

**THE ASSOCIATION BETWEEN RESEARCH-SUPPORT
LIBRARIANS' SELF-DIRECTED LEARNING TRAITS
AND THEIR COMPETENCIES**

BY

NAZRINDA A. SAMAH

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International Islamic University Malaysia**

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ABSTRACT

Research-support librarians must make themselves visible in the processes surrounding academic research. They have to play their part in supporting learning, enhancing teaching, improving research, providing services and anticipating the needs of academic researchers. By helping to drive research, learning and teaching outcomes, librarians gain greater visibility and respect. In order to capitalise on the opportunity to update their roles, research-support librarians should possess a compendium of competencies. However, previous studies revealed that these research-support librarians lack the competencies to keep abreast of the new resources, services, and technologies. Although there is a large body of literature discussing the comprehensive competencies required of research-support librarians, very few have attempted to investigate the same issue in the Malaysian context. Based on these concrete findings and pressing issues, the present study attempts to investigate the competencies of research-support librarians in Malaysian public universities. This study also aims to identify the association between research-support librarians' self-directed learning traits and their competencies. In addition, this study explores the issue of library management support in providing a self-directed learning environment to research-support librarians. This study employed the embedded mixed-methods design as its methodology as well. Data for both quantitative and qualitative studies were collected simultaneously. The findings from the quantitative study were collected from the survey instrument. The number of respondents was originally 262. After the final screening, 215 respondents were selected. SPSS was used to analyse the quantitative data. For the qualitative study, nine respondents were involved in the in-depth interviews. The responses were analysed using Miles and Huberman's (2014) technique, which involves data reduction, data display, conclusion-drawing, and verification. Five emerging themes and 32 sub-themes were identified. The findings revealed that the competencies of research-support librarians in Malaysian academic universities are still weak. The most noticeable lowest competency was information technology skills followed by research and contributions to the profession as the second lowest. The most prevalent competencies were interpersonal skills, followed by information literacy, entrepreneurialism, and foundational knowledge. The self-directed learning traits of research-support librarians in turn were considered average to high. The role of the learner's experience, readiness to learn, and orientation to learn were the most prevalent traits as compared to motivation to learn and the concept of the learner. Furthermore, the relationship between self-directed learning and competencies was mediocre. Generally, there was consensus among the respondents that their library management does extend its support to providing a self-directed learning environment to research-support librarians. In conclusion, the findings from this study serve as a useful snapshot of the competencies and self-directed learning traits of research-support librarians in Malaysian public universities. Having applied the Core-Competencies for 21st Century CARL Librarians Model and Knowles' (1970) Andragogy-Adult Learning Theory, this study can be seen as a means of assessment, strategic planning and budget execution, recruiting and hiring, training and development, career development, and succession planning initiatives. It can also be applied in identifying credentials, improving education, describing jobs, evaluating performance of research-support librarians, and aligning research-support librarianship with the library's mission and strategic goals. Educators can also use the findings of this study when developing, designing or improving curricula and courses.

خلاصة البحث

يلعب أمناء المكتبات الداعمة للبحث دورا مهما في دعم التعلم وتحسين التدريس والبحث الأكاديمي وتقديم الخدمات وتوقع احتياجات الباحثين الأكاديميين. من خلال هذا الدور يكتسب المكتبيون وضوحا واحتراما أكبر، ومن أجل الاستفادة من هذه الفرصة يجب عليهم تحديث أدوارهم بامتلاكهم مجموعة من الكفاءات، مع ذلك فقد كشفت الدراسات السابقة أن أمناء المكتبات الداعمة للبحوث يفتقرون للكفاءات الحديثة التي تؤهلهم لمواكبة الموارد والخدمات والتقنيات الحديثة. بالرغم من وجود عدة أبحاث ومؤلفات ناقشت الكفاءات التي يجب أن يتصف بها أمناء المكتبات الداعمين للبحث، إلا أن القليل منها حاول التحقق من المشكلة على مستوى الجامعات الحكومية في ماليزيا. تهدف هذه الدراسة الى التحقق من كفاءة أمناء المكتبات الداعمين للبحث في الجامعات الحكومية الماليزية وتحديد العلاقة بين سمات تعليمهم الذاتي وكفاءتهم. بالإضافة تهدف هذه الدراسة ايضا إلى استكشاف قضية دعم إدارة المكتبات في توفير بيئة تعليمية ذاتية التوجه للمكتبيين. تم استخدام الأسلوب المختلط المضمن كمنهجية في تصميم هذا البحث، وقد تم جمع البيانات الكمية والنوعية في وقت واحد مرتكزين على أداة المسح، إذ كان عدد المستجيبين 262، وبعد الفحص النهائي تم اختيار 215 مستجيبا. تم تحليل البيانات في هذه الدراسة باستخدام برنامج SPSS. وقد شارك في المقابلات الشخصية 9 مستجيبين، تم تحليل ردودهم باستخدام Miles and Huberman (2014) والتي تتضمن تقليل البيانات وعرضها ورسم الاستنتاج والتحقق. إضافة إلى تحديد خمسة مواضيع ناشئة و32 موضوع فرعي. كشفت النتائج أن كفاءات أمناء المكتبات الداعمين للبحوث في الجامعات الحكومية الماليزية لا تزال ضعيفة. وكانت أقل مهارة تمت ملاحظتها هي مهارة تكنولوجيا المعلومات متبوعة بالبحث والمساهمة في المهنة باعتبارها ثاني أدنى مستوى. اما الكفاءات الأكثر انتشارًا فكانت مهارات التعامل مع الآخرين، تليها معرفة المعلومات وريادة الأعمال والمعرفة التأسيسية. وبالتالي تم اعتبار سمات التعلم الذاتي للمكتبيين متوسطة إلى عالية. كما كان دور تجربة المتعلم والاستعداد للتعلم والتوجه للتعلم، أكثر الصفات انتشارًا مقارنة بدافع التعلم ومفهوم المتعلم. وقد جاءت العلاقة بين التعلم الذاتي والكفاءات متواضعة. عموما، من نتائج هذه الدراسة أيضا انه كان هناك إجماع بين المجيبين على أن إدارة مكتبهم تقدم دعمها لتوفير بيئة تعليمية موجهة ذاتيًا لأمناء المكتبات. في الختام، تعد نتائج هذه الدراسة عينة يستفيد منها أمناء المكتبات الداعمة للبحث في الجامعات الحكومية الماليزية للرفع من كفاءاتهم وخصائص تعلمهم الذاتي. ويمكن اعتبار هذه الدراسة وسيلة للتقييم والتخطيط الاستراتيجي وتنفيذ الميزانية، والتوظيف والتدريب والتطوير ويمكن تطبيقه أيضًا في تحديد أوراق الاعتماد وتحسين التعليم وتوصيف الوظائف وتقييم أداء أمناء المكتبات الداعمة للبحث وملاءمتها مع مهمة المكتبة وأهدافها الاستراتيجية. يمكن أيضا للمعلمين استخدام نتائج هذه الدراسة عند تطوير أو تصميم أو تحسين المناهج والمقررات.

APPROVAL PAGE

The thesis of Nazrinda A. Samah has been approved by the following:

Wan Ali@Wan Yusoff Bin Wan Mamat
Supervisor

Lokman Bin Mohd Tahir
Co-Supervisor

Zahidah Binti Zulkifli
Internal Examiner

Noorhidawati Binti Abdullah
External Examiner

Norliya Binti Ahmad Kassim
External Examiner

S.M. Abdul Quddus
Chairman

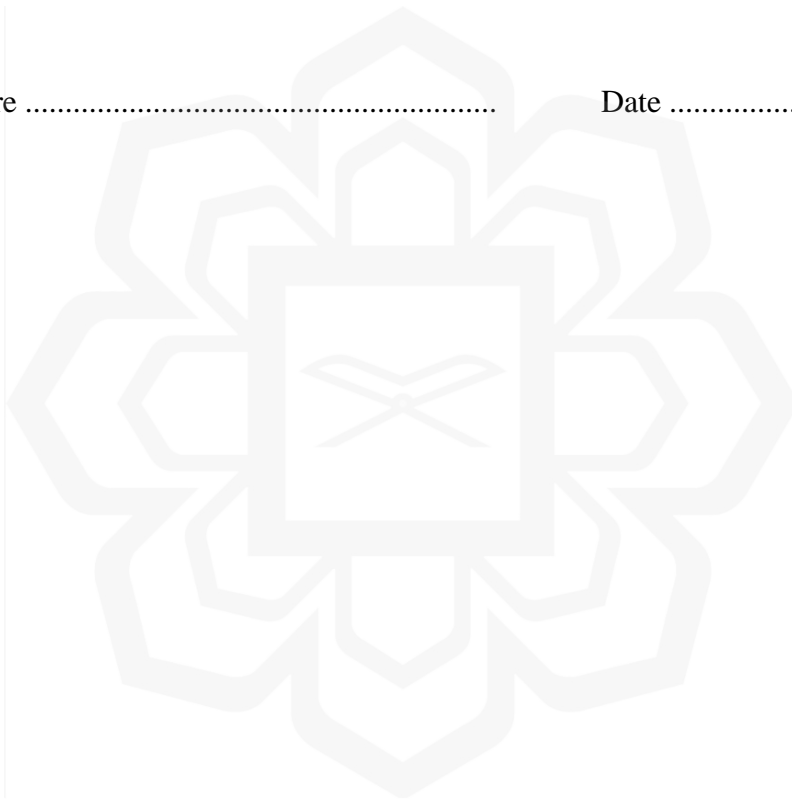
DECLARATION

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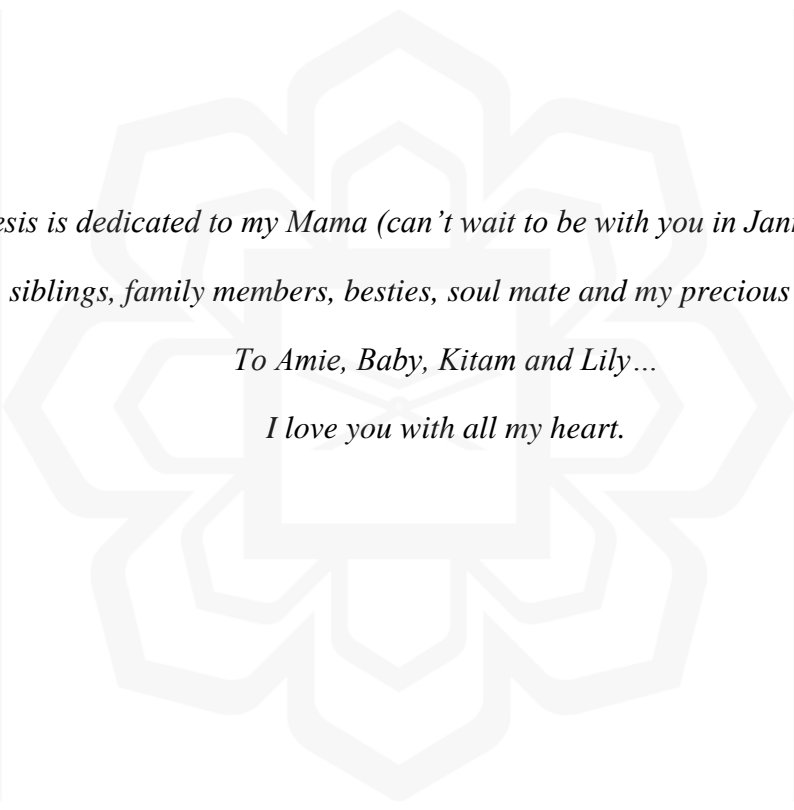
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*This thesis is dedicated to my Mama (can't wait to be with you in Jannah) and Papa,
siblings, family members, besties, soul mate and my precious kitties.*

To Amie, Baby, Kitam and Lily...

I love you with all my heart.

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“A companion of the Prophet (S.A.W.) asked, “O Allah’s Messenger! Is there a reward for us in serving animals?” He (S.A.W.) replied, “Yes, there is a reward for serving any animate (birds, animals etc).” – Bukhari 42/11

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LIST OF ABBREVIATIONS

ALA	American Library Association
AMA	American Management Association
ASERL	Association of Southeastern Research Libraries
CARL	Canadian Association of Research Libraries
CILIP	Chartered Institute of Library and Information Professionals
CMS	Content Management System
CLIR	Council on Library and Information Resources
CURL	Consortium of Research Libraries
CPD	Continuous Professional Development
CTD	Central Training Development
CRSLCM	Competencies of Research-Support Librarian Catalyst Model
EBL	Eskind Biomedical Library
EPU	Economic Planning Unit
HRD	Human Resource Division
ICT	Information and Communication Technologies
ICC	Innovative and Creative Circle
IHE	Institutions of Higher Education
IP	Information Professional
JCA	Job Competence Assessment
ILS	Integrated Library Systems
KAI	Key Amal Indicators
KPI	Key Performance Indicators
LMS	Learning Management System
MCU	Malaysian Comprehensive Universities
MEB	Malaysia Education Blueprint (Higher Education)
MLS	Master's Degree in Library Science
MNSQ	Mean-Square
MOHE	Ministry of Higher Education
MRU	Malaysian Research Universities
MSC	Multimedia Super Corridor
MTUN	Malaysian Technical Universities Network
ODLIS	Online Dictionary for Library and Information Science
PhD	Doctor of Philosophy
PTJ	Pusat Tanggungjawab
PTPTN	Perbadanan Tabung Pendidikan Tinggi Nasional
RIN	Research Information Network
RLUK	Research Libraries UK
RMSE	Root Mean-Square Error
SDL	Self-Directed Learning
SPSS	Statistical Package for the Social Sciences
UiTM	Universiti Teknologi MARA
UKM	Universiti Kebangsaan Malaysia
UNIMAP	Universiti Malaysia Perlis
UPM	Universiti Putra Malaysia
UTM	Universiti Teknologi Malaysia

UTeM	Universiti Teknikal Malaysia Melaka
UTHM	Universiti Tun Hussein Onn Malaysia
UPSI	Universiti Pendidikan Sultan Idris
USIM	Universiti Sains Islam Malaysia
UUM	Universiti Utara Malaysia
VUMC	Vanderbilt University Medical Center
WfP	Writing for Publications



CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

The principal job requirement of librarians is to organise information resource development, documentation, and information management programmes. They are responsible for providing services and facilities required by library users and for carrying out administrative and financial management tasks. In addition, librarians are required to supervise and manage human resources, ensure the preservation and security of information resources, and maintain the information and communication technology (ICT) applications in libraries.

However, for librarians who are working in a research-based environment such as a university, complying with the basic competencies is not sufficient. They need to step up and raise their competencies as well as embrace new competencies related to research support in order to fulfil researchers' needs, and those of their institutional research strategies. Research-related competencies include: reporting and marketing expertise, services, collections, and facilities of the library to researchers, impact assessment, publishing, funding, preparing scholarly communication, and of course research. Researchers are constantly intertwining themselves with teaching and learning as part of the research landscape. It follows that research-support librarians have to draw an intricate new map of support and services for researchers in order to increase productivity in research and scholarship. Their role in supporting research is self-evident, and cannot be questioned.

Moreover, research-support librarians need to develop personal contacts with researchers. Many benefits result from adopting a proactive and user-centred

approach. Only by engaging in a dialogue with the research community and actually listening to what they say can research-support librarians understand how the library and information service could meet researchers' requirements. Arguably, researchers are more likely to be convinced of the value of the contributions of research-support librarians if these librarians demonstrate their competence, professionalism, and expertise.

The demand for this enhanced role for research-support librarians is inevitable and growing. If researchers are not to look elsewhere, the professionals need to be quickly and fully prepared and equipped with the competencies to support them. Issues impeding the development of research support include the perceived self-sufficient image projected by academics, with librarians lacking the competencies and confidence to extend research support to researchers.

Research-support librarians may also struggle to anticipate how they can help researchers because they themselves are unsure of the type of support required. They may report a high level of anxiety and lack of knowledge associated with research data topics and scholarly communication. Research-support librarians need to move away from a passive, reactive role to a more active role in which they can anticipate as well as respond to demands from researchers.

With the shrinking of budgets and deterioration of funding allocations for instance on collections development, the 'do more with less' mantra or alternative is inescapable. Projects and services have to go on despite time and budget constraints. Increasing financial pressure on libraries is largely due to the increasing numbers of books and journals published each year, the rapid increases in periodical prices, which can lead to a cancellation of subscriptions, and budget increases, which have not been able to keep pace with these developments. The new demands placed on libraries as a

result of recent developments in information technology include the possibilities for electronic document delivery, providing online catalogues and database facilities on a shared basis, and electronic publishing.

Hence, research-support librarians need to transform their knowledge, skills, and attitudes and identify which competencies they are lacking in order to fill in any gaps. They need to learn and relearn, self-directly or by attending in-house or external training courses, in order to understand their competencies. They have many of the soft skills that they need such as communication, connecting users with information, and keying into the important networks within the university. They can also re-purpose many of their competencies such as in the areas of research data management.

Apart from these competencies, research-support librarians need to possess the competency of exploiting the resources, which are available, making them accessible to researchers both in physical terms and through developing an understanding and knowledge of how to maximise the value of resources. Other ways to be competent include being self-directed and taking responsibility for decisions. Experience and motivation need to be recognised by library management, with library professionals focusing more on the process and less on the content being taught. Strategies such as case studies, role-plays, simulations and self-evaluations have been found to be most useful in elevating the competencies of research-support librarians. Library management should adopt a role of a facilitator or resource rather than an instructor or manager.

In sum, in order to support research and researchers effectively, research-support librarians must be prepared to learn and develop. Reading and professional engagement will enhance their competencies; they should also take time to reflect on work, not only after completion, but also while it is in progress. Accreditation of

continuing professional development activities and additional postgraduate qualifications are additional ways of expanding horizons and developing competencies. Involvement in research and other scholarly activity can enhance the work of research-support librarians.

1.2 BACKGROUND TO THE PROBLEM

Knowledge economies survive when workers' knowledge is produced as well as distributed and information is gathered from technological resources. However, for a knowledge economy to thrive, these resources must come together through research and development to make jobs more efficient. In Malaysia, the knowledge economy era, which began in the year 2000, has focused on developing knowledge workers through extensive research components in the local higher education system (Singh, Schapper & Mayson, 2010).

Undeniably, the university plays a pivotal role in the knowledge economy and has the responsibility of creating value through access to knowledge. This shift to the need for knowledge began at the turn of the 21st century, when Malaysia moved from an industrial- to a knowledge-based economy. The focus at this time changed from training skilled workers to the creation of knowledge workers who could build the nation's economy for greater global competitiveness (Altbach, 2002; Altbach & Knight, 2007; Altbach & Teichler, 2001; Bakar, 2008; Douglass, 2007; Kaur, Sirat & Azman, 2008).

Launched on 7 April 2015, the Malaysia Education Blueprint (Higher Education) or MEB (HE) is considered to be the catalyst to achieve this vision. Outlining ten shifts to spur continued excellence in the higher education system, the MEB (HE) focuses on 'high-tech, high-touch' interventions and on strategies that

have the potential to put Malaysia on the world map. One of the routes to global prominence is by attaining excellence in research as indicated by world university rankings. Rankings are generally weighted heavily towards research output; for example, citations per faculty, number of papers in top journals, and the value of the *h*-index (Ministry of Education, 2015).

In addition, universities should pursue increased involvement in research and development within their local communities. This can be done through industry linkages, and community engagement projects and funds. Through such outreach, universities will become engines of economic opportunity and innovation in a way that invigorates the educational process and builds entrepreneurial leaders (Birx, Anderson-Fletcher & Whitney, 2013). The research function of the university matters because the general advancement of knowledge comes through research-based acts of discovery (Mintrom, 2008). Research conducted by universities adds to the shared stock of human knowledge and this knowledge is useful for creating a better world through its application and what results from that application (Kaufman, 2001).

For that reason, the Malaysian Ministry of Higher Education encourages all local Institutions of Higher Education (IHE) to position themselves accordingly and to aspire towards excellence based on their research strengths and focus areas. They are also encouraged to partner with industry, government, and local communities to incubate, develop and commercialise ideas, and establish supporting systems such as technology transfer offices and mechanisms for co-utilisation of facilities. Further, IHEs are encouraged to strengthen their role as a conduit for innovation and as solution-providers for other stakeholders (Economic Planning Unit, 2015). The government on the other hand will facilitate the development of innovation ecosystems in selected strategic areas that are critical to the nation's economic growth.

Irrefutably, research cannot occur unless it is supported by a variety of resources, and one of the physical resources is the adequacy of library facilities (Mintrom, 2008). An enduring metaphor for the academic library is that it is the ‘heart of the university’. The library provides consultancy, research support, and publication delivery services in helping users to obtain information and use the library effectively. It also provides reference services based on information from various resources and offers researchers support services in scholarly publications and basic guidance on matters relating to copyright, plagiarism, and intellectual property. In addition, the library-management team ensures that all aspects of human resources are systematically managed, accurate, efficient, and ongoing.

Library management should also manage the development and competencies of staff members who are carrying out important and essential tasks. Staff development is vital so as to orient, train and teach, through a systematic approach, the library staff members to work together to serve their customers. It is also vital for reshaping attitudes towards becoming more competent and helping staff members to become more aware of current trends. In short, staff members contribute heavily to the library’s success and failures.

Therefore, good library and information services are an essential underpinning for research. Success in research, at both national and institutional levels, depends critically on the quality of the information services to which researchers have access (Research Information Network, 2008). Libraries must gear up and get involved in providing and engineering services that assist in the processes of research in the full array of environments and rethink the services they provide by taking a researcher-centred view (MacColl, 2010; Research Information Network, 2008). There is also a need for much better communication and engagement between research-support

librarians, researchers, and managers at all levels in IHEs (Research Information Network, 2008). This is because a library is a home for scholarly communities that provides a sense of order for scholarly research.

Moreover, research-support librarians must make themselves visible in the processes surrounding academic research. They have to play their part in supporting learning, enhancing teaching, improving research, providing services and anticipating the needs of academic researchers. By helping to drive research, learning and teaching outcomes, librarians gain greater visibility and respect. In order to capitalise on the opportunity to update their roles, research-support librarians should possess a compendium of competencies.

The question is how research-support librarians ought to respond and engage in these matters. In an alarming study by Preer (2001), it was discovered that experts and decision-makers tend not to recognise and acknowledge the contributions that libraries and research-support librarians make in academia, nor include them in their research and reports. Although it has been eighteen years since these findings were published, they remain relevant to the present scenario and it is disheartening to accept this fact.

Although research-support librarians may still be providing significant value to their institutions, the value of their service is arguably decreasing. In another scenario, support-staff members and students frequently carry out librarians' responsibilities (Neal, 2006). This is an area of concern for those concerned with the information strategy of the modern campus, but it is of particular importance to the library itself; if attention and support fades from the library, its ability to contribute to the intellectual work of the campus diminishes and its continuing institutional well-being may be threatened. Moreover, if research-support librarians take a passive role, this will only place them in an uncertain position (Michalko, Malpas & Arcolio, 2010). The

implications of these trends for the academic library workforce and for the conditions of the academic library workplace need an in-depth study.

Another issue is the tendency of academic libraries to hire a growing number of individuals to fill professional librarian positions who do not possess a Master's degree in Library Science (MLS) (Neal, 2006). These non-MLS professionals hold a variety of qualifications; for instance, advanced degrees in subject disciplines, specialised language skills, teaching experience, or technology expertise. They are assigned to areas such as automation, human resources, fund-raising, publishing, instructional technology, facilities management, and other specialties that demand diverse educational backgrounds. This suggests that libraries often have the experience and skills in areas of interest to the various university faculties, however they do not necessarily have the depth or breadth of expertise required to increase value for their institutions. Accordingly, libraries should consider hiring or developing professionals with the requisite skills (Case, 2008).

There is also a new group of librarians with Master's degrees in Library Science (MLS) who have received their degrees through distance rather than residential programmes. Elsewhere, in 2003 a group of research libraries initiated efforts to bring Doctor of Philosophy (PhD) holders into librarian assignments. This focused the profession's attention on the persistent trend to populate the professional ranks in academic libraries with people from alternative, that is, non-traditional, academic backgrounds. It once again raised fears about the integrity of the MLS degree and the professional character of librarianship.

A related phenomenon that should be scrutinised is the increase of new professional assignments in academic libraries and the formation of professional-level classified management or technical assignments in jobs once held by librarians. These