

Middle Managers Competencies in Higher Technical Education Institution: A Systematic Review

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Abstract

Numerous research studies have been conducted on middle leadership in higher education. However, research on middle leadership competencies in the context of higher technical education is relatively rare. As such, the objective of this paper is to undertake a comprehensive evaluation of the existing academic research on middle leader competencies. This study used a systematic literature review methodology to rigorously synthesise research, identifying a total of 721 articles in the first stage and synthesising a final sample of six research papers. The synthesis of the findings in this SLR on the middle leader's competencies revealed a dearth of research on middle leader's technical and personal competencies; a scarcity of studies on middle leader's technical and personal competencies; and a predominance of competencies discussed leaning toward the general competencies of middle leaders in higher education institutions. Future study should examine the impact of middle leader capabilities on the efficacy of managing respective units or departments, as well as the significance of middle leader technical competencies in a particular field.

Keywords: Middle managers, middle leaders, competencies, higher education, TVET

1. Introduction

Technical and Vocational Education and Training (TVET) is important in promoting human capital development in all industries around the world (Zancajo & Valiente, 2019). It is the responsibility of TVET institution to provide students with knowledge in accordance with the requirements of industry needs. According to Hassan et al. (2019), TVET in Malaysia have a system that contribute to the social and economic development of the country. In addition to that, TVET also provides the opportunity to secondary school leavers to be trained as skilled workforce to meet the industry needs. Most of the TVET institution equipped with pedagogical and technological facilities as well as collaboration with relevant parties to realise these goals. Accordingly, the effectiveness of a programme in meeting the needs of the industry is highly dependent on the relationships that exist between higher technical institution and industry. Both higher technical institution and the industry play a major role to equip students with latest pedagogical method and a place to enhance their know-how through newly acquire knowledge and industrial experience respectively (Bakar et al., 2019).

The progression of TVET is gaining traction in domestic and international policy circles, as well as in developed and developing countries (Sultana, 2017). Records in 2019 show that only 27.5% of Malaysia's workforce is employed in a highly skilled job sector, with the majority (semi-skilled, 60.1% and low skilled 12.4%) of the workforce has a low academic qualification. The Malaysian government has set a target for highly skilled jobs of 33% in 2015 and 50% by

2020 (Malaysia, 2010). Compared with other developed countries, the highly skilled workforce in Finland stands at 83.84%, Switzerland 83.58%, Canada 82.88% while Singapore reaches 54%, and most of the workforce is working in the high technology sector (Přivara & Rievajová, 2019). Having established as one of the significant issues in Malaysia's educational system, the Malaysian government have devoted an allocation of USD 1 billion in 2017 Budget to focus on uplifting the TVET sector. An additional allocation of USD 65 million to enhance pedagogical equipment in TVET institutions and further USD 87 million to the Skills Development Fund (Nor Aida et al., 2017).

2. Competencies of Middle Managers in Higher Technical Education Institution

It is possible to describe a middle manager as someone who is positioned under the top executives but above the first-level of supervisor (Dopson, 1992). Middle level academic managers are found mostly in educational settings and higher education institutions. They are comprised of heads programs, units, academics departments, and in certain cases, research and technology centres who help to connect institutional plans and implementation (Kallenberg, 2015). Academic units serve as the foundation for a wide range of daily activities at higher education institutions, highlighting the important importance of departmental administration and leadership in these institutions. Additionally, Wolverson et al. (2005) stress that about 80% of organisational decisions at institutions and universities are made by middle academic leaders.

Nguyen (2009) stated that middle academic administrators are the group most impacted by institutional changes when defining the shifting policy and management models at higher education institutions. They may, however, encounter significant and actual obstacles in becoming an academic manager capable of enacting the necessary reforms to ensure institutions' continued performance (Nguyen, 2009; da Motta & Bolan, 2008). For starters, there is the issue of role uncertainty and disagreement as well as the blurring of authority and power boundaries (Branson, 2016; Franken, 2015). Another consideration is training and professional growth. Numerous scholars have commented on the dearth of study on the professional characteristics and growth of department chairs (Branson, 2016). According to Nguyen (2013), previous research on middle academic managers is Western-centric, emphasising the need of understanding middle level academic leadership within a certain culture and tradition.

According to Clegg and McAuley (2005), middle managers are expected to take on a range of tasks throughout time, originally as advocates of organisational principles, then as conservative, self-directed actors of controls, and most recently as communicators of fundamental strategic values. Historically, academic heads of higher education institutions have been perceived to be more concerned with their department's fundamental academic principles than with organisational values (Clegg & McAuley, 2005; Hancock & Hellawell, 2010). They are typically elected by their colleagues based on research recognition and teaching ability, which is reflected in their leadership duties. Consequently, middle academic managers commonly believe that traditional academic techniques of negotiation and persuasion, as well as the duties of a good citizen, are outmoded (Floyd & Preston, 2019). This has been believed to be one of the reasons why department heads usually distance themselves from management procedures contextualization and tradition (Clegg and McAuley, 2005).

A widespread impression nowadays is that the job of academic middle leaders has changed from being merely operational or administrative to being more strategic and

empowering (Creton & Heard-Lauréote, 2019). Middle management is viewed as very complicated, multidimensional, and multi - directional, necessitating negotiation across professional and power networks. According to Hamidifar et al. (2017), middle managers at institutions are gradually required to demonstrate administration competencies, including the ability to create missions, objectives, and strategies, manage monetary and human capitals, and exercise effective control. Evident in the perspective of higher education institutions transitioning to a corporate and self-directed model in the face of declining public financing, privatisation, benchmarking, and increased accountability requirements Bania, M. S. (2021). The development and execution of institutional mission statements, strategic planning, and quality assurance have caused in a significant increase of the managerial responsibilities of middle academic leaders (Nguyen, 2009).

In a changing management environment, middle level academic managers must exhibit a variety of diverse abilities. Analyses of the performance of middle managers in English-speaking higher education institutions identify six broad categories of responsibilities for academic leaders, including divisional governance, programme administration, personnel management, budget resource allocation, interaction, and office administration (Kallenberg, 2015; Nguyen, 2013). Numerous academics have explored the abilities and knowledge required to do these critical activities (Berdrow, 2010). However, it is suggested that the defined knowledge and skill abilities necessary for successful departmental leadership and administration are based on subjective indication relatively than empirical and creative study (Nguyen, 2009).

3. The Role of Middle Managers in The Higher Technical Education Institution

Studies examining the function of middle leaders have shown different difficulties and tensions in working with top management and academics, as well as the influence of managerialism (Thorton et al. 2018). Arquisola et al., (2020) research of middle leaders at Indonesian higher education institution indicated that they experienced varying degrees of uncertainty, inconsistency, and differences. This uncertainty in the position of the middle leader might be seen as a sense of dual identity as a management leader and as an intellectual collaborator (Hobley, 2018). Deem (2004) interviewed middle leaders at sixteen higher education institutions in the United Kingdom and identified several challenges with the middle leader role, plus expanding student enrolment, managing the double demands of pedagogical task and research, managing high workloads for middle leaders and their subordinate, dealing with problematic staff, a lack of resources, and financial constraints. The intermediate leader's position has been defined as one of dispute resolution and tension management, as well as balancing opposing demands (Thorpe, & Garside, 2017). Additionally, Thorpe and Garside (2017) stated that the role of middle management at a higher education institution may take on a number of meanings based on the occupants' academic identities and the institutional context.

Garcia & Maniago (2018) discovered that the middle leader's function was complicated and could be defined as that of a middle manager in their research of the Philippines higher education institution. Sukaris et al. (2019) assert that an academic middle manager is responsible for a variety of roles, procedures, and interests. According to Siam's (2017) research, the higher education institution in his study lacked or lacked an organisational plan for recognising and developing leadership abilities. Argento and van Helden (2021) argue that academic leadership positions are frequently viewed as transitory. With increased scrutiny and criticism directed at public officials, the desire to serve in a leadership capacity at a higher education institution

without receiving any external benefits may wane or vanish entirely (Ismulyati & Ginting, 2018). Thompson and Wolstencroft (2018) argue that higher education institutions make a mistake when they pick middle leaders, believing that being a competent faculty member automatically qualifies an individual for a managerial leadership post. Hence, middle leaders' function in a complex environment, and the difficulty is to comprehend their own position, the demands imposed on them, and also to exhibit the middle leaders' abilities necessary to succeed in the role.

Mughal (2017) discovered in a case study at a post-1992 new UK university that there was no clear understanding or agreement on the role of middle leaders among middle management, deans, and employees. While these findings are valuable, they are based on a single case study and are derived from a western setting. Having said that, research on what middle managers actually accomplish in higher technical education institutions is few and/or inconclusive. Thus, the preceding literature demonstrates a strong need to further examine middle leader competencies in technical programs in higher education institutions.

4. Systematic Literature Review Methodology

The computerised database was used to conduct the study search. This systematic review does not aim to generate new information, relatively it seeks to integrate and analyse current knowledge, implying that pertinent research on the subject that already exist. Using keywords such as those listed in Table 1, the first phase searched prominent databases such as Google Scholar and Microsoft Academics for articles relating to middle leader competences at higher technical institutions. The term AND was used to encompass a broader variety of results and narrow the search to a study of middle leader competencies, while the operator OR was introduced to allow alternative wordings and synonyms. (Aliyu et al., 2017; Kitchenham et al., 2004).

Table 1: Alternative wordings and synonyms for middle leaders and higher technical education

Main keyword	Alternative Terms
Middle Leaders Competencies	Middle Managers Competencies, Middle Leaders Competencies, Middle Managers Skill, Middle Leaders Skill, Middle Managers Skill, Middle Leaders Skill
Higher Technical Education	Technical and vocational education and training, Vocational education and training, technical education, further education, further education and training

The published and unpublished articles are systematically searched for research pertaining to a particular intervention or activity. To ensure an objective judgement, this search must attempt to encompass all available material. The second phase examined and classified the contents of these articles based on their author profiles, keywords, research technique, place of origin, and year of publication. The final phase involved compiling the publications' keywords in order to ascertain how writers positioned their works. We have chosen and put together keywords that express leadership abilities, middle management, and higher technical education. This inquiry used a period of 2000-2020 because it corresponds to research maturity (Kraus et al., 2020). Additionally, throughout the publishing of this timeline, significant papers such as Dixon Wood et al. (2006) and Whitemore and Knafl (2005) established critical SLR methodological principles (e.g., integrative review; mixed-method analysis) that should be addressed. Table 2

summarises the screening criteria used in this review. This study chose to evaluate only English-language papers, since Linares-Espinos et al. (2018) emphasised the significance of picking publications in their native languages, as articles in foreign languages might add to the confusion, increase review expenses, and use of time. The purpose of this is to ascertain the necessary ML leadership abilities for the higher technical education institution. The following research question leads this investigation:

1. What is the construct of middle leaders’ competencies in the context of higher technical education institutions?
2. What is the sub-construct of middle leader’s competencies in the context of higher technical education institutions?

The initial search resulted in the identification of 721 items. Following a review of the titles and abstracts, 37 papers were retained for in-depth consideration. Following up on references and conducting online searches resulted in the inclusion of one article to the worldwide tertiary education research database. From the 38 papers that were subjected to full-text investigation, 32 fulfilled at least two of the exclusion criteria, leaving six for inclusion in the evaluation. Following a step of full-text selection, the remaining papers were evaluated using a critical analysis procedure for methodological quality. Finally, a manual examination of all retrieved articles' reference lists was undertaken to identify any research that are overlooked throughout the database searches. Additionally, the search should include unpublished research to assist mitigate publication bias.

Table 2: Review Screening criteria

Criteria	Document types	Language	Research area
Inclusion	Article	English	Articles focusing on middle leaders’ competencies in higher technical education institution
Exclusion	Books, proceedings, review articles, abstracts	Non-English	Articles not focusing on middle leaders’ competencies in technical education institution

5. Higher Technical Education Institutions Middle Manager’s Competencies

The purpose of this study was to examine the essential competences for middle managers from a higher technical education institutions viewpoint. According to the six papers' results, the key skills for middle leaders in higher technical education institution comprise cognitive, interpersonal, technical, and strategic competencies that are important for middle leaders' success. The key competencies correspond to Boyatzis (2008, 1982) and Eyde et al., (1999) definitions of leadership competencies. The sub-competencies can be further defined as cognitive competencies, which include strategic thinking and planning (Greatbatch & Tate, 2018), creative problem solving (Van Pham et al., 2019), values and strategic direction, customer knowledge, and performance results for the organisation and its people (Oliver, 2002), and planning and organising (Van Pham et al., 2019 and Potgieter & Coetzee, 2010). Interpersonal ability is critical for leaders, as the nature of the leader's tasks include supervising, bargaining, and influencing (Boyatzis, 2008, 1982; Eyde et al., 1999). Referring to the middle leadership

competencies, the interpersonal skill sub-competencies include negotiation and influencing skills, as well as fostering equality and diversity (Greatbatch and Tate, 2018), valuing people (Briggs, 2001), creating a work environment and motivating team members (Van Pham et al., 2019), management and leadership skills (Mohd Noor & Dola, 2019), and development of empowered individuals (Potgieter & Coetzee, 2010).

Boyatzis (2008, 1982) and Eyde et al. (1999) defined business skill as the coordination, technical, expertise, resource allocation, and personnel abilities. Technical skill, on the other hand, is a phrase that is considerably more familiar to middle managers in higher technical education institutions. Although the terminologies are different, the sub-competencies associated with technical skills are more or less identical to those associated with business skills as described by Boyatzis (2008, 1982) and Eyde et al (1999). According to the tabulated data, procurement/commissioning skills (Greatbatch & Tate, 2018), coaching and mentoring (Van Pham et al., 2019), innovative and excellent products and services for customers (Oliver, 2002), and controlling (Potgieter & Coetzee, 2010) can all be classified as middle leader technical competencies in the higher technical education institutions.

Boyatzis (2008, 1982) defines strategic abilities as planning, assessing, issue solving, and decision making. Strategic ability benefits higher technical education institution's middle leaders since the majority of them are responsible for managing a unit or department that carries out the institution's vision and purpose. Using the resources available to the unit or department, middle leaders must plan, assess, and make decisions in order to carry out the institution's wider goal. As summarised in Table 3, sub-competencies include change management skills, performance management entrepreneurial skills, financial management skills (Greatbatch & Tate, 2018), translating vision into action and monitoring (Briggs, 2002), evaluating performance and providing feedback, vision, values, and strategic direction of the organisation, and effective and efficient development (Van Pham et al., 2019).

Researchers identify a large number of middle leader competencies in their publications. Nonetheless, a critical component of leadership that is sometimes overlooked in middle leadership abilities is personal leadership capacity. Referring to the list of competencies included in the tabulated data, sub-competences such as personal effectiveness and self-awareness (Greatbatch & Tate, 2018), self-training and self-direction (Van Pham et al., 2019), and personal characteristics (Potgieter & Coetzee, 2010) is are identified as personal competencies of middle leaders in the higher technical education institutions. Additionally, the personal competencies also applicable to middle leaders regardless of institution or organisation.

Table 3: Matrix of middle leadership’s competencies in higher technical education institution

Author (s)	Study Domain	Country	Methodology	Classification	Dimension
David Greatbatch and Sue Tate (2018)	Further Education (FE)	United Kingdom	Document Analysis	General Competencies	Strategic thinking and planning, negotiation and influencing skills, change management skills, performance management, general commercial awareness and entrepreneurial skills, financial management skills, procurement/commissioning skills, fostering equality and diversity, Personal effectiveness and self-awareness
Ann R. J. Briggs (2001)	Further Education (FE)	United Kingdom	Mix Method	Leadership Style	Transformational leadership – values people, acknowledges skill advantage and empathises with difficulty, Transactional leadership – translate vision into action and monitoring
Van Pham et al. (2019)	Higher Education (HE)	Vietnam	Mix method	Leadership and management	Leading changes Managing operations
				Advising and consultation	Creative problem-solving Presentation skills Negotiation skills
				Human resources management	Evaluating performance and providing feedback Coaching and mentoring Building a work environment and motivating team members
				Self-management	Maintaining political and ethical qualities, Self-training, self-direction
Khairul Baharein Mohd Noor and Kamariah Dola (2019)	Higher Education (HE)	Malaysia	Quantitative	General Competencies	Management and leadership skills, personal effectiveness skill, expertise and professional skill
Fiona Oliver (2002)	Vocational Education and Training (VET)	Australia	Quantitative & Document Analysis	General Competencies	Knowledge of customers, clients, communities, partners and markets; vision, values and strategic direction of the organisation; innovative and excellent products and services for customers, clients and communities; effective and efficient development and management of resources, development of empowered and motivated people, successful outcomes and performance results for the organisation and its people.
Ingrid L. Potgieter and Melinde Coetzee (2010)	Higher Education (HE)	South Africa	Quantitative	General Competencies	Planning and organising, leadership, controlling, human resource, personal attributes.

6. Conclusion

The SLR addressed both of the study's research goals, which were to identify appropriate constructs and sub-constructs of middle leaders' abilities required at a higher technical education institution. The study concluded that non-technical competence is just as critical as technical competence and is reinforced by teachers' personal characteristics, motivations, and physical state in the middle leader position in the higher technical education sector. The majority of the competencies are linked with Boyatzis's (2008, 1982) and Eyde et al., (1999) leadership's skills. The alignment of middle leadership abilities with the Boyatzis (2008, 1982) and Eyde et al. (1999) models demonstrates that the majority of the tasks of middle leaders in higher technical education institutions are comparable across levels and organisations. However, implying that intermediate leaders are comparable to top leaders must be done cautiously, given the majority of high-level executives in an organisation establish the organization's vision and goal. Middle leaders, on the other hand, are more likely to be the responsible for the implementation of the organization's vision and mission.

Some of the articles go into great length about the abilities of middle leaders. However, the absence of competency rankings impedes continued development of future middle leaders in the field of higher technical education. Additionally, the ranking of competences will demonstrate the major responsibilities of present middle leaders and the influence of those responsibilities on other competencies. It is worth noting that the majority of publications barely covered the technical competencies of middle leaders in detail. Due to the technical nature of the education programme given, technical skills should be highlighted. According to the aforementioned literatures, the majority of middle leaders are in charge of the financial and procurement aspects in respective units or departments (Greatbatch & Tate, 2018; Potgieter & Coetzee, 2010; Oliver, 2002). As a result, technical expertise is required to manage the procurement process for tools and equipment, particularly those necessary to support the execution of a technical academic programme. However, the dearth of thorough research studies in this field is reasonable given the extensive technical abilities required to fulfil the responsibilities of middle leaders. The future path of the middle competencies should focus on technical skills within a subject-specific area, such as engineering, business, or hospitality.

In the higher technical education institutions sector, middle leaders serve as the focal point for service delivery, namely managing academic delivery to students. These leaders' actions have a significant impact on the effectiveness of academic service delivery. As a result, it is critical that the higher technical education institutions assume responsibility for the development of middle management capabilities. This growth entails both the capacity to lead their departments and the ability to comprehend and execute the senior management function of the institution. If middle leaders are developed in accordance with the stated competencies, the effect will be seen in the performance of employees and students within their divisions or departments.

In conjunction with the current TVET transformation programme, which is being implemented through new TVET policies, particularly in Malaysia, middle leaders in higher technical education institutions require strong leadership competencies in order to be effective in implementing changes that improve the organization's management practices, success, and ability to continuously and competitively adapt to the world's ever-changing new technologies.

As a consequence, effective future middle leaders in higher technical education institutions who are competent in administration, management, and strategy implementation will be synthesised to help the institution accomplish its objectives.

References

- Alan Floyd & Diane Preston (2019) Why do UK academics become Associate Deans and what are their future career plans?, *Journal of Higher Education Policy and Management*, 41:4, 430-443, DOI: 10.1080/1360080X.2019.1625220
- Ali Durmus & Abdulkadir Dagh. (2017). Integration of vocational schools to industry 4.0 by updating curriculum and programs. *International Journal of Multidisciplinary Studies and Innovative Technologies*, 1(1), 1-3.
- Aliyu, M. B. (2017). Efficiency of Boolean search strings for Information retrieval. *American Journal of Engineering Research*, 6(11), 216-222.
- Arquisola, M.J., Zutshi, A., Rentschler, R. and Billsberry, J. (2020), "Academic leaders' double bind: challenges from an Indonesian perspective", *International Journal of Educational Management*, Vol. 34 No. 2, pp. 397-416. <https://doi.org/10.1108/IJEM-10-2018-0328>
- Argento, D., & van Helden, J. (2021). New development: University managers balancing between sense and sensibility. *Public Money & Management*, 1-4.
- Bakar, R. A., Noruzman, A. H., & Bujang, S. D. A. (2019). The Effectiveness of Diploma in Information Technology (Digital Technology) Program 2.5 Years at Polytechnic Malaysia. *International Journal of Technical Vocational and Engineering Technology (iJTveT)*, 1(1), 75-81.
- Bania, M. S. (2021). Effect of Privatisation and College Autonomy on Quality in Higher Education: Parents' Perception relating to their Satisfaction. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(6), 3421-3430.
- Berdrow, I. (2010). King among Kings: Understanding the Role and Responsibilities of the Department Chair in Higher Education. *Educational Management Administration & Leadership*, 38(4), 499–514. <https://doi.org/10.1177/1741143210368146>
- Briggs, A. R. (2001). Academic middle managers in further education: reflections on leadership. *Research in Post-Compulsory Education*, 6(2), 223-236.
- Boyatzis, R. E. (1982). *The competent manager: A model for effective performance*. New York: John Wiley & Sons.
- Boyatzis, R.E. (2008), "Competencies in the 21st century", *Journal of Management Development*, Vol. 27 No. 1, pp. 5-12. <https://doi.org/10.1108/02621710810840730>
- Branson, C. M., Franken, M., & Penney, D. (2016). Middle leadership in higher education: A relational analysis. *Educational Management Administration & Leadership*, 44(1), 128–145. <https://doi.org/10.1177/1741143214558575>
- Creaton, J., Heard-Lauréote, K. (2019). Rhetoric and Reality in Middle Management: The Role of Heads of Academic Departments in UK Universities. *High Educ Policy*, 34, 195–217, <https://doi.org/10.1057/s41307-018-00128-8>
- Dopson, S.; Risk, A.; Stewart, R. (1992). The changing role of the middle manager in the United Kingdom. *Int. Stud. Manag. Organ.*, 22, 40–53.
- Deem, R. (2004), The Knowledge Worker, the Manager-academic and the Contemporary UK University: New and Old Forms of Public Management?. *Financial Accountability & Management*, 20: 107-128. <https://doi.org/10.1111/j.1468-0408.2004.00189.x>

- Dixon-Woods, M., Cavers, D., Agarwal, S. et al. (2006). 'Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups', *BMC Med Res Methodol*, 6, pp.35
- Eyde, L. D., Gregory, D. J., Muldrow, T. W., & Mergen, P. K. (1999). High-Performance Leaders: A Competency Model, US Office of Personnel Management.
- Garcia, C. C., & Maniago, J. D. (2018). Emotional intelligence and conflict management styles of Filipino middle managers in select higher education institutions. *Asian Journal of Interdisciplinary Research*, 1(1), 42-55. <https://doi.org/10.34256/ajir1815>
- Greatbatch, D., & Tate, S. (2018). Teaching, leadership and governance in Further Education. *Social Science in Government*, 1-115.
- Hamidifar, F., Yusoff, K., & Ebrahimi, M. (2017). Leadership and Management Profiles For The Internationalization of Iranian Higher Education. *UMRAN-International Journal of Islamic and Civilizational Studies*, 4(1-1).
- Hassan, R., Foong, L. M., & Ismail, A. A. (2019). TVET in Malaysia. In *Vocational Education and Training in ASEAN Member States* (pp. 109-132). Springer, Singapore.
- Ismulyati, S., & Ginting, G. (2018). Entrepreneurship modeling in Higher Education Institutions: an explanatory study. *Review of Integrative Business and Economics Research*, 7, 181-189.
- Janet Hobley (2018) 'Practice architectures', 'scholarship' and 'middle leaders' within an established community of HE practitioners in FE, *Research in Post-Compulsory Education*, 23:1, 57-74, DOI: 10.1080/13596748.2018.1420728
- Kallenberg T. (2015) Academic Middle Managers Shaping the Landscape Between Policy and Practice. In: Pritchard R.M.O., Klumpp M., Teichler U. (eds) *Diversity and Excellence in Higher Education*. SensePublishers, Rotterdam. https://doi.org/10.1007/978-94-6300-172-4_11
- Kate Thornton, Jo Walton, Marc Wilson & Liz Jones (2018) Middle leadership roles in universities: Holy Grail or poisoned chalice, *Journal of Higher Education Policy and Management*, 40:3, 208-223, DOI: 10.1080/1360080X.2018.1462435
- Kitchenham, B. (2004). Procedures for performing systematic reviews. *Keele, UK, Keele University*, 33(2004), 1-26.
- Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2020). The art of crafting a systematic literature review in entrepreneurship research. *International Entrepreneurship and Management Journal*, 16(3), 1023-1042.
- Linares-Espinós, E., Hernández, V., Domínguez-Escrig, J. L., Fernández-Pello, S., Hevia, V., Mayor, J., Padilla-Fernández, B., & Ribal, M. J. (2018). Methodology of a systematic review. Metodología de una revisión sistemática. *Actas urológicas españolas*, 42(8), 499–506. <https://doi.org/10.1016/j.acuro.2018.01.010>
- Malaysia. (2010). Rancangan Malaysia Kesepuluh 2011-2015. Unit Perancang Ekonomi, Jabatan Perdana Menteri, Putrajaya.
- Márcia Vieira da Motta & Valmor Bolan (2008) Academic and Managerial Skills of Academic Deans: A self-assessment perspective, *Tertiary Education and Management*, 14:4, 303-316, DOI: 10.1080/13583880802481740
- Margaret Franken, Dawn Penney & Christopher Branson (2015) Middle leaders' learning in a university context, *Journal of Higher Education Policy and Management*, 37:2, 190-203, DOI: 10.1080/1360080X.2015.1019120

- Mughal, M. S., Ross, A., & Fearon, D. J. (2017). Development needs of Middle Managers in Higher Education Institutions: A case study of a post 1992 New University in UK. *International Journal of Business & Administrative Studies*, 3(6), 239-259.
- Mimi Wolverton Corresponding author, Robert Ackerman & Spencer Holt (2005) Preparing for Leadership: What Academic Department Chairs Need to Know, *Journal of Higher Education Policy and Management*, 27:2, 227-238, DOI: 10.1080/13600800500120126
- Miyeong, L., & Namchul, L. TVET Development and ODA for Developing Countries.
- Nor Aida Abdul Rahman, Suhaila Abdul Kadir, Mohammad Fakhruhnizam, Mohammad & Mohamed Idrus Abdul Moin (2017). Higher TVET education in aviation: Teaching quality and a master key to industry 4.0. *International Journal of Education, Psychology and Counselling*, 2(5), 44-53.
- Nick Hancock & David E. Hellowell (2003) Academic Middle Management in Higher Education: A game of hide and seek?, *Journal of Higher Education Policy and Management*, 25:1, 5-12, DOI: 10.1080/13600800305739
- Noor, K.B., & Dola, K. (2009). Job Competencies for Malaysian Managers in Higher Education Institution. *Asian Journal of Management*, 4, 226-240.
- Oliver, F., (2002). A future management model for Australian VET middle managers: parts 1 and 2, Ceridwen Management Consulting, Melbourne.
- Pham, T. V., Nghiem, T. T., Nguyen, L. M. T., Mai, T. X., & Tran, T. (2019). Exploring key competencies of mid-level academic managers in higher education in Vietnam. *Sustainability*, 11(23), 6818.
- Potgieter, I. L., & Coetzee, M. (2010). Management competencies in higher education: Perceived job importance in relation to level of training required. *SA Journal of Human Resource Management*, 8(1), 1-10.
- Prívarová, A., & Rievajová, E. (2019). Destination Marketing and Policies Attracting High-Skilled Individuals in Germany and Singapore. *Transnational Marketing Journal*, 7(2), 229-244. <https://doi.org/10.33182/tmj.v7i2.799>
- Rahman, N. A. A., Kadir, S. A., Mohammad, M. F., & Moin, M. I. A. (2017). Higher TVET Education in Aviation: Teaching Quality and A Master Key to Industry 4.0. *International Journal of Education*, 2(5), 44-53.
- Siam, M. R. (2017). The effect of communication strategy on the relationship between strategy execution (organisational level) and organisational performance: a middle level managers' perspective at higher education institutions. *Journal for Global Business Advancement*, 10(2), 158-186.
- Sue Clegg & John McAuley (2005) Conceptualising Middle Management in Higher Education: A multifaceted discourse, *Journal of Higher Education Policy and Management*, 27:1, 19-34, DOI: 10.1080/13600800500045786
- Sukaris, Sri Hartini, Dien Mardhiyah, Ismi Rajiani and Budiyono Pristyadi (2019). Dynamic Capability of Private Universities: The Role of Middle Managers. *International Journal of Recent Technology and Engineering (IJRTE)*, 8 (4). pp. 1576-1582. ISSN 2277-3878
- Sultana, R. G. (2017) Career guidance and TVET: critical intersections in the Arab Mediterranean Countries, *International Journal of Training Research*, 15:3, 214-228, DOI: 10.1080/14480220.2017.1374667
- Thompson, C., & Wolstencroft, P. (2018). Trust into mistrust: the uncertain marriage between public and private sector practice for middle managers in education. *Research in Post-Compulsory Education*, 23(2), 213-230.

- Thi Lan Huong Nguyen (2013) Middle-level Academic Management: A case study on the roles of the Heads of Department at a Vietnamese university, *Tertiary Education and Management*, 19:1, 1-15, DOI: 10.1080/13583883.2012.724704
- Thi Lan Huong Nguyen (2012) Identifying the training needs of Heads of Department in a newly established university in Vietnam, *Journal of Higher Education Policy and Management*, 34:3, 309-321, DOI: 10.1080/1360080X.2012.678730
- Thorpe, A., & Garside, D. (2017). (co) Meta-reflection as a method for the professional development of academic middle leaders in higher education. *Management in Education*, 31(3), 111-117.
- Whittemore, R. and Knafl, K. (2005), The integrative review: updated methodology. *Journal of Advanced Nursing*, 52: 546-553. <https://doi.org/10.1111/j.1365-2648.2005.03621.x>
- Zancajo, A., & Valiente, O. (2019). TVET policy reforms in Chile 2006–2018: between human capital and the right to education. *Journal of Vocational Education & Training*, 71(4), 579-599.