ANTECEDENTS OF STRATEGIC THINKING AMONG ACADEMIC LIBRARIANS IN DRIVING INNOVATION AND LEADING CHANGE

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Abstract: *This exploratory case study intends to identify the antecedents of strategic thinking from the insights of librarians and its practice in Malaysian research universities. This study will analyse output derived from demonstrating strategic thinking ability among librarians, including evidence of the success of innovative projects and services initiated by university libraries. This will be useful to validate that innovativeness endeavours are highly encouraged in academic librarians' workplaces. Strategic thinking leading to innovative behaviours is calculated as a parameter in measuring academic librarians' job performance. To meet the objectives, focus group interviews were first conducted with ten informants among academic librarians in order to discover their conceptions, beliefs and perceptions regarding antecedents and inhibitors of strategic thinking, within the universities under study. Then, document analyses were used to check and analyse the parent organization visions with regard to innovativeness and librarians' strategic thinking behaviours. This included official library innovation documents and librarian job specifications. The data collection methods provided significant evidence to show that the Malaysian universities' academic libraries are dynamic, as strategic thinking and innovative behaviours take place to a certain extent with incremental award-winning innovations. This paper is considered a new extension and in-depth study in discovering the strategic thinking ability and has implications for innovative behaviour among Malaysia's librarians.*

Keywords: *Strategic Thinking, Innovative Behaviour, Librarian, Research University, Job Performance*
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Introduction

In today's global business and economic systems, strategic thinking is a high value asset for organisations pursuing a competitive advantage. Such strategic thinking is the foundation for both strategy and innovation as it builds a vision for future prior to the linear process of developing a strategic plan. From the perspective of library vand information management field, librarians who embrace the latest strategic insights are able to scan an environment to look for opportunity signs and predict challenges in librarianship's future. As part of the business

ecosystem, libraries and their leadership can take advantage of strategic thinking to move the library forward and align with organization's vision.

It has been widely discussed that since entering the new millennium, academic libraries operate in a high-velocity environment in which information demand, competition, technology, access and copyright issues are constantly changing (Gichohi, 2015). Consequently, these phenomena demand extensive empirical research, particularly on how academic librarians should strategically respond for profession's sustainability. In addition, there is a call to tackle the scarcity on the adoption of strategic management practices and systems as well as to response the consideration for both values and evidence of strategic management in librarianship landscape. Libraries must creatively find strategic solutions to stay relevant without setting foot in a brick and mortar library or stagnating within their traditional roles' parameter (Troll, 2002).

In response to fill the gap of real demand to explore strategic thinking ability and its impact on the practice of creative services in academic libraries, this paper examines the extent to which strategic thinking influences innovative behaviour among librarians working in public research universities (RUs). Another objective is to analyse of an output derived from librarians' strategic thinking as an indicator of successful innovative projects/services initiated by them. Although several empirical studies already exist in discussing strategic thinking with some elements of the library services, it could be argued that this paper is the first of its kind as it specifically discusses the strategic thinking skills and practices from the Malaysian perspective. This study also benefits other researchers to intensify their reference and induce further research on the strategic thinking and its consequence for service innovativeness in a public university. Academic librarians will find the analysis of data helpful in their initiatives towards crafting service innovation.

The following section presents a review of the related literature. This is followed by a description of the research method used to facilitate the empirical exploration according to the research objectives. The cross-case analysis revealed the practice of strategic thinking and it influences towards innovative behavioural in selected libraries. Finally, the limitations and recommendations for further research are highlighted.

The Demand and Issues to Think Strategically
From 2006 to 2010, Malaysia took big steps to boost the achievements of local learning institutions and public universities by giving the mandate as RU status to five public universities. This development is seen as a catalyst to trigger healthy competitive nature within the public universities and it is hoped that this development will increase quality and quantity of countries invention and innovation (Ramli et al. 2013). The academic libraries attached to these five RUs serve two complementary purposes: (1) support the universities' curriculum; and (2) support research, innovation and invention of the university faculty and students.

Higher education in Malaysia is a highly centralized enterprise within the Ministry of Higher Education (MOHE), including the operation of policies and plans for universities. The issues of librarians to embrace strategic thinking and demonstrate innovative behaviour emerged because of the Malaysian Quality Assurance (MQA) Policies when the MOHE translates the national economic and social policies of the Economic Transfer Plan (ETP) and the National Innovation Model (NIM) into the public universities plans in accordance with the national aspirations and objectives. MOHE formulates policy guidelines for the implementation and management of universities libraries programs to align with the roles and responsibilities of their parent universities. In a centralized administration system of education such as

Malaysia's, academic librarians are largely accountable to their respective universities and to MOHE. Hence, academic librarians respond to the request, demands from the top, and follow the directives given to them. In other words, their priorities at work are typically determined by the expectations laid out by higher administrative authorities (Sa'ari, 2018).

Since academic librarians operate in changing times, they must be intimately engaged in and support the full life cycle of knowledge discovery, use, preservation, and sharing in diverse contexts of the university's mission. Academic libraries have transitioned from a knowledge service provider within a single university to become collaborative partners within the broader ecosystem of higher education (Association of Research Libraries, 2014).

However, the integration of the strategic thinking skills, reinforce changes management and innovative behaviour which require proactive, creative and critical thinking are not as easy task for librarians. It is a challenge to shift their existing conception, beliefs and perspectives about the new strategic working process as opposed to their traditional professional "benchmarks". They have also to hash out a somewhat unknown future, given the changes in resources, technologies, and the fact of information explosion and information overload. Issues of scholarly practices and scholarly communication; the rapid migration of content to digital environments and the attendant behavioural changes of students, faculty, and others; shifts in pedagogy toward inquiry, critical reflection, and evidence-based reasoning; issues of intellectual property and author rights; data mining and e-science; and assessment of learning and program outcomes are just some of the complex challenges that libraries must address internally, within their institutions (Gibson & Dixon, 2011).

Strategic Thinking, Innovative Behaviours and The Antecedents
Mintzberg (1994) points out that strategic thinking will produce strategic planning which involves the systematic programming of pre-identified strategies. Bonn (2001); Goldman, Scott and Follman, (2017); Nuntamanop, Kauranen and Igel, (2013) also agree with this view and states that the strategic planning process takes place after strategic thinking. As strategic thinking is a skill that acquires as much a mind-set as a set of techniques, many strategic challenges facing academic libraries are causing many their leaders to question the traditional service role in favour of an 'engaged partner' role—both on their own campuses, as well as beyond their institutions. Consequently, libraries face competition for the time and attention of their clientele, and should extensively focus on communication, strategic thinking skills and expertise which might be needed (Eldridge et al. 2016).

Gibson and Dixon explain that academic libraries are urgently required to emphasise a "strategic alignment" with institutional mission in a closely attuned way, as essential to deciding upon engagement and outreach activities. The debate about the strategic thinking skills and competencies in library invite many insights into different researchers' opinions. Knight (2015) contends that a strategically-thinking librarian is one of the most required competencies to help an organization configure resources within a dynamic competitive environment, serving market needs and satisfying patron expectations as well as to maintain its strategic direction. Many other studies have also stressed the importance of re-starting the checklists of training and professional development of librarians, because these are crucial elements in ensuring positive library stakeholders experiences and substantial improvements in future capacity and performance (e.g. Lockhart & Majal, 2012; Ahsan, 2014; Qutab et al. 2016).

In sum, strategic thinking is about constructing creative new ideas and designing actions on the basis of new learning. This also involves discovering novel, imaginative strategies for gaining competitive advantage and for envisioning potential futures significantly different from the present (Heracleous, 1998; Van Der & Yap 2015; Guastello, 2013; O'Connor, O'Brien & Jin, 2014). Based on the work of others, Liedtka (1998) developed a model defining strategic thinking as a particular way of thinking, with very specific and clearly identifiable characteristics. The model consists of five key elements, which are: (i) systems perspective/system thinking, or the ability to clarify one's roles and the impact of one's behaviour within the larger system; (ii) intent-focused, or the ability to leverage energy, focus attention and concentrate in order to achieve a goal; (iii) intelligent opportunism, or the openness to new experiences which allows one to take advantage of alternative strategies; (iv) thinking in time, or the ability to connect the past, present, and future as critical inputs; and (v) hypothesis-driven, or the ability to think and judge critically. Solid cognitive ability aids in determining, shaping and achieving an inspired or desired future, and involves constructing creative new ideas and designing actions on the basis of new learning (Smith et al. 2008; Dyer et al., 2009; Celuch et al. 2017; Sledge & Fishman, 2014; Matthews & Brueggermann, 2015) may help the academic librarians generate and use innovative resource combinations to create value from their differing skills and abilities.

The skills and abilities associated to strategic thinking emerged from the above discussion of cognitive ability of system thinking; intent focus; intelligent opportunity and thinking in time. All of these skills are suggested to lead to innovative behaviour among academic librarians. Innovative behaviour is a performance and activity demonstrated by employees in organizations in order to create new process, products or improve administration processes and a vital contributor to the effective functioning of organizations (Amo & Kolvereid, 2005; Osman, Shariff & Lajin, 2016; Vargas et al. 2017). The antecedents of innovative behaviours were used in this paper namely: (i) idea generation consists of the traits of search new ways and improve current tasks (Kanter, 1988; Johnen, 2013; Mumford, 2010); (ii) idea championing refers to abilities to encourage key person to be innovative and influencing other employees by pushing and negotiating (Zaltman, Duncan & Holbek, 1973; Kundu & Roy, 2010); and (iii) idea implementation defines as a considerable effort from individuals to transform ideas into practical propositions. It includes behaviours such as developing new products or work processes, testing and modifying them (Kanter, 1988; Van de Ven & Rogers, 1988; West & Far, 1990; Johnen, 2013).

From the above literature analysis, we may conclude that strategic thinking is a process that defines the manner in which people think about, assess, view, and create the future for themselves and others in their organizations. It is an extremely effective and valuable tool. The librarians under study can apply strategic thinking to arrive at decisions related to their work in terms of innovative and entrepreneurial behaviour.

Methodology
This study used a qualitative interview method which focused on gaining an understanding from the academic librarians' points of view, experiences and interpretations. Symon and Cassell (2012) claimed that qualitative researchers often struggle with the question of what a case is and where its boundaries. According to Tashakkori and Teddkie (2010), a case could be one person, a program or a subset of organisations being investigated. Creswell (2007) define a case as the unit of analysis, while Tashakkori and Teddkie (2010) claims that precise definitions of cases or case studies cannot be made. As such, a case can be loosely defined as a specific, complex, functioning thing (Symon & Cassell, 2012). One method often applied in

complex, multi-location, multi-organisation studies is to define a unit of analysis at large as a main case and define sub-units as embedded cases that can be used for data comparison (Saunders et.al 2012; Yin 2009). As no sub-units within organizations are analysed in this study, only main cases are used. Therefore, two selected Malaysian public universities of research university status form the unit of analysis employed in this study. A design with two case studies (include one pilot case study) with twenty-four in-depth interviews is selected as it is considered sufficient and practical as they are within the range suggested by the experts (McPhail 2003; Miles & Huberman 1994).

The strategic thinking was measured consisting of system thinking, intent focus, intelligent opportunity and thinking in time. These antecedents are widely used in investigating and rating strategic thinking at individual level. Based on this, it was possible to explore academic librarian's strategic thinking competencies within their routine works. To allow purposive sampling suitable to achieve the objectives of the study and provide answers to the research questions, only two of five Malaysian public research universities are chosen. These universities over the years have been reputable in ten areas of performance, including research impact, internationalization, products, services and overall achievement associated with innovation. The core specialization of CASE A is agricultural science, while CASE B's specialization is science and technology. This fact may have an impact on the strategic thinking competencies of both cases. Only ten professional academic librarians were identified as informants in order to reduce problems of large population of a total 1,355 professional and managerial staff of academic libraries in Malaysia (Perpustakaan Negara Malaysia, 2016).

The interview protocol checklist was prepared to conduct the focus group discussions. The checklist contains all the necessity requirements for the researcher to be get ready with before the interview sessions were carried out such as identification of interviewees, research ethics, letter of approval from the universities' authority, document on consent to participate, interview procedures and processes, the instructions to the interviewees, the key research questions, field work note book for the researcher's comments and reflective notes. Semi structured questions were built from the literature review the interviewees were briefed about the purpose of the study and requested to allow MP3 recording of the interviews and also on the participation consent form with the aim to assure of their personal anonymity and the confidentiality of the responses and the raw data (Saunders et al. 2012). The interviews conducted lasted between 50 minutes and one hour the focus group discussions formed part of the instruments for gathering qualitative data from two focus group discussions, otherwise known as "guided small group discussions" (Krueger & Casey, 2009). All two focus group discussion sessions were led by the researcher in collaboration of the university administrative authority. They were aimed at stimulating discussions on the entrepreneurial competencies leading to innovation among the academic librarians. The focus group approach was regarded as particularly suitable instrument for this study due to such methodological advantages (Krueger & Casey, 2009) as cost and time effectiveness, high face validity, potential for valuable group interaction, and immediate results. The indexing was carried out by assigning a unique code to each informant, for each transcript and each segment in the transcript which is important in order to retrieve original data and to cross-reference information while writing and reporting. As part of cleaning the data, all notes, data in the interview protocol forms and note books and diaries, and observation notes were arranged in order. All RUs documents and the policy documents were categorized and classified separately and indexed as well.

The academic librarians at both locations have at least a bachelor's degree in Library and Information Science and are in a similar category S41 with 10 to 15 years of service. CASE

has is two males and three females, whereas CASE B has one male and four females. The age range for both locations is between 35-45 years old. All librarians maintained the Key Performance Index of 90% to 95% of overall achievement as shown in Table 1 below.

Table 1: Informants Profile

Characteristics of Informants	CASE A					CASE B
	Service Grade	Working Experience (years)	Annual Work Assessment (%)	Service Grade	Working Experience	Annual Work Assessment
Informant 1	S41	11	91-95%	S41	12	91-95%
Informant 2	S41	13	91-95%	S41	11	91-95%
Informant 3	S41	11	91-95%	S41	10	91-95%
Informant 4	S41	10	91-95%	S41	13	91-95%
Informant 5	S41	12	91-95%	S41	14	91-95%

Findings and Discussion

The next section contains the following: (i) the cross-case analysis of data for CASE A and CASE B which revealed the strategic thinking antecedents' in leading innovative behaviours from the academic librarian's perspectives; and (ii) innovation products revealed by the academic librarians of Case A and Case B.

Cross-Case Analysis of Data

System Thinking

Strategic thinking refers to being able to understand implications of strategic actions. A strategic thinker has a mental model of the complete end-to-end system of value creation, his or her role within it, and an understanding of the competencies it contains (Bonn, 2001; Goldman, Scott, & Follman 2017; Kauranen & Igel, 2013). In organizations, systems consist of inputs, transformations, outputs, feedback loops, goals, stakeholders, and external influences that operate together to make an organization healthy or unhealthy.

A key feature of the system thinking approach perceived by the Informants in CASE A is their emphasis on effectiveness thinking in order to practice innovative behaviour. They concentrate on delivering against the central purpose of their service and were able to redesign their system in accordance with systems principles. The systems thinking intervention involved conscientious study of the demand in a 'longer than usual' process which proved to be very valuable for the redesign of systems and work processes. Becoming intimately familiar with the customers and demand is at the heart of this approach. For example, the development of a new ways of books processing helped to reduce processing time and processing costs by RM32,596.50. Another project was speeding up the binding process of library materials by developing a gluing machine called GluMac. With this machine, the binding cost was reduced to 80% cost saving of RM61, 632.00. The creation of a Portable Hot Stamping Platform produced an efficient way of tooling library materials.

The informants in CASE B believed that they have developed a clear understanding of their role, required capabilities, responsibilities and contribution within a team work, an ability to

determine the direction and focus through the implementation of strategic planning which assist them in decision making process which helps them to focus on resources and efforts and practice their entrepreneurial and innovative skills. By adoption such traits informants at CASE B were able to create a new storage and dissemination processing, the creation of a web-based database of bibliographic records, efficient process to locate books on the shelves, research index measurement and KPI based on BS 11260 among other products they perceived as innovation.

Intent Focus

Intent focus means becoming more determined and less distractible than rivals in the marketplace. Crediting Hamel and Prahalad with popularising the concept, Abraham (2005) describes strategic intent as "the focus that allows individuals within an organization to marshal leverage their energy, to focus attention, to resist distraction, and to contrite for as long as it takes to achieve a goal.

The data described intent focus practiced by informants of both CASE A and CASE B as readiness to control and manage their own work and the work of others so that it results into a real value added. Intent focus manifests itself as a complex of knowledge, skills and personal traits driving the librarians' performance. Intent focus describes what makes people effective in the given role. As perceived by the, intention is a clear statement of one's goal, vision and missions, which acts as conscious guidance of underlying decisions, thoughts and actions and later, influence their work outcome or job performance (Liedtka 1998; Goldman, Scott and Follman, 2017; Nuntamanop, Kauranen and Igel, 2013).

The clear intention inspires informants of CASE A and CASE B to focus and manipulate of quantifiable energy to work on the desired outcomes. With an intention to fulfil the demands of users, they focused on user's requirement especially in providing required information even though they admitted it is a challenging work because the sources should be provided from variety format of sources and from multiple disciplines. These traits enable them to practice their entrepreneurial skills leading to innovative behaviour for example by developing a database 'ACQLicks', which is a proactive acquisition system used to monitor the progress of publication purchase processing, developing a memory portal, Sistem eBorang PSAS, upgrading Subject Guide Portal, and the Malaysian Institutional Repository which is ranked second in Malaysia, having been awarded an innovation award in 2013, and many more.

In addition, intent focus had helped informants of CASE B to leverage their energy and efforts to be innovative with the establishment of data mining task of user demographic profiles and Ideas Bank, and to establish formal procedures and standards for collecting reference statistics. A workplace design creates the environment conducive for practicing entrepreneurial skills and innovative behaviour.

Intelligent Opportunity

Intelligent opportunism means being responsive to good opportunities. This means that a well-articulated strategy to channel organisational efforts effectively and efficiently must be balanced against the risks of losing sight of alternative strategies better suited to a changing environment (Chussil, 2005; Hussy, 2001; Mckeown, 2011; Bonn, 2001; Goldman, Scott, & Follman 2017; Kauranen & Igel, 2013). The informants of CASE A believed that by allowing a space for corrective performance, willingness to accept and engage for new task is one of the factors to enrich experience and for getting new insights or recognising new chances for career growth and development. They perceived that comments and critics inspired them to make an

effort to improve their work such as the library website as an important tool to promote library resources and to place their library in cyberspace's map. Demands from users to solve problems quickly make them to think in innovative ways to accomplish the tasks.

The informants of CASE A mentioned that an experience gained through their involvement in collaborative research project with academician, which enhanced the research process as the research finished faster than expected. As an increasingly interdisciplinary research environment, librarians are well-positioned to facilitate linkages within and across academic disciplines and to aid in the dissemination and ingestion of information and data. The informants defined entrepreneurial skills as practicing entrepreneurial activities leading to incremental innovation – making of something new, at least to the institution. They also stated that innovation needs what is called 'private space for criticism' to flourish. Individual characteristics that were cited as important included the creation and sharing of new knowledge, being entrepreneurial, and trying to be innovative. It appears that the informants of CASE A perceived that incremental innovation should be ongoing in order to fulfil the RU requirements, frequently through a process of bringing in new ideas and concepts from other organizations and institutions.

Conversely, informants of CASE B perceived that top management put their trust in encouraging the librarians to generate ideas through conversations, brainstorming sessions, and idea-sharing to strengthen teamwork. They were able to develop IR and digital preservation projects in collaborative projects with the IT department.

Thinking in Time
Thinking in time means being able to hold past, present and future in mind at the same time to create better decision making and speed implementation. "Strategy is not driven by future intent alone. It is the gap between today's reality and intent for the future that is critical (Hussy, 2001; Chussil, 2005; Mckeown, 2011). Scenario planning is a practical application for incorporating "thinking in time" into strategy making (Schoemaker, 2012; Abraham, 2005).

The informants of CASE A mentioned that they should be able to see consequences of library environment based on the current trends to fulfil its function as a contemporary showcase for literary, entertainment, educational space. Nevertheless, whatever the trends demand by users, they are persistent in maintaining the role of the library as a vibrant central resource for the university which supports scholarly communication within and between higher education institutions. On the other hand, they predicted that someday the library will include stored resources as well as with furniture and wireless connections. This is associated with strategic thinking, which is defined as a mental or thinking process applied by an individual in the context of achieving success in organizational endeavour. As a cognitive activity, it produces thought (Liedtka, 2000, Mckeown, 2011).

Informants of CASE B on the other hand perceived thinking in time associated with strategic thinking of self-assessment which involves the generation and application of appropriate coping skills and knowledge in strengthening the pedagogy knowledge and curriculum development, digital preservation and related IT competencies as well as interpersonal skills which gave them insight and opportunities intended to create competitive advantage for an organization. This can be done individually, as well as collaboratively, among key personnel who can positively alter an organization's future. Group strategic thinking in time may create more value by enabling a proactive and creative dialogue; where individual gain other people's perspectives on critical and complex issues (Schoemaker, 2012; Abraham, 2005). This is

regarded as a benefit in highly competitive and fast-changing landscapes such as that of the RUs.

Table 2: Strategic Thinking Perceived by Academic Librarians of CASE A and CASE B

Antecedents	CASE A	CASE B	Innovative Behaviour
System thinking	➢ Able to discover, prepare and envision future for competitive advantage ➢ Creative and provocative in collaboration works ➢ Ideas generator and critical thinker ➢ Planner for continuity of learning and new knowledge ➢ Mission-oriented	➢ Clear thinkers to lead themselves and others ➢ Responsive to team work ➢ Self-directedness and self-controlled and responsible for their decisions ➢ Resourceful ➢ Environmental analyst and strategic decision makers	Idea generation
Intent focus	➢ Ambiguous ➢ Highly consciousness ➢ Openness to new experiences ➢ Discipline and systematic ➢ Able to optimise energy and resource	➢ Highly concentration on a single goal. ➢ Time saver	Idea championing Idea implementation
Intelligent opportunity	➢ Willingness to improvise ➢ Enthusiastic and confidence to accept hardship though new task assigned ➢ Opportunity seekers through collaborative tasks ➢ Able to share knowledge or expertise.	➢ Knowledge sharing attitude ➢ Participate in conversation and brainstorming session ➢ Influencer to gain trust ➢ Knowledgeable in IT to get connected or collaborated with IT personnel	
Thinking in time	➢ Identifier the standard of user's satisfaction and quality of services ➢ Predictor of future library ➢ Innovator through global ICT innovation network.	➢ Strengthen pedagogy knowledge and curriculum development ➢ Competent in ICT ➢ Re-branding personality ➢ Self-assessment	

Innovation Products Revealed by the Academic Librarians of Case A and Case B

As revealed by the data, informants of CASE A and CASE B have demonstrated strategic thinking skills based on the antecedents of system thinking, intent focus, intelligent opportunity and thinking in time leading to innovative behaviour were evident by the various products and processes in Table 2. CASE A innovations by type (technical or administrative) and by associated attributes (product or process). Using this taxonomy, the libraries' innovations as cited by the informants are summarized in Table 3.

Table 3: Innovations of CASE A and CASE B by Type and Attributes and Awards

Types of Innovation	CASE A		
	Product	**Process**	**Award**
Technical	Institutional Repository	Creation of new quick acquisitions processing	Excellent library award 2011
	Memory Portal	Creation of new conservation process	
	Upgrading link of international information system	Efficient process of forms	Best department in RU
	Library Portal	Service- provide lecturers, students and researchers with specialised information	Springer e-book and e-journal High Usage 2012-13
	Electronic Form	e-journal high usage	Innovation Award 2013
	New Subject Guides	Creating new customers' services.	Client Service Award 2013
	Subject Guide Portal	Creation of efficient tooling process	PTJ Most Active Award 2013
	Portable hot stamping platform	Creation of fast gluing process for conservation work	Emerald group Publishing High Usage Award 2012
	Online cataloguing		
	Quick Reference Link		
	Upgrade Book Drop		
	These database system		
Administrative	Innovations world include products that support the administrative structure. There were none cited).	A standing R & D budget	

CASE B			
Technical	**Product**	**Process**	**Award**
	Institutional repository	Creation of new storage and dissemination processing	Quality Services Award 2015
	Research and Development Information System – A data bank system	Creation of web-based database of bibliographic records	Information Technology Award 2015
	Union Catalogue of Malaysia	Creation of efficient system for library loan	Webometrics RU award Non-Academic Category 2015, 2014
	Interlibrary Loan System	Creation of web-based database of bibliographic records	Winner for Lean Management Best Performance 2015
	Books location system	Creation of efficient system to locate books on the shelves	Best Group in Lean Management Category
	Idea Bank Portal	Improve current task for new ideas	95th in Top Institutional Ranking of World Repositories-RU Institutional Repository
	KPI based on BS 11260	Saving cost for new processes on KPI measurement	First place repository in 4th consecutive years in a row in Malaysia
	Sistem Aduan Masalah Aplikasi	Quick processing of complaints	3 Gold Stars – ICC MPC Malaysian Convention (National Level) 2012
		Research index measurement	First Runner-up ICC Convention for Malaysian libraries
	KPI based on BS 11260	Saving cost for new processes on KPI measurement	First place repository in 4th consecutive years in a row in Malaysia
Administrative	(Innovations world include products that support the administrative structure. There were none cited).	A standing R& Budget. A revenue producing unit Budget allocation for IR Business plans for new projects Associate university librarian for national union catalogue	Innovations include products that support the administrative structure. None cited)

The data also revealed that even though innovative behaviours among the academic librarians were evident, the entrepreneurial knowledge and skills of the academic librarians involved in this study at CASE A and CASE B conceptually indicate that the public sector operates with different obligations, accountabilities and objectives from the private sector, several working definitions for corporate entrepreneurship in the public sector (or public entrepreneurship) have been proposed. Roberts (2002), for instance, defines public entrepreneurship as the generation of a novel idea and the design and implementation of the innovative idea into public sector practice. Alternatively, the approach of Morris and Jones (1999, p. 74) describes public sector entrepreneurship as "the process of creating value for citizens by bringing together unique combinations of public and/or private resources to exploit social opportunities".

Innovations proofs in Table 3 developed by CASE A and CASE B that emerged from the data gathered from interviews with the informants have been implemented in a majority of academic libraries regardless of status. Several of the cited innovations appear to be routine and common in today's world, although the specific processes and products were new to CASE A and CASE B at the time of adoption. Even though there are likely administrative-product innovations, none were cited. Such innovations might include software products that are brought into the library than can help facilitate the management of a large, complex organization. Innovations that go beyond the traditional library practices and services that relate to entrepreneurial skills, such as services that can create significant revenue that flows directly into the library's coffers, were not cited. However, a partnership or collaborative revenue as suggested as a potential derived from strategic thinking producing project which may result multi-million revenues were nonexistence.

Conclusion
This study was carried out to achieve the objective of exploring strategic thinking skills among academic librarians. The data from CASE A and CASE B shows considerable evidence from the librarians involved in this study that the Malaysian RU academic libraries are dynamic in which the demonstration of strategic thinking skills and practice leading to innovative behaviours have taken place to a certain extent. Innovative behaviour was being practiced in both cases within the parameters of their professional norms, focusing on processes that contribute to the bureaucratic sluggishness inherent in the traditional structure of the academic library. This is evident from the data, not only in the recognition of the need to be strategic thinking and innovative, but also in the diversity of roles and responsibilities cited and the progressing innovations projects and initiatives undertaken. In terms of the RU library culture, this progressive of incremental innovation was acknowledged as a positive behaviour by librarians of both RUs'. However, in the two Malaysian cases, both cases illustrated the similar riddle of complex questions that have no clear solution due to the fact that strategic thinking is multifaceted and complex to explore and measure, and often approached as purposive behaviour directed towards a specific event. In this study, the purposive behaviour of the academic librarians is directed towards a specific event which is common to both cases which is fulfilling the mission and continuing maintenance of the goals of the RU status within the world ranking exercises. The beliefs of the librarians of CASE A and CASE B, which are associated with the antecedents of strategic thinking, were perceived as helping them to generate considerable innovations. Based on these various concepts, the informants demonstrated a high degree of agreement and recognition of the strategic challenges presented by the RU requirements, particularly the strategic necessity of sustaining the on-going assessment of the RU status that drove them to be entrepreneurial and innovative.

Limitation and Recommendation

The limitations of the study include:

The study explores strategic thinking and innovative behaviour among academic librarians of selected RUs in Malaysia. Therefore, the explanations of the findings are derived from interviews are limited to public universities and from the perspective of government servant. Since only two RUs gave permission to conduct research, the findings could not be generalized to cover the entire RUs in Malaysia. In addition, the ten respondents were selected from two different RUs by management. Thus, the findings were limited to the points of view, experience and opinions of the academic librarians involved in this study.

The study has not included leadership and coaching factors that may influence strategic thinking of academic librarians.

The richness of the information gathered, and the ability of the triangulation evidence, may be limited by the fact that respondents might not have been willing to share certain information with the researcher due to confidentiality of the information pertaining to the organization. Informants may also be biased in that they may tend to create a positive image or even a negative image of their parent university. These are beyond the control of the researcher and are inherent in qualitative research (McPhil 2003; Cresswell, 2007; Yin 2009).

Related to the scope of research, this study was conducted at the RUs in Peninsular Malaysia. Future research should consider adopting the same theme at private universities with the same core specialization. The differences and comparisons between states in Malaysia can be explored in terms of academic librarian's perspective in strategic thinking and innovative behaviour. This study can be expanded to analyse the factors of strategic thinking in terms of library leadership, religion, science, ethnicity and service grade.

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