EXPLORING THE PROBLEMS FACED BY THE ACADEMICS IN TRANSFORMING UNIVERSITY COLLEGES TO UNIVERSITIES: A PILOT STUDY

Sara Asmawati Shariffuddin[1]
Jamal Rizal Razali[2]
Shahirah Mohd Hashim[1]

[1]Centre of Preparatory and General Studies, TATI University College, Terengganu, Malaysia
[2]Centre for Modern Languages and Human Sciences, Universiti Malaysia Pahang, Pahang, Malaysia

_____

Abstract: Improving higher education provision is one of many agendas of the government worldwide. Despite its diversity and importance, the number of studies on the transformation of tertiary institutions particularly the transformation from university colleges to universities is still lacking. Thus, this pilot study aims to determine whether the academics face problems in the transformation from university colleges to universities, to explore the solutions provided and to test the instrument developed for defects before conducting the main study. Semi-structured interview questions were employed on three participants who was a managing academic, a permanent staff and a contract staff. The pilot study proved to be important in four ways. These include (1) selecting suitable potential participants, (2) categorizing the problems faced by the academics in the transformation from university college to university, (3) reflecting on suitable solutions from the views of the academics and (4) amending the semi- structured interview questions. Seemingly the academics viewed that they faced various categories of problems related to the transformation; hence, solutions were crucial for the academics to remain motivated and satisfied with their jobs. The findings have important implications as they can assist the policy makers and the management of the university college in improving the solutions provided to the academics experiencing the problems prevalent in the pilot study.

Keywords: Academics, Higher Education, Higher Education Institution, University College, University
_____

Introduction

Transforming higher education institutions (HEIs) is a movement initiated by government to improve the service of tertiary education provision. Various efforts are taken by the government in improving different aspects of higher education. Internationally, these efforts can be observed in areas such as higher education policy, quality, funding, research, global rankings, massification, internationalization, vocationalization, stratification, governance and differentiation (Shariffuddin, Razali and Ghani, 2017). Meanwhile in Malaysia, these efforts involve the transformation of various types of tertiary institutions including APEX university, research universities, focused universities, comprehensive universities, polytechnics and community colleges (Shariffuddin, Razali, Ghani, Shaaidi and Ibrahim, 2016). However, not many studies focus on the experience of the academics in the transformation from university colleges to universities. Hence, the main study of this research intends to explore the academics' experience dealing with the problems pertaining to the transformation from university colleges to universities.

More now than ever that the policy makers should acknowledge the stakeholders' needs particularly the academic community who plays the vital role in carrying out its strategic plan of transforming the academic institution. Their academic career advancement and professional growth become more challenging owing to the demands of HEI status transformation. Furthermore, the elevated control over academic activities during the transformation affects the academics one way or another (Musselin, 2007). Even though, the policy makers and the academics sometimes can be at odds as a result of the institutional reform pressure because both communities impose different values on achieving these aspirations (Kwiek, 2015), consensus between the two parties should be found. It is essential so that the objectives of the transformation are accomplished.

The decision to carry out this pilot study was made to determine if the academics face problem/s in the transformation process from a university college to a university, to explore the solutions provided and to test the instrument developed for defects before conducting the main study. Pilot study provides an opportunity for researchers to test the instrument, in this case is semi-structured interview questions. It is also a process which allows the researchers to evaluate and amend the instrument from the participants' feedback pertaining to the questions enquired in the interview session (Creswell, 2012, p.390).

Literature Review

Transforming university colleges to full status universities

Malaysian university colleges mushroom with the enactment of Education Act 1996 which encourages the expansion of private HEIs to meet the needs for tertiary education in the country. Nevertheless, the status of university college as a brand is commonly perceived as being less prestigious compared to the HEIs with full university status. More often than not, the university colleges were considered as the second class higher education provider compared to the full-pledged universities (Abdul, 2006). In fact, it was discovered that the HEIs with university status were able to enrol more international students compared to the other types of HEIs in Malaysia (Migin, Falahat, Yajid and Khatibi, 2015). Hence, this shows the significant value of full university status to the development of HEIs in Malaysia to enrol not only local but also more international students.

Apart from that, the perception may have been influenced by the different criteria of the university colleges and the universities, which are attributed to the extent of the compulsory requirements that university colleges need to fulfil compared to the universities in terms of operation, finance, curriculum, quality, faculty, governance, R&D, infrastructure, students and track record. The requirements are established by the Ministry of Higher Education (MOHE) via Malaysian Quality Accreditation Agency (MQA) and these requirements set a distinction between university colleges and universities (MOHE, 2011). MQA regularly monitors the HEIs so that they continuously to adhere to the requirements and possess the criteria and quality as envisioned by MOHE. Table 1 describes the different criteria between the university colleges and the full status universities.

Table 1: Different criteria between university college and university

Different criteria between university college and university		
	University colleges	**Full university status**
Finance	Have at least RM15 million in capital investment.	Have at least RM20 million in capital investment.
Faculty	Have at least 15% of the faculty members with PhD and 60% with Master qualifications; 60% full-time and 30% part-time teaching staff	Have at least 20% of the faculty members with PhD and 80% with Master qualification; 80% full-time and 20% part-time teaching staff.
Governance	Have at least 40% of the top management possess PhD or Master qualification with minimum 5 years experience in managing an HEI.	Have at least 70% of the top management possess PhD qualification with minimum 8 years experience in managing an HEI.
	Rector/ Chief Executive Officer has PhD qualification with at least 8 years' experience managing an HEI.	Rector/ Chief Executive Officer has PhD qualification with minimum 10 years experience in managing an HEI.
Research	Participation in research is encouraged and not compulsory.	Have allocated at least 30% of operational cost for research and development.
		Have at least 10% of researches presented in local conferences and 5% in international conferences.
		Have at least 3 participations in local research exhibitions and 1 in international research exhibition.
		Faculty members who have served more than 5 years MUST conduct between 6-8 researches, published

		10 articles (with at least 5 are in international journals).
Internationalization	Have at least 10% international students.	Have at least 20% international students.
Quality of Teaching Staff	No Professor or Associate Professor title among the teaching staff is required.	Possess at least 10% teaching staff with Professor title and at least 20% with Associate Professor.
Student Affairs and Welfare	Provide at least RM100,000 annual scholarship for eligible students.	Provide at least RM200,000 annual scholarship for eligible students.
	Accommodation is provided for at least 40% from total no. of students.	Accommodation is provided for at least 60 % from total no. of students.
	Have at least 2 permanent officers at International Student Office.	Have at least 3 permanent officers at International Student Office.
Internal Quality System	Have examination management and evaluation system.	Have at least 40% local experts and 20% international experts as external examiners.

Adapted from: MOHE (2011)

MOHE has taken serious efforts in transforming public university colleges to full status universities to appeal to the expected image that people have on public HEIs as the first class of tertiary in education in the country (MOHE, 2007). Six (6) of its university colleges were transformed to full-pledged universities. Table 2 indicates the list of public university colleges which were accredited with full university status.

Table 2: List of public university colleges accredited with full university status

No.	Currently known as	Formerly known as	Year of Establishment	Year of Conferred
1	Universiti Sains Islam Malaysia (USIM)	Kolej Universiti Islam Malaysian (KUIM)	1996	2007
2	Universiti Malaysia Terengganu (UMT)	Kolej Universiti Sains Malaysia (KUSTEM)	1999	2007
3	Universiti Teknikal Malaysia Melaka (UTeM)	Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM)	2000	2007
4	Universiti Universiti Tun Hussein Onn Malaysia (UTHM)	Kolej Universiti Teknologi Tun Hussein Onn (KUIITHO)	2000	2007

| 5 | Universiti Malaysia Perlis (UniMAP) | Kolej Universiti Kejuruteraan Utara Malaysia (KUKUM) | 2001 | 2007 |
| 6 | Universiti Malaysia Pahang | Kolej Universiti Kejuruteaan and Teknologi Malaysia (KUKTEM) | 2002 | 2007 |

Adapted from Koh et al. (2011)

Problems faced in the transformation process and the solutions proposed

The academics are the pillars that sustain the operation of any academic institution. Thus, they are responsible for carrying out the key strategies in transforming the university colleges to full university status as believed by many policymakers and the people. Due to these obligation and pressure, the academics face various problems relating to their academic identity (Delanty, 2008), career and activities (Musselin, 2013). The problems they face pertaining to their identity are relating to the various roles they have to perform in their works. In this case, their traditional roles as teachers and researchers are further extended as entrepreneurs and administrators (Delanty, 2008, p. 129). They have to assume these various roles in the efforts of the academic institution to fulfil the criteria set by the MOHE and to achieve the objectives of the transformation. As a result, the pressure of performing these various obligations takes a toll on them as many become stress and unable to handle this change on their academic identity (p.131). Hence, continuous staff development e.g. trainings, seminars and workshops should be provided (Kezar and Eckel, 2002, p. 313) so that encouragement and support are available in handling the changes better.

Apart from their academic identity, the academics also have to endure problems pertaining to the management of their career in particular the academic's employment, promotions and rewards. Even though Malaysian academic institutions have full autonomy over its operation, the state still plays important role in its finance and administration (Morshidi, 2009). Therefore, issues of employment such as job status including permanent, contract, full-time or part-time; promotions such as key performance indicators and career advancement; and rewards such as bonuses; emerge as these determine their salary, increment, research grants and many other benefits (Musselin, 2013, pg. 27-29). Henceforth, senior administrative support and collaborative leadership are needed whereby the top management collaborate with the individuals from every level of the institution in implementing and rewarding the best initiatives towards achieving the transformation goals while providing financial support as well as seeking external resources as required (Kezar and Eckel, 2002, p.312). As a result, the possibility for members of the institutions to feel valued and remain driven as the opportunity for problem solving on mutual concerns are enhanced.

Lastly, completing their academic activities are also equally challenging for the academics during the transformation process as these are controlled by the academic institutions. This indicates the academics' lack of authority in determining their preferred specialization in teaching, research and/or administration works (Musselin, 2013, p.30). Apart from that, the works allocated to the academics also determine the employment position such as contract or permanent, recognition such as professorship and performance assessment such as the inclination of key performance indicators towards teaching, research and/or administration or

one-size-fits-all type of assessment (p.30-31). Therefore, Whittaker and Montgomery (2014) suggested that to ensure the faculty development and engagement in their academic activities during the transformation process, three types of supports support should be extended to the academics. First, strategic career planning which refers to the integration of teaching, research and/or administration in accordance to the academics' diverse specialization towards achieving the goals of the transformation (p.264). Second, performance measurement which includes the members of the academic institution in the planning, implementation and evaluation of the success of the efforts for accomplishing the goals (p.266). Meanwhile, the third, development support implies that the provision from internal and external funding are redistributed to support the scholarly efforts in forms of recognition and rewards which further affect the success for achieving the objectives of the transformation (p.268-270).

Overall, the success of the transformation of university colleges to full university status relies on the academics to perform their best at accomplishing the tasks thrusted to them. However, the academics cannot excel without the nudge from the state in forms of interventions and policies as well as the different types of support extended by the academic institution' management. Therefore, the academics, the management and the state have to work hand in hand to ensure the objectives of the transformation are attained.

Method

Qualitative design is selected to gauge into the academics' experience in the transformation of university college to a full-pledged university. Qualitative design is selected because it is considered the most suitable method to investigate and understand social or human problems as experienced by an individual or group (Creswell, 2014, p.4). As such, the researchers intend to obtain the perspectives of the managing and teaching academics to further understand the "how" and "why" of the problems experienced in the transformation of university colleges to full-pledged universities. Their perspectives particularly on the problems experienced in the transformation process were obtained via interview and documents analysis to provide greater understanding on the transformation process.

Semi-structured interview questions were self-developed by the researchers based on the research questions of the study as suggested by Creswell (2014, p.140) that a researcher may create sub-questions based on the research questions to be used in the interview for collecting data. The interview questions created were checked by two experts and the answer transcripts were given to the participants for member checking of which the contents of the interview were examined and the results of the obtained from the interview was validated. To establish content reliability of the instrument, the researchers conducted this pilot study as proposed by Creswell (2012, p.390) that conducting pilot study is crucial in ensuring the validity of the interview questions. To reflect five research questions of the main study, six (6) items in the demographic section and twelve (12) items in the open-ended section were constructed. Samples of the demographic questions before the amendment were listed in Table 3. Meanwhile, the samples of the open-ended section can be further observed in Table 4.

Table 3: Sample of demographic questions

Demographic Details
Gender
Academic Background
Teaching Experience
Employment Status
Current Position
Previous Position

Table 4: Sample of open-ended questions

No.	Semi-structured interview questions
1.	What are the issues and problems you have experienced in the university college transition to be a full-pledged university?
2.	What are the factors in your opinion that contribute to the issues and problems that you have experienced?
3.	Why do you think so?
4.	What are the types of solutions provided to the academics in handling the issues and problems in TATIUC's transition to be a full-pledged university?
5.	What are types of solutions do you think should be provided to the academics in order to handle these issues and problems better?
6.	Why the solutions should be provided to the academics in dealing with these issues and problems?

Research site

A Malaysian private college university funded by the state government, which was undergoing transformation to a full-pledged university, was selected as the research site for the pilot study. It was announced at a press conference in 2010 by the rector that the college university is moving forward with the efforts towards being a university. Currently, the university college offers technical, engineering and ICT programs from foundation to postgraduate level. It has close to 300 staff from teaching to support personnel from various faculties and departments.

Participants

Three (3) academics from the focus group with specific criteria were selected. Two (2) of them were females and one (1) was male. One academic can be categorized as a managing academic, one was a permanent staff and the last was a contract staff. Three participants were considered sufficient as a source of information for pilot testing (Herzog, 2008) as 10% of the total participants which is 12 (twelve) in the actual study whom the researchers intend to interview. These different criteria were chosen to explore the possibilities for the various types of problems faced by the academics. All participants possess Master qualification and had worked with the university college between 4 to 20 years. To protect their individual confidentiality, minimal demographic background was obtained from the demographic section of the interview questions in the pilot study. In the beginning, the participants were hesitant to participate in study as they were apprehended of the consequences if their identities were revealed. Upon assurance from one of the researchers that their identity would be kept confidential at all times,

they all agreed to participate in the study. Questions on the demographic details proposed are listed in Table 3.

The interviews were conducted at their choice of location including participants' office and at a café. Each interview was conducted in English. Since, English is the medium of instruction at the university college and the participants must use English to teach their respective subjects, the academics do not have problems understanding the interview questions during the interview sessions. However, the participants were free to speak their mother tongue, Bahasa Melayu if they preferred during these sessions. The average duration for interviews lasted for about one-half- hour to 2 hours long, which was recorded on a digital voice recorder. No video recording was made during the pilot study so that the participants were convinced that their individuality confidentiality was safeguarded by the researchers. After the interview, the researchers asked the participants to comment on the questions. To improve the semi-structured interview questions, modification was made in accordance to their comments. Then, the transcription of each interview was e-mailed to the participants for feedbacks in ensuring the credibility of the pilot study.

Results and Discussions

Discussion 1: problems in transforming university colleges to full-pledged universities

All three (3) participants highlighted that they experienced different kinds of problems in the transformation process of the university college being upgraded to a full-pledged university. The problems were categorized and listed in Table 5. Seventeen (17) challenges were mentioned by the participants in the pilot study.

Table 5: Categories of problems

Problems experienced by the academics
Curriculum development
Inadequate infrastructure (equipment and machineries)
Lack of research development
Inequitable KPI management
Unclear supervision method and lack opportunity for supervision
Lacking in community program organization
Lack of motivation
Lack of funding
Being complacent
Self-content

Inadequate infrastructure, inequitable KPI management, lack of motivation and lack of funding were the most cited types of problems experienced by the participants. Other types of problems were also cited including lack of research and development, lack of opportunity for supervision, lack of community program organized by the academics, being complacent and self-content with limited responsibilities and restricted tasks assigned. Nevertheless, the following categories were cited to have been improved and met the requirements set by MQA and the academics' expectation such as curriculum development with the restructuring of syllabus and development of new programs, research development as certain monetary provision for internal

grants were provided, improved supervision method as academics with PhD qualification and those with conducting research experiences were elected as supervisors and a number community program were jointly organized by the academics and student organizations. Thus, the results proved that the academics experienced various types of problems in the transformation from university colleges to universities.

Discussion 2: Solutions provided to the academics

When asked about the types of solutions provided by the management to solve the problems they faced, the participants highlighted nine types of solutions assisting them in carrying out their daily tasks towards achieving the objectives of being a university. The solutions received from the management were revealed and categorized as in Table 6.

Table 6: Categories of solutions provided

Solutions
Establishment of BAKAT
Grants for research
Rewards based on performance
Commercialization of products
Trainings
Monthly talks
Curriculum development
Supervision method improvement
Community program

The most cited types of solutions imparted to the academics were curriculum development and grants for research. Whilst, internal grants were provided via the institution's short term grants; external grants were obtained depending on the academics' success in securing FRGS and other types of grants provided by the government. Other supports were also mentioned including the establishment of BAKAT, a department which manage the academics' performance, rewards based on the academics' performance, commercialization of products, trainings including in-house seminars and workshops, monthly talks, curriculum development, supervision method improvement and community program. Nonetheless, more solutions should be provided so that the academics' career shall develop and for them to maintain motivated and driven to accomplish the institutional goal of becoming a university.

Discussion 3: Amendment to the semi-structured interview questions

The responses in the pilot interviews with the participants made the researchers realized that certain items in the semi-structured interview questions needed to be revised to make them more relevant in seeking the answers to the objectives of the main study. Hence, question number one (1), four (4), five (5) and six (6) were retained, while, seven (7) was eliminated and two (2) and three (3) were replaced with suitable wordings to capture the information to best

describe the background of the participants. Table 7 lists the amendments made to demographic questions after the pilot study.

Table 7: Questions for demographic details

No.	Demographic Question Before Amendment	Demographic Question After Amendment
	Please provide details of the following:	
1.	Gender	Retain.
2.	Academic Background	Replace with "highest qualification".
3.	Teaching Experience	Replace with "duration working with the institution".
4.	Employment Status	Retain.
5.	Current Position	Answer options are retained except for option 3, replaced with "HOP@HOD"
6.	Previous Position	Answer options are retained except for option 3, replaced with "HOP@HOD
7.	Job Scope	Eliminate.

The researchers also noticed that long interview questions sometimes confused the participants in comprehending what was being inquired. Some of the long questions affected the initial responses of the participants. The questions were inquired a number of times so that the participants were able to provide the relevant answers Therefore, the questions were reviewed and shorten in the efforts of turning them into precise and clear questions. Whilst, question number one (1), two (2), four (4) and five (5) were shorten; question number three (3) and five (5) were eliminated. Table 8 displays the modifications made to the interview questions after the pilot study.

Table 8: Interview questions before and after pilot study

No.	Interview Questions Before Amendment	Interview Questions After Amendment
1.	What are the issues and problems you have experienced in your HEI's transition to be a full-pledged university maybe in terms of teaching and learning, research and development, supervision, community program and supervision to name a few?	What are the problems you have experienced in your institution's transformation to be a university? *Shorten the question.* *Eliminate the words "issues" and "full-pledged"; the phrase "maybe in terms of teaching and learning, research and development, supervision, community program and supervision to name a few".* *Eliminate the word "HEI" and replace with "institution".*
2.	What are the factors in your opinion that contribute to the issues and problems that you have experienced?	What are the factors/causes that contribute to the problems you experience and why?

		Eliminate the word "issues". *Add the word "causes".*
3.	Why do you think so?	*Eliminate. This question is inquired as part of question no. 2.*
4.	What are the types of solutions provided by the management to the academics in handling the issues and problems in the university college transition to be a full-pledged university?	What are the types of solutions provided by the management to the academics in handling the problems? *Eliminate the word "issues" and the phrase "in the university college transition to be a full-pledged university".*
5.	What are types of solutions do you think should be provided by the management to the academics to handle these issues and problems better?	What are the types of solutions should be provided by the management to the academics in handling these problems better and why? *Eliminate the phrase "do you think" and the word "issues".*
6.	Why the solutions should be provided to the academics in dealing with these issues and problems?	*Eliminate. This question is inquired as part of question no. 5.*

Overall, the semi-structured interview questions utilized in this study pertaining to the problems faced by the academics in the transformation from university colleges to universities do a considerably good job in exploring the academics' experience dealing with various types of problems. In fact, this pilot study has helped the researchers to determine that the proposed instrument, in this case the interview questions, is appropriate and not too complex for the participants to respond to (Teijlingen and Hundley, 2001). However, necessary amendments need to be made so that the questions are accurate and clear in seeking relevant information from the participants' responses.

Conclusion

The pilot study implicates the policy makers and the management of higher education institutions in empowering the academics working towards achieving the objectives of transforming the university colleges to become universities. It highlighted the necessity of understanding the problems experienced by the academics and recognizing suitable aids that should be imparted so that they continue to be motivated and perform their best in accomplishing personal and institutional goals.

All members of the university college have to work hand in hand in the efforts of fulfilling the requirements to be conferred a full university status by MQA. It is even more so for the

academics as some of these criteria are directly translated as their key performance indicators (KPIs) which are determined by MOHE (Muniandy, Ong, Phua and Ong, 2011) in order to achieve the government's goal of providing quality education to the people and becoming higher education hub in the region as set out in National Higher Education Strategic Plan (NHESP) 2020. KPIs are identified as the measures utilized to establish core competencies of the academics based on the HEI's mission and vision whilst taking into account its sources and competitive state (Chen, Yang and Shiau, 2006). Their career development and achievement via KPIs have to be in-line with the university college's strategic plan because their productivity enhances the performance of the university college (Masron, Ahmad and Rahim, 2012), which eventually leads to the achievement of fulfilling the requirements of becoming a university.

One of many implications on the academics in striving to achieve the target are on their tasks and competency, which become significant in determining their performances (Janudin And Maelah, 2015). The traditional function or an identity of the academics as a teacher is extended to being a researcher, entrepreneur and administrator, which define the tasks, competency and preference for their academic work (Delanty, 2008 and Musselin, 2013) Apart from that, their academic careers are also implicated as professorship and permanent position become more competitive (Fumasoli, Goastellec and Kehm, 2015). Henceforth, with the variation and increased workloads, the academics faced various problems in achieving their KPIs for their annual performance appraisal, which one is in the context of scholarly publication (Kaur, Ibrahim and Selamat, 2013). Their performance also has strong relationship with job satisfaction, job involvement and job engagement (Piennar and Bester, 2009). Nevertheless. they remain committed in ensuring the success of their academic institution despite the setbacks (Houston, Meyer and Paewei, 2006).

Several limitations were identified from the pilot study. First, even though this was an in-depth study but it was a small pilot study using qualitative method with small number of participants, to be exact only three (3) to represent the actual total of twelve (12) participants in the main study. Hence, the study suggests that future research to conduct large scale studies exploring the problems experienced by the academics and the solutions provided in Malaysian context. The findings can assist in figuring out the improvements on the aids imparted to the academics for better performance and more job satisfaction. Second, the study only examined the academics' experience at one university college. For future study, the comparison on the experiences of the academics from several university colleges is recommended be conducted to examine the differences and similarities of the problems experienced and the solutions provided. Finally, the study was limited to the experience of academics in Malaysian context. Thus, the study recommends that future research to be expanded in exploring the academics' experience in the transformation of other types of academic institutions.

Acknowledgements

References

Abdul. (2006). *Pendidikan Selepas SPM*. PTS Professional Publishing Sdn Bhd.

Chen, S.H., Yang, C.C. and Shiau, J.Y. (2006). The application of balanced scorecard in the performance evaluation of higher education. The TQM Magazine, *18*(2),190-205.

Creswell, J.W. (2012). *Educational research: planning, conducting and evaluating quantitative and qualitative research.* Pearson Education, Inc., Boston.

Creswell, J.W. (2014). *Research design: qualitative, quantitative and mixed method approaches* (4th ed.). SAGE Publications, Inc., Thousand Oaks.

Delanty, G. (2008). Academic identities and institutional change. In *Changing Identities in Higher Education*, 24–133.

Fumasoli, T., Goastellec, G., and Kehm, B. (2015). Academic careers and work in Europe: trends, challenges, perspectives. In *The Changing Academy - The Changing Academic Profession in International Comparative Perspective*, 201–214. Springer Netherlands.

Herzog, M.A. (2008). Considerations in determining sample size for pilot studies. *Research in nursing and health, 31*, 180-191.

Houston, D., Meyer, L. H., & Paewai, S. (2006). Academic Staff Workloads and Job Satisfaction: Expectations and values in academe. *Journal of Higher Education Policy and Management*, *28*(1), 17–30. http://doi.org/10.1080/13600800500283734

Janudin, S. E., and Maelah, R. (2015). Performance measurement system and lecturers ' performance : testing the mediation role of competency in Malaysian research university. *Journal of Contemporary Issues and Thought*, *5*, 168–183.

Kaur, S., Ibrahim, R., & Selamat, A. (2013). Constraints on achieving key performance indicators for scholarly publications among academic staff : case of a Malaysian public university. In *2013 International Conference on Research and Innovation in Information Systems (ICRIIS) 3*, 73–78. http://doi.org/10.1109/ICRIIS.2013.6716688

Kezar, A., & Eckel, P. (2002). Examining the institutional transformation process: the importance of sensemaking , interrelated strategies and balance. *Research in Higher Education*, *43*(3), 295–328.

Koh, A. K., Abd Shukor, R., Abdul Razak, D., Sahrim, H. Ahmad, and Azman, J. (2011). The growth of public universities in Malaysia. *College Student Journal*, *45*(2), 238–241

Kwiek, M. (2015). The unfading power of collegiality? university governance in Poland in a European comparative and quantitative perspective. *International Journal of Educational Development. 43,*77-89.

Masron, T. A., Ahmad, Z., and Rahim, N. B. (2012). Key performance indicators vs key intangible performance among academic staff: a case study of a public university in Malaysia. *Procedia - Social and Behavioral Sciences*, *56*(ICTLHE), 494–503. http://doi.org/10.1016/j.sbspro.2012.09.681

Migin, M. W., Falahat, M., Ab Yajid, M. S., and Khatibi, A. (2015). Impacts of institutional characteristics on international students ' choice of private higher education institutions in Malaysia. *Higher Education Studies*, *5*(1), 31–42. http://doi.org/10.5539/hes.v5n1p31

Ministry of Education, M. National higher education strategic plan: laying the foundation beyond 2020 (2007). Malaysia.

Ministry of Higher Education, M. Kriteria-kriteria naik taraf kolej kepada kolej universiti dan kolej universiti kepada universiti (2011).

Muniandy, B., Ong, M. Y., Phua, K. K., and Ong, S. L. (2011). Assessing key performance indicators monitoring system (KPI-MS) of a university using technology acceptance model. *International Journal of Social Science and Humanity*, *1*(3), 171–176.

Musselin, C. (2007). The transformation of academic work: facts and analysis. *Research & Occasional Series: CSHE, 4.07. "Center for Studies in Higher Education.* 1-14.

Musselin, C. (2013). Redefinition of the relationships between academics and their university. *Higher Education*, *65*(1), 25–37. http://doi.org/10.1007/s10734-012-9579-3

Pienaar, C., and Bester, C. (2009). Addressing career obstacles within a changing higher education work environment: perspectives of academics. *South African Journal of Psychology*, *39*(3), 376–385.

Shariffuddin, S.A., Razali, J.R., Ghani, M.A., Shaaidi, W.R. and Ibrahim, I.S.A. (2016). Transformation of higher education institutions in Malaysia: a review. *Journal of Global Business and Social Entrepreneurship, 1*(2), 126-136.

Shariffuddin, S.A., Razali, J.R. and Ghani, M.A. (2017). A review on higher education institutions transformation in selected regions. *Proceeding of International Conference on Humanities, Language, Culture & Business, Penang 2017, 2*, 75-84.

Morshidi, S. (2010). Strategic planning directions of Malaysia's higher education: university autonomy in the midst of political uncertainties. *Higher Education*, *59*(4), 461–473. http://doi.org/10.1007/s10734-009-9259-0

Teijlingen, E.R. and Hundley, V. (2001). The importance of pilot study. *Social Research Update*, 35.

Whittaker, J. A., and Montgomery, B. L. (2014). Cultivating institutional transformation and Sustainable STEM diversity in higher education through integrative faculty development. *Innovative Higher Education*, *39*, 263–275.