed to be dependent on advanced countries for their professional education, as Malaysia lacked expertise in ERM. They brought up the issue of recognition of the programs by professional associations such as in the UK and USA. However, the majority of the participants believed that this was not possible as records and archival professional organizations were non-existent in Malaysia. In the area of training, obtaining the certificate of attendance was the only form of achievement that they could think of.

The records managers did not discuss much on this subject as they knew little of the existing accredited academic programs that were available locally or abroad. They also lacked awareness on the available training programs in ERM. However, they suggested that public services training institute diploma programs should incorporate subjects on ERM so that the newly appointed administrative officers who were assigned the responsibility to manage electronic records would get their requisite knowledge in ERM. The participants also cited several examples of training they had undergone at the National Archives and other related training courses on IT, for all of which they were awarded certificates of attendance. Similarly with the administrators, they felt that it was sufficient for the administrative staff to be awarded a certificate of attendance.

In their individual focus group, the IT personnel proposed the idea of evaluation by experts on the level of competence gained by the IT staff, and for this it was felt that a certificate of achievement should be awarded in order to ensure a meaningful training outcome. They also believed that this achievement could improve their prospects for promotion. However, in the last focus group, the archivists, records managers and administrators argued that certificate of achievement called for formal examinations, evaluation of participants' work by a panel of experts or external examiners, as well as the involvement of the national accreditation committee. These conditions demand extra resources, and require mechanisms and expertise which were seriously lacking. However, they agreed that public services training institute should provide accredited modular programs on records management in collaboration with the National Archives providing the training facilities.

Conclusion:

This study draws firm conclusions about the relevance of the generic model to the Malaysian context. The literature review and the pragmatic examples in the generic model of vocational and professional education and

training for ERM have suggested that partnership building between the different key players was a function of common education and training. However, this was not so in the Malaysian context. What was perceived as critical by the Malaysian record keepers was first to establish partnership among the key stakeholders at the strategic level, as ERM needs high level support. To the Malaysian record keepers who participated in the focus group discussions, this issue needs to be addressed first, rather than the issue of developing partnership among the record keepers themselves through common education and training in ERM. However, the generic model had provided the basis for developing an understanding of the dynamics involved in the implementation of educational and training initiatives in ERM for the record keepers aimed at the success of the EG in Malaysia.

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