THE SEARCH FOR MEANING AND ENGAGEMENT AMONG MALAYSIAN ACADEMICS

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Abstract

This thesis studies the work experience of Malaysian academics through the theoretical framework of the Job Characteristics Model (JCM). Specifically, this research aimed to explore what constitutes work for Malaysian academics, and to examine the variables that lead towards workplace meaningfulness and work engagement. This was accomplished through three studies.

The first qualitative study was carried out on 15 full-time academic respondents recruited from a range of higher education institutions (HEIs) in Malaysia, and aimed to examine what are the job characteristics that make up their work experience as Malaysian academics, including the challenges and motivations they face in the workplace and their reported attitudes and beliefs towards their work. The findings were also analysed through the lens of the JCM to determine if the characteristics present in the workplace are relatable to the job characteristics postulated by the JCM. Results indicated that some of the job characteristics that make up the Malaysian academic work experience are related to the characteristics of the JCM, in addition to several other factors such as organisational support, authorship, task variety, meaningful work, and elevated levels of burnout.

The second quantitative study analysed the relationship between the reported factors in the first study with job psychological meaningfulness and also sought to generalize the findings of the first study to the general population of Malaysian academics. 350 participants were recruited from a range of Malaysian HEIs. Results indicated significant relationships between the JCM factors of Autonomy, Skill Variety, Task Significance, and Task Identity with job psychological meaningfulness, while Feedback was not a significant predictor. Additionally, factors such as Task Variety and Authorship was also a significant predictor of job psychological meaningfulness. Results also indicated a high level of burnout among Malaysian academics in

general, indicating a generalizability of the results from the first study to the Malaysian academic population.

The third study examined the relationship between the JCM factors, the psychological state of job meaningfulness, and work engagement levels among the same participants in Study 2. The relationship between burnout and work engagement was also studied. Results showed significant relationships between job psychological meaningfulness and work engagement, as well as significant mediated relationships between the JCM factors and work engagement with job psychological meaningfulness as a mediator. Burnout was also found to be significantly predictive of work engagement, as well as a significant mediator of the relationship between job psychological meaningfulness and work engagement. Implications of these results for the Malaysian higher education sector are discussed.

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"Have I not commanded you? Be strong and courageous. Do not be afraid, do not be discouraged. For the LORD your God will be with you wherever you go." – Joshua 1:9

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Preface

This thesis describes the study that was conducted to understand the meaning of work for Malaysian academics. Specifically, this thesis seeks to understand what are the challenges, motivations, and personal beliefs and values held by Malaysian academics that make up the experience of their work, as well as to validate the Job Characteristics Model (JCM) (Hackman & Oldham, 1976) as a viable theoretical framework that can be applied to the Malaysian academic workplace.

This thesis is structured into nine chapters. Chapter 1 [*Introduction*] provides an overview of the general research area at hand, including the research background and motivations for conducting this research. This includes the significance of the research and its potential contributions to the Malaysian academic field.

Chapters 2 [*Conceptual Framework*] and 3 [*The Academic Workplace: A review of the literature*] details the relevant theoretical framework used in this research and discusses the relevant literature regarding the Malaysian academic workplace, in addition to identifying and discussing the literature gaps that this thesis aims to address.

Chapter 4 [*Research Methodology*] discusses the research design and methodology used in this study, including the rationale for a sequential exploratory design, sampling methods used, ethical considerations, and a description of the participants recruited in the different phases of this study.

Chapter 5 [*Assessing the factor structure of the study's instruments*] details the validation analysis that was conducted on the instruments used in the quantitative phase of this research, including a discussion of the respective factor structures, model fit, and scale modifications that were conducted in order to validate the instruments to a Malaysian academic population.

Chapter 6 [*Investigating the work experience of Malaysian academics*] details the qualitative analysis and findings of this thesis, which is the first phase of the overall study. This chapter presents the thematic findings of the Malaysian academic work experience, and discusses the results in relation to the findings of previous studies as well as its similarities to the theoretical framework of the JCM.

Chapter 7 [*Investigating the relationships between workplace factors, JPM, and burnout*] details the quantitative analysis of the workplace factors of Malaysian academics that were found in Chapter 6 and examines its relationship with job psychological meaningfulness (JPM) and burnout. This chapter also examines the factors of the JCM and its relationship with JPM, in order to validate the JCM as a viable theoretical framework for the Malaysian academic sector.

Chapter 8 [*Investigating the relationship between JCM, JPM, burnout, and engagement*] details the quantitative analysis of the relationship between the workplace factors, JPM, burnout, and engagement. Specifically, this chapter examines whether JPM positively predicts work outcomes such as work engagement, whether the relationship between the JCM's factors and work engagement are mediated by JPM as postulated by Hackman and Oldham (1976), and whether burnout has both a direct and mediating effect on the work engagement levels of Malaysian academics.

Chapter 9 [*General discussion, implications, and directions for future research*] integrates the findings of the three empirical chapters of this thesis, and discusses them as a whole. This includes a discussion of the collective view held by Malaysian academics towards their work, a discussion on the viability of the JCM as a theoretical framework for Malaysian academics, and the influence of burnout in Malaysian academia. Theoretical, practical, and

methodological implications are also discussed in this chapter, as well as the limitations of this study and suggestions for future research followed by an overall conclusion.

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List of Abbreviations

AMOS	Analysis of Moment Structures
CBI	Copenhagen Burnout Inventory
CFA	Confirmatory Factor Analysis
EFA	Exploratroy Factor Analysis
FFO	Feedback From Others
FFJ	Feedback From Job
HEI	Higher Education Institution
IAF	Index of Autonomous Functioning
JCM	Job Characteristics Model
JPM	Job Psychological Meaningfulness
SEM	Structural Equation Modeling
SPOS	Survey of Perceived Organisational Support
SPSS	Statistical Package for the Social Sciences
SV	Skill Variety
TI	Task Identity
TS	Task Significance
TV	Task Variety
UWES	Utrecht Work Engagement Scale
WAMI	Work and Meaning Inventory
WDQ	Work Design Questionnaire
WE	Work Engagement

Chapter 1: Introduction

1.1. Chapter Overview

This chapter presents an overview of the research project, provides the rationale for the purpose of this research and the problem area in general, details a brief history of the Malaysian higher education and its current situations, and highlights the significance of this research and its possible contributions to the area of academic work. It concludes with a brief summary of the study's contributions to the research area.

1.2. General statement of problem area

The landscape of higher education is shifting rapidly today – from once being an opportunity open to only a few to being a common pathway for most individuals in developed countries (Schofer & Meyer, 2005). Roughly one-fifth of the world cohort is now enrolled in higher education, and this trend is seen to be on an upwards trajectory in the near future (Schofer & Meyer, 2005). As such, the field of academics is currently experiencing an unprecedented expansion, and is becoming increasingly in the focus of industrial-organisational psychology researchers (Vossensteyn, 2004; Ravichandran & Rajendran, 2007; Watts & Robertson, 2011; Fredman & Doughney, 2012). However, despite an increased focus on education, global levels of support for members of academia remains limited (Vossensteyn, 2004). As a result, members of academia find themselves facing increased pressures as they work in a field that is increasingly demanding, with academic work environments found to be consistently deteriorating in overall quality (Kinman & Jones, 2008; Houston, Meyer, & Paewai, 2006; Tytherleigh, Webb, Cooper, & Ricketts, 2005).

According to the Health and Safety Executive (HSE) of Great Britain (2017), the top three industries with higher than average levels of stress, depression, or anxiety consists of health

and social services, public administration and defence, and education. Watts and Robertson (2011) further found that the increasing number of students enrolled in higher education institutions was a strong predictor of burnout. Additionally, it was also found that academics were not as highly paid in comparison to professionals in commercial sectors (Gillespie, Walsh, Winefield, Dua, & Stough, 2001; Fredman & Doughney, 2012; Waitere, Wright, Tremaine, Brown, & Pause, 2011), and reported higher than average weekly hours of work (Kinman & Wray, 2013).

Extensive research carried out in academic workplaces consistently highlights systemic and endemic issues faced by members of academia, such as increased stress levels (Abouserie, 1996), poor work-life balance (Barkhuizen & Rothmann, 2016), insufficient resources (Gillespie et al, 2001), increased role conflict and ambiguity (Kinman & Wray, 2013), as well as lack of organisational support (Ravichandran & Rajendran, 2007), stemming from the global rise in enrolment of higher education students (Schofer & Meyer, 2005).

These studies highlight endemic issues present within the modern higher education landscape (Rothmann & Jordaan, 2006). The landscape of higher education in Malaysia also faces its own set of challenges, resulting from prodigious growth (Economic Planning Unit, 2010) in recent years to the difficulty in balancing an ambitious growth trajectory with limited budgetary means (The Organization for Economic Co-operation and Development, 2016), problems which will be expounded further in the subsequent section. Nonetheless, as a member of the Malaysian academic field himself, this researcher has struggled with much of the same issues highlighted by these researches, including intense work-related pressure due to excessive demands, role conflict and ambiguity brought on by the clash between organisational goals and personal values as an academic, and the struggle of coping with insufficient resources.

In accordance with Malaysia's aim to be recognized a global education hub in the near future, it is important to better understand these systemic issues in academia, and work towards resolving them. However, a majority of the current literature regarding the academic workplace in Malaysia merely presents a descriptive perspective of the problems faced, with little in the way of in-depth analysis as to the factors that cause issues such as increased stress or perceived lack of organisational support (Idris, 2012; Makhbul & Khairuddin, 2013). While the current literature examines the current challenges faced by Malaysian academics, it does little in exploring the relationship between the work factors and work outcomes of Malaysian academics.

This highlights the dire need for a study of this type to be done in Malaysia. If Malaysia is to have any hope of fulfilling its huge potential as the hub of higher education and the centre for excellence in the region, it is imperative that we are able to gain an in-depth understanding of the challenges faced by Malaysian academics as well as the motivating factors in the workplace, in addition to understanding how these factors are able to influence and predict the work performance of Malaysian academics. This can be achieved by first understanding its history and the preceding challenges and factors leading up to its present day condition. The subsequent section provides a brief look at the history of the Malaysian higher education sector, as well as the unique challenges it has faced in its relatively young, 70-year history, the echoes of which still contributes to the modern Malaysian academic workplace.

1.3. Higher Education in Malaysia: History, Challenges, and Current Status

History of Malaysian Higher Education

The Malaysian higher education landscape began with the establishment of University Malaya in 1949 (University Malaya, 2018). It quickly expanded, with the inception of additional state-funded universities before the passage of the Private Higher Educational Institutions

(PHEI) Act 1996 increased governmental support for private providers of higher education in Malaysia. However, the Asian financial crisis in 1997 brought the expanding Malaysian higher education sector to a shuddering halt (Varghese, 2001). An economic collapse of the East Asian regions (including Malaysia) resulted in extensive budgetary cuts by the Malaysian government in an attempt to stabilize the economy and resulted in significantly reduced support for higher education institutions (Varghese, 2001). The resulting budgetary cuts and economic collapse led to both public and private education institutions in Malaysia to respond by introducing austerity measures such as reducing staff and financial support for higher education activities.

Additionally, the collapse of the ringgit currency value in relation to the currencies of popular higher education destinations such as the US, UK, and Australia led to an explosion in student enrolment numbers in local universities as a result of Malaysians' inability to fund the studies of their children abroad (Varghese, 2001). The devaluation of the ringgit also made Malaysia a more viable destination for foreign students, further compounding the stress faced by the Malaysian higher education sector as a result of reduced financial support and increased workloads (Varghese, 2001). The large influx of students enrolling in Malaysian HEIs was both a blessing and a curse, in that it resulted in the much needed internal expansion of the nation's higher education sector, while at the same time placing acute stresses on its arguably under-developed infrastructure. The effects of this explosion in numbers resonates even today.

Current Status of Malaysian Higher Education Sector

The legacy of the Asian financial crisis of 1997 led to a Malaysian higher education sector that was increasingly overloaded and underfunded, which persists in some form to this day (Mok, 2011). Compounding this sorry state of events is the fact that a majority of Malaysian higher education institutions are still heavily dependent on state funding (Sirat, 2009), funding

which was drastically reduced during the financial crisis and has continued on a downward trend (Mok, 2011). Despite this, Malaysia's higher education sector is currently experiencing a revival of sorts, with student numbers breaching the 1.1million mark for the first time in the country's history (Economic Planning Unit, 2010). The recovery of the Malaysian higher education landscape is on the uptick, with Malaysia now classified as a "regional student hub" due to its exponential growth in numbers (Knight & Sirat, 2011). Malaysia currently represents one of the top two countries in the ASEAN region (alongside Thailand) which recruits international students in significantly larger numbers compared to other member countries (Lek, 2014). Malaysia is also recognized by the UNESCO Institute for Statistics (UIS) as having one of the highest exponential growth rates for graduate education and scientific publication, which is further proof of the rapid recovery of the sector since the dark days of the Asian Financial Crisis (UIS, 2016). Recent reports by the Performance Management and Delivery Unit (PEMANDU) indicates that the higher education sector contributed RM9.7 billion to Malaysia's GNI in 2016, placing it comfortably among the top 10 income generators for the country, and this figure is expected to grow in the coming years (PEMANDU, 2016).

All of this is the result of the initiatives of the Ministry of Higher Education (MOHE)'s Plan 2015-2025, which sets out a blueprint for the transformation of the higher education industry of Malaysia into an international hub of education within the next decade (MOHE, 2015). A recent job statistics report provided by the Ministry of Higher Education's survey also highlights the field of education as one of the most popular choices for graduates, particularly at the Masters and PhD levels (Maklumat Pekerjaan Graduan 2015-2016), a stark difference from pre-Asian Financial Crisis levels. The growth of academia in Malaysia is also reflected in its recent improvement in university ranking according to the Times Higher Education University

Rankings 2016 (Times Higher Education World University Rankings 2015-2016, 2016). These improvements are also highlighted by UNESCO, which recognizes Malaysia as among the top 10 destinations for post-secondary education (UIS, 2016). This has spurred the Malaysian government towards more ambitious goals, targeting a total population of 200,000 foreign students by the year 2020, up from the latest census of 172,886 as of the year 2016 (PEMANDU, 2016).

Challenges facing the Malaysian Higher Education Sector

However, despite the promising current status of the Malaysian higher education sector, legacy issues dating back to the Asian Financial Crisis continue to persist. The sector as a whole is still underfunded, and in fact is still facing budgetary cuts (Else, 2016). According to the Organization for Economic Co-Operation and Development (OECD)'s 2016, Malaysia's education system is lagging behind and in need of additional resources and reforms in order to keep up with its ever-expanding size (The Organization for Economic Co-operation and Development, 2016).

Furthermore, the lack of funds in Malaysian higher education is compounded by the lack of financial transparency in governmental bureaucracies including the Malaysian Ministry of Higher Education and public HEIs (Siddiquee, 2006). According to the Open Budget Index, an independent comparative index of central government budget transparency, Malaysia ranked a lowly 55th, placed under the category of "Limited Information Available", lagging behind regional peers such as Thailand, Philippines, India, and Indonesia, as well as countries that are arguably in less developed such as Colombia or Afghanistan (International Budget Partnership, 2018). Issues of inefficiency and corruption remain rampant, with frequent interference from outside parties and cronyism affecting the awarding of contracts and the allocation of resources,

which only serves to further negatively affect transparency in budgets and accounting (Wee, Othman, Omar, Abdul Rahman, & Haron, 2010; Abu Bakar, Saleh, & Sani Mohamad, 2011). Despite efforts by the government in recent times to remedy this issue, corruption remains acute, and in many cases, public data on accounts and spending are inaccessible, with recent studies showing that more effort is still required to improve accountability and transparency (Yaakob, Kadir, & Jusoff, 2009; Siddiquee, 2010; Abu Bakar & Ismail, 2011). The inaccessibility of budget and spending data makes it even more difficult to properly assess how the lack of funding negatively affects the Malaysian academic sector, as it is almost impossible to determine for instance how much money is actually available to the sector as opposed to the official budget, and whether or not Malaysian academics are made to pay the price by making up for any shortfall between the official allocated resources and actual received resources by multi-tasking or reducing resource-heavy initiatives such as research in favour of resource-generating activities such as teaching and delivering programs.

Exacerbating the problem is the push for the globalization of the Malaysian academic industries in order to achieve the MOHE's ambitious objectives, leading to increased pressure on Malaysian academics to embrace new initiatives in order to remain competitive across the region such as embracing ICT (Hong & Songan, 2011). Additionally, there is increasingly a need for Malaysian academics to handle and be familiarized with multiple different standards as a result of being a provider of different international-standard degrees, leading to inefficiencies and counter-productive outcomes such as the diversion of resources (Lim, 2010). Similar to the findings of Sabagh, Hall, and Saroyan (2018), the push towards massification and internationalization have resulted in Malaysian academics facing ever-increasing workloads, both quantitatively and qualitatively. Additionally, higher education institutions (HEIs) are still

focused on cost-cutting strategies to reduce operational expenses, including a decrease in employment of administrative and part-time teaching staff and the passing of that additional workload to their already-overworked permanent faculty members, which only serves to make the problem worse (Sohail, Daud, & Rajadurai, 2006).

Further adding to the stress experienced by Malaysian academics is the renaissance of the privatization of higher education (Tierney & Sirat, 2008). Malaysia has seen an exponential growth in the higher education landscape since the financial crisis, with more than 20 public universities, 33 private universities, and over 500 private colleges as of 2014 (Grapragasem, Krishnan, & Mansor, 2014). The prolific rise in private institutions eventually resulted in a temporary moratorium on private HEIs in 2013, extended to 2020 due to an inability to properly govern the large numbers of private HEIs in Malaysia (Nokman, 2017). This increase of private HEIs has led to increased competition between both public and private entities jostling to capture adequate market share (Wan, 2007). Externally, Malaysia also finds itself embroiled in increasing competition among its Asia Pacific peers in terms of attracting a larger market share in the higher education sector (Brookes & Becket, 2007), leading to the industry as a whole operating on ever slimmer margins in order to remain competitive.

As a result, increased competitive pressures has led Malaysian HEIs to adopt alternative strategies in order to compete for and retain students, improve services, and at the same time balancing their respective budgets in order to achieve sustainability or turn a profit (Sohail, Rajadurai, & Rahman, 2003), placing added pressure on the academic staff in Malaysia.

Effects on Malaysian Academics

The effects of this on members of Malaysian academia is significant, with members of academia reporting higher turnover intentions and reduced job satisfaction due to budgetary

concerns and increased workloads (Arokisamy, Ismail, Ahmad, & Othman, 2011; Aslan, Shaukat, Mad Shah, & Mahfar, 2014), a trend which has been consistent for at least the past decade (Yaacob & Wood, 2004).

One result of the budgetary cuts and lack of funding has been the re-shaping of what it means to be an academic in Malaysia. As previously mentioned, it is difficult to assess how much resources are allocated to research intiatives due to the lack of transparency and accountability (Siddiquee, 2010; Abu Bakar & Ismail, 2011). However, what is prominent is that the current state of Malaysian academia is one that is more focused on revenue generating activities such as teaching and delivering programs rather than on research due to the financial cutbacks (Kamal, 2017). In a study on what constitutes the top five priorities in the Malaysian academic workplace, teaching and delivering programs ranked at the top of the list, with research being placed in the second or third tiers depending on the respective rank of the academic responding to the survey (Ghasemy, Hussin, Megat Daud, Md Nor, Ghavifekr, & Kenayathulla, 2018). Indeed, in a rare burst of frustration, one prominent retired professor lamented the state of Malaysian academia, claiming that Malaysian academics have been relegated to nothing more than "glorified high school teachers", focused on simply teaching and their respective lesson plans (Kaur, 2017). Indeed, the policy adopted by some Malaysian HEIs to split research and teaching into two distinct, separate tracks for their academics to choose from is testament to the view that some Malaysian academics hold towards what constitutes being an academic – that one can be an academic that focuses entirely on teaching rather than having to do research (Azman, Che Omar, Md Yunus, & Zain, 2016).

Furthermore, the HEI workplace is seen to be an increasingly stressful sector for Malaysian academics (Ahsan, Abdullah, Yong, & Shah Alam, 2009; Nasurdin & O'Driscoll,

2011; Idris, 2012; Makhbul & Khairuddin, 2013, UfoRIA UiTM, 2009). In a recent study, more than 20% of Malaysian academics reported significant amounts of work-related stress as a result of high levels of job demand (Mukosolu, Ibrahim, Rampal, & Ibrahim, 2015). A case study of factors that were found to influence the overall work experience of Malaysian academics discovered that inadequate work conditions, excessive amounts of responsibility, a high level of job demand and a lack of recognition were among the top contributors to job dissatisfaction among Malaysian academics (Wong & Heng, 2009). Malaysian academics also frequently reported high levels of role ambiguity (Idris, 2011). All of this can be seen as a direct result of the legacy of the Asian financial crisis collapse which led to the mass retrenchment of academic staff in the widespread enactment of austerity resulting in increased workloads faced by Malaysian academics (Zain et al., 2010).

It was also found that Malaysian academics also struggled from poor work-life balance (Mohd Noor, 2011). High levels of job demands was found to lead to increased levels of work-family conflict, and negatively affected the wellbeing of Malaysian academics (Panatik, Rajab, Shah, Rahman, Yusoff, & Zainal Badri, 2012). This was compounded by a perceived lack of organisational support (Idris, 2012; Makhbul & Khairuddin, 2013), challenges that were similar to their contemporaries from other countries (Barkhuizen & Rothmann, 2016; Ravichandran & Rajendran, 2007). Once again, the reduction in quality of life and work-life balance can be seen as a result of the legacy issues currently plaguing the Malaysian higher education sector.

Studies conducted on the work experience of Malaysian academics reflects the findings of those previously conducted in other countries where academics are also under increased pressure due to situational factors (see: Abouserie, 1996; Barkhuizen & Rothmann, 2016). The occurrence of similar challenges faced by Malaysian academics in the workplace demonstrates

that the problems present in the field of academia is one that is not limited by geographical or cultural factors. As the literature demonstrates, the ever-growing landscape of the Malaysian higher education, while beneficial in the long run, also brings about its fair share of challenges that the Malaysian academic needs to face as a result of endemic problems left behind from an earlier era.

1.4. Significance of the study

As previously stated, the Malaysian higher education sector is currently experiencing a large influx of new workers, with the sector registering as one of the top destinations for fresh graduates, with a massive 71% of Ph.D graduates and 45% of Masters graduates choosing to enter the academic sector (Maklumat Pekerjaan Graduan 2015-2016). The academic sector in Malaysia is looking towards the enrolment of 250,000 foreign graduates enrolled in Malaysian HEIs (Ministry of Education Malaysia, 2013). With regards to the growing shift towards e-learning, Malaysia's online education market is also expected to achieve a robust compound annual growth rate of 16.4%. (Research Nester, 2014) Regardless of the growth of academic workers or the increase in enrolled students in HEIs, all markers indicate that the Malaysian higher education sector is poised for an exponential period of growth in the foreseeable near future.

Nonetheless, despite the promising future, there remains a chronic lack of research pertaining to the Malaysian academic workplace, particularly with regards to understanding the work experience from a holistic perspective. Studies which highlight particular strains such as heavy workloads (Zain et al., 2010), poor work-life balance (Mohd Noor, 2011), or lack of resources (Idris, 2012) are useful in highlighting the challenges currently present in the Malaysian higher education sector. However, they merely adopt a pathological perspective,

highlighting the negative aspects and relationships between academics and their work environments, but failing to adequately explore the possible factors in the workplace that lead to positive work outcomes and an overall improvement in the environment.

This study is significant for the following reasons. To the best of the researcher's knowledge, this study is the first of its kind in Malaysia to attempt a qualitative analysis of the work experience of Malaysian academics. A qualitative analysis examining the factors that constitute the work experience of Malaysian academics makes it possible to create a valid account of both the challenges faced by Malaysian academics as well as the sources of strength they perceive in their workplace, which represents a more holistic analysis of the Malaysian academic workplace. Additionally, this study will also examine the academic workplace through the lens of the JCM, which has been found to be a valid, robust theory of workplace design and motivation (Fried & Ferris, 1987). As the subsequent section will expound further, the JCM is a theory that prescribes the importance of several workplace factors in attaining meaningful work and improved work outcomes (Hackman & Oldham, 1976). Analysing the work experience of academics through the lens of the JCM offers a framework to conceptualize the job characteristics of the Malaysian academic workplace and allows us to understand how these variables interact with each other to constitute meaning in the job. Additionally, it also allows for an analysis of how different work characteristics are related to workplace challenges and workplace resources, providing greater insight into effective workplace crafting for the Malaysian academic workplace.

Conducting this study in a Malaysian context also contributes to the literature on the JCM as it serves as a validation of the theory in an Asian, collectivist work culture. While the JCM has been found to be widely applicable in numerous studies (Fried & Ferris, 1987), a majority of

those studies were conducted in Western-individualistic cultures. Culture has been found to play a significant role in the applicability of theories to new workplaces. For instance, a study by Birnbaum, Farh, and Wong (1986) found that the five-trait model of the JCM did not have a satisfactory fit to the Hong Kong population, whereas a four-trait modified model did. Additional research by Obi-Nwosu, Chiamaka, and Tochukwu (2013) found that only the characteristic of TI in the JCM was a significant job characteristic in the Nigerian cultural context. Studying the JCM in a Malaysian context can serve to further the literature with regards to how well it applies to the Malaysian context, specifically in the field of academic work.

Thirdly, this study also validates the psychometric properties of the various instruments used in this study to the Malaysian context. In order to measure the latent variables in this study, seven scales were used, which are the Survey of Perceived Organisational Support, Work and Meaning Inventory, Job Psychological Meaningfulness Scale, Shortened Utrecht Work Engagement, Index of Autonomous Functioning, Work Design Questionnaire, and the Copenhagen Burnout Inventory. All of these scales represent psychologically valid and reliable scales that have been tested across multiple studies and culture. However, few if any of these scales have been used in a Malaysian context. Prior to interpretation of the data, the factor structure of all of the scales used in this study was assessed via EFA and CFA. As a result, the factor structure of some of the scales were found to require modification in order to provide a better fit for the Malaysian academic population. While not the primary aim of this study, the modification of the factor structures for better applicability to the Malaysian population indirectly contributes to the literature of the scales used in this study. For instance, one of the validations of this study found that a single-factor structure of the autonomy subscale in the WDQ was more appropriate to the Malaysian context, as opposed to the suggested three-factor

structure by Morgeson and Humphrey (2006), which contributes to the literature regarding the WDQ in general.

Finally, this study is significant because an understanding of the relationship between various work factors and the work outcomes of meaningfulness and engagement can lead to more effective strategies towards improving the Malaysian academic workplace. Both the government and private stakeholders of Malaysian HEIs can use the findings and recommendations of this research as a guide in crafting more conducive work environments for Malaysian academics, improving not just the work experience of their faculty members but elevating the Malaysian higher education field as a whole.

1.5. Chapter summary and conclusions

This chapter demonstrates the need for research to be done on the Malaysian academic workplace, and provides a brief summary of the area of focus in question. It has also highlighted the significance and contribution of this study, which are:

1. The exploration of the Malaysian academic workplace in greater detail, including the job characteristics present in the workplace that serve as psychological resources as well as the challenges encountered by Malaysian academics in the workplace.
2. The validation of the JCM theory to the Malaysian academic work context, specifically, which of the five characteristics are applicable.
3. The validation of seven psychometric instruments that are commonly used in the organisational psychology research to a Malaysian population.
4. The findings and recommendations of this study can be used by stakeholders to improve the Malaysian higher education landscape as a whole for both the members of academia and their students whose lives they directly impact.

Having presented the general overview of this research, a brief history of the area in focus, and the significance and contributions of this thesis, the next chapter will examine the conceptual framework consisting of established organisational psychology theories that serves as a guide and frame for this research project.

Chapter 2: Conceptual Framework

2.1. Chapter Overview

This chapter discusses the various theories of work design and motivation, as well as their contributions towards understanding the factors that are present and worth studying in the modern workplace. It will also examine the psychological underpinnings of the JCM theory in particular, as the JCM will be used as the primary theoretical framework of this research project. It concludes with a brief summary of both the theories and the psychological validity and suitability of the JCM as the theoretical framework of this project.

2.2. Theories of Work Characteristics and Motivation

Industrial organisational psychology is mostly concerned with studying the area of work in hopes of improving both work conditions and work outcomes. There exists multiple theories regarding what constitutes the experience of work, yet most of these theories concur with regards to the role of workplace characteristics and factors in influencing work outcomes, with two of the most commonly-used theories being the Herzberg's Two-Factor theory, and the Job Characteristics Model, (Herzberg, Mausner, & Snyderman, 1959; Hackman & Oldham, 1976).

2.2.1. Herzberg's Two-Factor Theory (TFT)

Herzberg's Two Factor Theory, (also referred to in the current literature as the Motivation-Hygiene theory), was first proposed by Herzberg in 1959 (Herzberg, Mausner, & Snyderman, 1959). Building upon the foundations of Maslow's theory of motivation, Herzberg believed that simply fulfilling lower order needs in the workplace was insufficient, as individuals also possessed higher order psychological needs such as recognition and a sense of achievement (Herzberg et al., 1959). However, in a departure from the Maslow model of motivation, Herzberg proposed that motivation is influenced by two separate dimensions, one which led to

satisfaction in the workplace, and another which led to dissatisfaction (Herzberg et al., 1959). These were called motivators and hygiene factors respectively.

According to Herzberg, motivators consist of factors that increase workplace motivation, which includes recognition, responsibility, the opportunity for meaningful work, autonomy, and challenge. The presence of these factors in the workplace leads to increased work satisfaction. However, the relationship is unipolar – the absence of these motivators did not lead to work dissatisfaction (Herzberg et al., 1959). Hygiene factors on the other hand, were factors that were correlated with work dissatisfaction, such as job security, benefits, work conditions, and salary. Similar to motivators, the relationship between hygiene factors and work satisfaction is also unipolar – the absence of hygiene factors led to work dissatisfaction, but their presence did not contribute increased work satisfaction (Hackman & Oldham, 1976).

Herzberg developed and validated the TFT through the collection of data from engineers and accountants in Pittsburgh, U.S.A., whom he believed were an adequate, valid sample due to the increasing prominence of both fields during that period (Herzberg, 1964).Using the Critical Incident Technique (CIT), Herzberg analysed the qualitative reports of respondents in his study during reported times of happiness and unhappiness in their workplace, classifying their incidences into the categories of Motivators and Hygiene factors. The TFT has been tested across multiple workplaces (Lundberg, Gudmundson, & Andersson, 2009; Smerek & Peterson, 2007; Ruthankoon & Ogunlana, 2003), and found to still be a valid theoretical framework for the modern workplace despite the passage of time (Basset-Jones & Lloyd, 2005).

However, criticisms of Herzberg's TFT stems from the fact the theory itself does not account for the role of individual differences such as personality or values, which may moderate or influence the effect of certain motivators and hygiene factors on some individuals (Hackman

& Oldham, 1976). Additionally, the rigid dichotomy between satisfaction and dissatisfaction has been found to be possibly influenced by the use of the CIT, which may present artificially separate motivators and hygiene factors into two independent, unipolar dimensions rather than a unified, bipolar spectrum (King, 1970). These weaknesses and criticisms indirectly contributed to the development of the JCM in the subsequent years.

2.2.2. Job Characteristics Model (JCM)

Considered one of the seminal theories regarding workplace motivation, Hackman and Oldman (1976) developed the Job Characteristics Model as an attempt to extend, refine, and clarify the relationships between work variables and work outcomes suggested by previous theories such as Herzberg's TFT (Hackman & Oldham, 1976). The JCM addresses the particular weaknesses of the TFT in that it does not rely on individual, subjective descriptions of workplace incidences in order to determine and classify workplace factors into motivators or hygiene factors, but rather postulates a fixed model of correlated workplace characteristics that have clear relationships with work outcomes (Hackman & Oldham, 1976).

The JCM postulates the existence of five important workplace factors that are essential to workplace wellbeing (Hackman & Oldham, 1976). These factors are Skill Variety (SV), Task Identity (TI), Task Significance (TS), Autonomy, and Feedback. SV is defined as the extent to which a job requires the use of a variety of different skills and activities, task identity is the degree to which a job requires an individual to complete it as a "whole", from its conception to its end, while task significance is the extent to which an individual perceives the job task to have a substantial impact on the lives of other people. Autonomy on the other hand is the extent to which the job provides independence, freedom, and discretion to an individual with regards to work schedules and processes, and the final variable of feedback is the degree to which

performing a job results in the individual receiving information and evaluation of the effectiveness and quality of his performance (Hackman & Oldham, 1976).

The presence of these five work characteristics is theorised to lead to the development of three critical psychological states: task identity, significance, and skill variety led to experienced workplace meaningfulness, autonomy led to experienced responsibility for the outcome of work, and feedback led to knowledge of the results of work activities (Hackman & Oldham, 1976). These critical psychological states lead to an increase in work outcomes such as job satisfaction, motivation, and engagement.

Hackman and Oldham (1976) initially tested their postulations of the JCM on 658 employees recruited from a range of 62 different jobs in across seven separate organizations, in order to increase the generalizability of the sample and thus the results of their study. It was found that the five postulated work characteristics were significantly correlated, both with each other as well as with the hypothesised critical psychological states. The three psychological states were also found to be significant mediators between work characteristics and work outcomes, demonstrating the statistical validity of the JCM's factor structure.

Further validation of the JCM's factor structure and its viability as a theoretical framework was supported by the findings of Fried and Ferris (1987). In a meta-analytical review of 200 studies, they found that the multidimensionality of the JCM and its characteristics was well-supported, even accounting for studies carried out in different workplaces and fields (Fried & Ferris, 1987). However, contrary to the original model, it was found that there were no clear differential relationships between certain job characteristics and the critical psychological states, indicating that the core job characteristics could contribute to all three psychological states of meaningfulness, responsibility, and knowledge instead of just one as initially suggested by

Hackman and Oldham (1976). Other meta-analytical studies further confirm the relationship between the characteristics in the JCM and job outcomes and wellbeing, where 28 studies from a variety of fields were found to demonstrate clear links between job characteristics and job satisfaction (Loher, Noe, Moeller, & Fitzgerald, 1985).

Nonetheless, despite the wide applicability of the JCM to various work types of work, the overall factor structure of the JCM has been found to change depending on the culture within which it is applied. For instance, Birnbaum, Farh, and Wong (1986) found that while a large part of the JCM is applicable to the Hong Kong work sector, a four-factor structure that disregards the characteristic of Feedback was found to have a much better overall fit. Despite this, the general applicability of the overall factor structure of the JCM at large supports its robustness as a modern theory of work design and motivation.

2.3. Assessing the underpinnings of the JCM as viable theory of the modern workplace

As this thesis utilizes the JCM as the theoretical framework within which the study's relationships will be observed, it is prudent to further examine the psychological underpinnings of the JCM in today's modern workplace. As previously stated, the JCM has been found to be widely applicable to a majority of work environments across a prolonged period of time (Loher, Noe, Moeller, & Fitzgerald, 1985; Fried & Ferris, 1987). In fact, the JCM has been found to be a common tool used by modern day consulting firms as a model towards work redesign and improvement (Oldham, Hackman, Smith, & Hitt, 2005). This section will examine the current literature regarding the modern workplace to properly understand why the JCM has proved to be such a robust framework for the modern workplace. This will be done via an analysis of the current workplace literature regarding each of the JCM's five individual factors of Autonomy, Task Identity, Task Significance, Skill Variety, and Feedback.

2.3.1. Autonomy

A large amount of research supports the importance of autonomy as a characteristics in work design (Pelletier, Fortier, Vallerand, & Nathalie, 2002; Littman-Ovadia, Oren, & Lavy, 2013; Rousseau & Aube, 2013). The positive influence of autonomy is also found to transcend work fields, with similar influences found in healthcare (Williams et al., 1998), education (Skaalvik & Skaalvik, 2014), corporate (Parker, Jimmieson, & Amiot, 2013), volunteerism (Kim & Kao, 2014), and self-employment (Annink & den Dulk, 2012). Autonomy was also found to be an important factor across individual differences such as age (Kenny, Walsh-Blair, Bluestein, Bempechat, & Seltzer, 2010) and culture (Esser & Olsen, 2012). Breaugh (1999) found that the construct of autonomy in the workplace could be divided into three different facets, namely Work Schedule Autonomy (WSA), Work Criteria Autonomy (WCA), and Work Method Autonomy (WMA). It was found that each individual facet of autonomy contributed in a different manner towards improving overall work wellbeing. Different facets of autonomy were found to be correlated to different workplace wellbeing outcomes, with WMA most correlated to job satisfaction (Sekhar, 2011). However, Sadler-Smith, El-Kot, and Leat (2003) found that the facet of WCA was most strongly correlated with job satisfaction in a non-Western work context, demonstrating possible cultural differences.

Research has shown the positive effects of workplace autonomy (Lim, Yung, Lin, & Lin, 2011, Bidee, et al., 2013). According to Carr & Mellizo (2013), autonomy was even found to have a larger influence on work satisfaction than wages. For instance, autonomy has been found to significantly predict work engagement (Heidemeier & Wiese, 2014; Heijstra, Rafnsdottir, & Jonsdottir, 2011; Bargagliotti, 2011). This was also found to be true even in team-oriented work environments (Rousseau & Aube, 2013). The facet of autonomy most correlated with work

engagement was that of work schedule autonomy (WSA) (Sekhar, 2011). This is further supported by Pelletier et al. (2002) who discovered that individuals who were given autonomy in their work times were more persistent, motivated, and showed higher levels of engagement due to their own self-regulation, whereas those who perceived external regulation were less so.

Additionally, autonomy is also an antecedent to work productivity and efficiency (Bidee, et al., 2013). Lopes, Lagoa & Calapez (2014) found that increased levels of work autonomy fostered pro-social behaviours, leading to a better work environment and increased productivity, whereas Park, Jimmieson, and Amiot (2013) found that individuals who were given autonomy were better able to cope with increased workloads, were less anxious, and demonstrated increased task performance and higher productivity. Individuals who perceived workplace autonomy were also less prone to work exhaustion, and experienced an overall increase in work productivity as a result (Ahuja, Chudoba, McKnight, George, & Kacmar, 2007; Hill, Hawkins, Ferris, & Weitzman, 2001). In a meta-analysis of 88 studies, a consistent pattern of results linking increased autonomy with better job performances and increased productivity was found (Spector, 1986). Judge and Bono (2001)'s meta-analysis displayed a similar trend across 216 studies, where an increase in autonomy resulted in increased work performance levels.

Additionally, autonomy is also correlated with workplace commitment and turnover intentions (Sisodia & Das, 2013; Moreau & Mageau, 2012; Tastan, 2014). Sekhar (2011)'s study on workplace autonomy found that workplace criteria autonomy (WCA) was a significant predictor of commitment and turnover intentions, whereas Sadler-Smith, El-Kot, and Leat (2003) also highlights the importance of workplace schedule autonomy (WSA) as a contributor towards turnover intentions. Tummers, Groenveld, and Lankhaar (2013) found that individuals who perceived a reduction in autonomy were strongly influenced to leave the organization. Similarly,

Kaddourah, Khalidi, Shaheen and Tannir (2013) discovered that a lack of autonomy resulted in higher work dissatisfaction and increased turnover intentions. A possible explanation for this is the positive relationship between autonomy and workplace well-being (Lopes et al., 2014).

Literature on workplace autonomy consistently points to it as being a buffer for negative events in the workplace (Wu, Luksyte, & Parker, 2014; Chung-Yan, 2010). The lack of autonomy in the workplace was found to be detrimental to the overall work experience (Lazaric & Raybaut, 2013). Work environments lacking in autonomy resulted in individuals being less engaged with their work (Tillot, Walsh, & Moxham, 2013). Haar and Spell (2009) found that individuals who low levels of autonomy were more heavily influenced by negative events and changes in the workplace. Trepanier, Fernet, and Austin (2013) also found that unsatisfied needs for autonomy adversely affected the psychological health of employees and significantly predicted burnout and turnover intentions. Heidemeier and Wiese (2014) on the other hand, found that an increase in workplace autonomy resulted in greater levels of job comfort, while Annink and den Dulk (2012) discovered that greater workplace autonomy led to a healthier work-life balance, increased overall psychological wellbeing and lower turnover intentions.

Autonomy's importance as a workplace motivator is tied to the concept of locus of control (Kim, Cable, Kim, & Wang, 2009; Wu, 2012). An internal locus of control enables individuals to take responsibility and develop a sense of ownership towards their work (Froese & Xiao, 2012), allowing individuals to be more creative (Lazaric & Raybaut, 2013) and empowering individuals to perceive a sense of self-leadership (Ho & Nesbit, 2014), all of which contributes towards improving overall work wellbeing. Additionally, autonomy also increases a sense of competence in individuals (Trepanier, Fernet, & Austin, 2013). As Arogundade and Arogundade (2015) found, individuals who experienced a sense of competence and mastery in

their work experienced greater psychological wellbeing and reported greater career satisfaction. This was supported by Kenny et al. (2010)'s study, where autonomy led to the development of achievement-related beliefs, increased motivation, and improved work behaviours and outcomes. Furthermore, Froese and Xiao (2012) found that employees empowered with higher levels of autonomy felt more competent in their work, were willing to take bigger risks, and were happier in their job.

In summary, the present literature clearly supports the importance of autonomy as a key characteristic in the modern workplace, as postulated by the JCM (Hackman & Oldham, 1976). Autonomy has been found to lead to a variety of improved work outcomes, and has been found to be applicable to different cultures and workplaces.

2.3.2. Task Identity

According to the JCM, the characteristics of Task Identity (TI) is inherently linked to the experience of meaningfulness in the workplace (Hackman & Oldham, 1976). As mentioned prior, TI is defined as the degree to which a job requires an individual to complete it as a "whole" (Hackman & Oldham, 1976). According to TI, individuals who are able to supervise and work on a task from its inception to its final completion will experience a high level of TI, while simply working on a portion of work in isolation would result in lower experiences of meaning in the workplace.

This is surprisingly a rehash of the age-old debate between work efficiency and work meaning, as initially postulated by the great philosophical thinkers Adam Smith and Karl Marx. As observed by Smith (1937) in his book "*The Wealth of Nations*", separation of work into a smaller segments with each worker specialising in each segment greatly increases workplace efficiency. However, Marx in his writings in "*Economics and Philosophic Manuscripts of 1844"*

argues that the segregation of labour in the Smith-ian concept alienates the worker from his job, and results in lower levels of engagement, perceived meaning, and engagement in the workplace, and only work for the payment of labour (1844).

Interestingly, modern-day psychology offers empirical support for the Marx-ian view of work and task identity, arguing for the importance of workplace meaningfulness instead of just payment for labour (Yeoman, 2013). Until recently, individuals had a tendency to view work from an instrumental perspective (Bailyn, 1989). However, in the modern era, work has experienced a paradigm shift from just being a "means to an end" as Smith postulates, to "an end in itself,", more akin to a Marx-like view – most distinctly characterised by Erikson's stages of development of Generativity vs Stagnation, which finds that work has become an integral part of an individual's life in generating meaning and satisfaction (Ciccarelli & White, 2014). Research has also indicated the decreasing significance of money over other psychological factors in the workplace (Tang, 1992), demonstrating that while the Smith-ian view of work is useful for efficiency, the Marx-ian perspective would seem be gaining prominence in the modern workplace when it comes to ensuring better work outcomes for organizations and workers.

A psychological explanation for the role of TI in the workplace is that it leads to a sense of psychological ownership in work. In a revision of the JCM, Pierce, Jussila, and Cummings (2009) found that TI is linked to a sense of psychological ownership, where individuals who were able to perceive control and participation over the entire work process felt like they "owned" their work. This increased sense of ownership offers a justification to why TI is such a significant factor in the modern workplace, and explains how it is able to lead to increased work outcomes such as meaningfulness, engagement, and commitment. In a similar vein, TI was also

found to be related to affective organisational commitment among workers (Dunham, Grube, & Castaneda, 1994), which ultimate leads to improved work outcomes.

The importance of TI in the workplace has been found to span across multiple work environments and fields, from healthcare (Pearson & Chong, 1997; Adebayo & Ezeanya, 2010) to scientists and engineers (Steers, 1977) to the IT workforce (Hoonakker, Marian, & Carayon, 2003). While some studies have demonstrated that TI may not be an effective work characteristic for all workplaces (Hunt, Chonko, & Wood, 1985; Agarwal & Ramaswami, 1993), a majority of research indicates multiple positive work outcomes from increasing perceived TI, including increased commitment (Lin & Hsieh, 2002), quality of working life (Hoonakker et al., 2003), engagement (Saks, 2006), and decreased levels of burnout (Adebayo & Ezeanya, 2010).

As the present literature demonstrates, TI remains a significant job characteristic in the modern workplace since its initial conceptualisation by Hackman and Oldham (1976), being found to be applicable across different work sectors and leading to improved work outcomes.

2.3.3. Task Significance

Task Significance (TS) is another component of the JCM and is suggested to be a critical characteristic of work design that contributes towards workplace meaningfulness (Hackman & Oldham, 1976). TS is best defined as the extent to which an individual perceives the job task to have a substantial impact on the lives of other people (Hackman & Oldham, 1976). According to the JCM, individuals who perceive that their job has an added significance to the lives and outcomes of others beyond themselves perceive an increase in TS, which results in increased meaningfulness in the job and improved work outcomes.

The role of TS in the modern workplace is well-researched. Studies indicate that subjects differed in their commitment, satisfaction, productivity, and engagement levels in their work

when they perceived that the task at hand had added significance beyond mere payment (Ariely, Kamenica, & Prelec, 2008; Raub & Blunschi, 2014; Gostautaite & Buciuniene, 2015). It was also found that workers who perceived their work as meaningful and important were better able to respond to challenging demands in the workplace (Crawford, LePine, & Rich, 2010). A laboratory experiment to determine causality found that individuals who were induced to perceive greater significance in their tasks actually increased their levels of job performance, and displayed increased job dedication and helping behaviour towards others (Grant, 2008). Furthermore, TS was found to be linked with higher levels of participation and involvement (Brown & Peterson, 1993; Hu, Erdogan, Bauer, Jiang, Liu, & Li 2015), as well as organisational identification and reduced turnover intention (Sluss, Ashforth, & Gibson, 2012). Additionally, TS was found to moderate the negative effects of emotional dissonance with the job (Dal Santo, Pohl, & Battistelli, 2013), and compensated for negative work and negative self-evaluations in the workplace (Grant & Sonnentag, 2010).

An explanation for the role of TS in influencing workplace outcomes is its relationship with workplace meaningfulness (Hackman & Oldham, 1976; Allan, Duffy, & Collisson, 2016; Allan, 2017). As the TFT postulates, TS is one of the key factors in work motivation (Herzberg, 1959). In fact, Schnell, Hoge, and Pollet (2013) suggests that TS is one of the strongest predictors of work meaningfulness, superseding other personal and organisational variables. Thomas and Velthouse (1990) suggests that work that is seen to be impactful to others contributes towards work meaningfulness, and leads to experienced workplace empowerment. As literature suggests, meaningfulness represents a critical workplace factor, being linked to engagement (Steger, Littman-Ovadia, Miller, Menger, & Rothmann, 2012; Michaelson, Pratt, Grant, & Dunn, 2014), productivity (Morrison, Burke, & Greene, 2007; Poole, 2009;

Kazemipour & Mohd Amin, 2012), organisational commitment (Duffy et al., 2011; Nwibere & Emecheta, 2012; Ivtzan, Sorensen, & Halonen, 2013; Duffy et al., 2014), work satisfaction (Berg, Wrzenewski, & Dutton, 2010), and individual fulfilment (Wrzesniewski, 2003; King, et al., 2006; Van Fossen & Vredenburgh, 2014).

The importance of meaningfulness in the workplace and its links with TS demonstrates the importance of TS in the modern workplace, and its contributions towards work design as postulated in the JCM (Hackman & Oldham, 1976).

2.3.4. Skill Variety

Skill Variety (SV) is suggested by Hackman and Oldham (1976) to be another integral job characteristic that contributes towards the design of meaningful work. SV is characterised as the extent to which a job is varied in terms of activities and requires that an individual uses a variety of skills and abilities to complete the job. That being said, some research has indicated that SV is strictly limited to the jobs requirements of a variety of skills rather than the individual's use of their own varied set of skills in the workplace (O'Brien, 1983), drawing a line between skill variety (SV) and skill utilization (SU), which is the worker's ability to utilize their skills in the workplace. Nonetheless, other researches postulate that the differentiation between SV and SU is merely a matter of semantics, and that both SV and SU are in essence the same concept. Lester (1987) found that SV and SU items loaded onto the same factor in a factor analysis study developing the Teacher Job Satisfaction Questionnaire (TJSQ). Teachers who completed the TJSQ saw no qualitative difference between items focused on SV and items focused on SU, with the factor structure combining both variables into a single factor (Lester, 1987). There is thus evidence to believe that SV and SU are psychometrically identical constructs.

Research on the role of skill variety in the workplace demonstrates its importance and versatility in improving the work environment. For instance, SV has been found to improve an individual's creativity and idea generation in the workplace (Noefer, Stegmaier, Molter, & Sonntag, 2009; Chen, Shih, & Yeh, 2011; Jiang, Wang & Zhao, 2012). SV has also been found to lead to an increase in job satisfaction levels (Glisson & Durick, 1988; Judge, Bono, & Locke, 2000), even accounting for differing fields of work such as healthcare (Humphrys & O'Brien, 1986), governmental services (Ting, 1997), education (Van den Broeck. Vansteenkiste, De Witte, & Lens, 2008) and accountant and engineering (Hackman & Oldham, 1975). Additionally, SV is also found to be a useful predictor of future behaviour and work outcomes such as engagement (Saks, 2006), work motivation (Houkes, 2002), job performance (Kemboi, Biwott, Cheunos, & Rutto, 2013), burnout levels (Carrière & Bremner, 2011), organisational commitment (Liden, Wayne, & Sparrowe, 2000; Bakker, Demerouti, De Boer, & Schaufeli, 2003), organisational citizenship behaviours (Feather & Rauter, 2004), job changes (Fields, Dingman, Roman, & Blum, 2005) and turnover intention and job exits (Zaniboni, Truxillo, & Fraccaroli, 2013; Marsh & Mannari, 1977; Karasek Jr, 1979).

One way in which SV affects the modern workplace is that the need for the development and use of a variety of skills in the workplace brings about a sense of challenge in the workplace (Brown & Peterson, 1993). Challenge has been found to be a key factor in increasing workplace meaningfulness (Wrzesniewski, Dutton, & Debebe, 2003; Berg, Wrzesniewski, & Dutton, 2010; Martinez & Scott, 2014). This is illustrated in a laboratory study by Norton, Mochon, and Ariely, where it was found that participants were placed in a more challenging condition of task completion reportedly found their work meaningful and enjoyable, in addition to attaching more value to the outcome of their work. Martinez and Scott (2014) found similar results, where 145

participants who were measured reported that having a balance between their skills and adequate amount of challenge in their job lead to them experiencing more meaning in their work, and higher levels of productivity and engagement. Berg, Wrzesniewski, and Dutton (2010) found that individuals who were able to deem work as challenging and meaningful showed an increase in work performance and behaviour. According to Parry (2006), the ability and competence to take on the challenge of realigning opportunities at work with one's own strengths also brought a sense of meaning. The role of challenging work in increasing workplace meaning is also cited as a motivator by Herzberg (1968), who discovered that presenting workers with a more challenging job increased their motivation to complete the task as they were more able to perceive meaningful growth and learning in their workplaces.

The relationship between SV, challenge, and improved workplace outcomes is perhaps best explained by the Self-Determination Theory (SDT) of Ryan and Deci (2000). Ryan and Deci highlighted three universal needs for individual well-being which are Competency, Autonomy, and Relatedness according to the SDT. An individual's development and use of a variety of skills to meet the challenge present in their workplace contributes to an increased sense of competence, which ultimately leads to improved well-being and work outcomes (Ryan & Deci, 2000).

In summary, the current literature clearly demonstrates the importance of SV as a job characteristic in the both the JCM as well as the current workplace, and explains how an increase in SV can lead to a better work environment and improved work outcomes.

2.3.5. Feedback

The final job characteristic postulated by the JCM to be integral to the design of meaningful work is Feedback. Feedback is defined as the degree to which performing a job

results in the individual receiving information and evaluation of the effectiveness and quality of his performance (Hackman & Oldham, 1976). The role and importance of feedback in the workplace is not just suggested by the JCM, but by workplace literature at large (Smithers & Walker, 2000; Ali & Ahmed, 2009).

A survey by the Institute of Leadership and Management in the UK carried out across more than 2000 managers found that feedback and recognition was found to be important to 62% of workers (2013). Stajkovic & Luthans (1997) in a meta-analysis of studies of behavioural modification in organizations over a period of 20 years found that three of the most significant incentive motivators frequently used were money, social recognition, and performance feedback. Other seminal theories support the importance of feedback in the workplace, with Herzberg's TFT study on Finnish supervisors finding that recognition and feedback of pre-set goals and work performance was one of the most important motivating factors (Herzberg, 1965). Additionally, the role of feedback and recognition in improving workplace outcomes is seen in its inclusion into the Work Preference Inventory (WPI), where it was found that feedback and recognition was strongly correlated with improved work outcomes (Amabile, Hill, Hennessey, & Tighe, 1994). Furthermore, feedback is also generally accepted to be an important work resource that leads to improved work outcomes such as engagement and buffers against burnout in the Jobs-Demands Resources Theory, further demonstrating the importance of feedback in the workplace (Bakker, Demerouti, & Schaufeli, 2003; Crawford, LePine, & Rich, 2010).

When discussing feedback, it is imperative to examine the different kinds of feedback available in the workplace. Scholarship on feedback via a meta-analysis of 72 studies conducted in multiple organizations over a period of years reveals two main types of feedback: social recognition and acknowledgement, and task-oriented feedback (Stajkovic & Luthans, 2003).

Social recognition and acknowledgement is most commonly understood as a type of feedback obtained from an individual's social circle for the work that is completed, which is seen as a social reward, while task-oriented feedback is commonly seen as form of non-financial workplace intervention that serves to guide an individual towards better work outcomes (Locke & Latham, 1990; Stajkovic & Luthans, 1997; Evans, 2001; Rapp, Agnihotri, Baker, & Andzulis, 2014).

Studies on the social recognition sub-construct of feedback frequently points to it being an integral factor in the workplace (Stajkovic & Luthans, 2001; Hicks & Adams, 2003; Mathauer & Imhoff, 2006). For instance, Hviid, Smith, Frydendall, and Flyholm (2012) found that service workers who were given feedback in the form of social recognition reported healthier psychosocial environments in their workplace. Rapp, Agnihotri, Baker, and Andzulis (2014) obtained similar results when it was found that social recognition from superiors and peers produced a positive moderating effect on work performance, and increased loyalty and organisational commitment of service representatives.

According to Matthauer and Imhoff (2006), social recognition could stem from the community that the work impacts as well as the community within the workplace itself. The function of social recognition in leading to improved work outcomes is perhaps best explained by Bandura's (1986) work on social foundations of thoughts and actions, where it was found that social recognition often preceded valuable rewards from others. Social recognition is thus seen as a cue towards impending positive outcomes or rewards, giving it significant motivational power.

Besides social recognition, task-oriented feedback is also frequently found to be an important and useful form of feedback (Stajkovic & Luthans, 2001). According to Stajkovic and Luthans (1997), individuals react to feedback according to the goal-setting model, where

feedback helps in understanding the discrepancy between their current position and their intended goal and motivates them to achieve it. Thus, task-oriented feedback was found to be most useful when it was conveyed immediately, graphically, and specifically (Stajkovic & Luthans, 1997).

The relationship between task-oriented feedback and improved work outcomes is explained by Bandura's (1977) theory of self-efficacy. Self-efficacy was found to have positive effects on task initiation and perseverance; individuals with high self-efficacy are frequently more productive, committed, and engaged with their work (Bandura, 1999). It was suggested that self-efficacy could be induced via human agency (Bandura, 1982), a suggestion that Schunk (1995) confirms when it was found that task-oriented feedback from superiors functioned as a persuasive source of self-efficacy information.

The positive effects of feedback in the workplace cannot be understated. Feedback has been found to be positively linked with work motivation, productivity, and dedication (Hertel, Niedner, & Hermann, 2003; Ariely, Kamenica, & Prelec, 2008). Lundberg, Godmundson, and Anderson (2008) found feedback and recognition to be an essential growth factor in the workplace, and generally led to an improvement in work outcomes. Additionally, feedback was found to also influence organisational commitment and loyalty, and individuals who were given appropriate feedback were more satisfied with their work and willing to work for less money (Ariely, Kamenica, & Prelec, 2008; Rapp, Agnihotri, Baker, & Andzulis, 2014). Conversely, workers who were not provided with feedback frequently reported feeling demotivated and "invisible", which resulted in poor overall performance.

The role and importance of feedback is clearly demonstrated in the current literature, and the characteristic of Feedback is unquestionably one that is still very much relevant, both to the JCM and to the overall work literature.

2.4. Chapter summary and conclusions

This chapter discusses the present-day theories regarding work design and work motivation, in order to better understand the respective factors that constitute the modern-day workplace. Additionally, it has also highlighted how the Job Characteristics Model is an appropriate theoretical framework for the present research project, and examined how each of the five characteristics of the JCM holds up under the scrutiny of literature. It was found that all five characteristics of the JCM have rich literature support for their roles and effects in the workplace, justifying the JCM as a suitable model with which to examine the modern-day workplace. Having examined the theoretical framework in general and justified its use in this study, the following chapter will attempt to look at how the JCM applies to the academic workplace in particular, in addition to examining the other factors of the academic workplace that will be observed in this study.

Chapter 3: The Academic Workplace: A review of the literature

3.1. Chapter Overview

This chapter discusses the JCM with regards to its applicability to the academic workplace, as well as the other factors pertaining to the academic workplace that will be the subject of study in this project such as burnout and engagement. Additionally, it will assess the relationships between the various variables in this study, followed by the postulation of the research questions, aims, and hypotheses of this study stemming from the relationships examined. It concludes with a brief summary of the relationships between the variables and how they lead to the overarching research questions and aims of this study.

3.2. Applying the JCM to an academic work setting

The JCM was initially developed for use in the corporate or business industry (Hackman & Oldham, 1976; Kopelman, 1985), and has seen extensive use in studies focused on a variety of industries (Ruthankoon & Ogunlana, 2003; Smerek & Peterson, 2007; Lundberg, Gudmundson, & Andersson, 2009). However, very few studies have sought to study the JCM in education and academia (Barnabe & Burns, 1994; Houkes, Janssen, de Jonge, & Nijhuis, 2001). Nonetheless, the few studies that have applied the JCM to the academic work context have found it to be a useful tool in examining the work characteristics of academics and teachers.

One of the earliest studies to apply the JCM to the academic workplace is the research conducted by Barnabe and Burns (1994). They tested the Job Diagnostic Survey (Hackman & Oldham, 1975), a diagnostic tool used to measure the work characteristics of the JCM on a sample of 247 teachers in Quebec, Canada, to determine if the JCM would be applicable to the field of education. It was found that teachers reported similar patterns of relationships between the JCM's workplace characteristics and their reported levels of work motivation compared to

Hackman and Oldham's (1975) findings, albeit at a weaker correlation level. This result was one of the first to demonstrate that the JCM could be used as a viable tool to gauge the education industry. Houkes et al. (2001) further compared the relationship between the JCM's characteristics with intrinsic work motivation between two samples: bankers and teachers, in order to determine if they would yield differing results based on their respective work fields. It was found that both work samples reported significant relationships between the JCM characteristics in their workplace and intrinsic work motivation, demonstrating the applicability of the JCM in the academic workplace.

However, the lack of research examining the JCM in the academic context still poses a problem with regards to achieving adequate research support for the relationships between work characteristics and work outcomes proposed by this study. One possible workaround to address the problem of the relative paucity of research examining the JCM in academic contexts would be to look at research that does not specify the JCM in particular, but which studied particular factors of the JCM or found significant factors in the academic workplace that correspond to the characteristics of the JCM.

With regards to the characteristic of autonomy for instance, research by Perie and Baker (1997) on American education found that teachers who perceived greater control over their work were happier. The same relationship between perceived workplace autonomy and happiness in the education workplace was found in a sample of Canadian teachers (Ma & MacMillan, 1999). A more recent study by Skaalvik and Skaalvik (2009; 2014) on middle and high school teachers in Norway also found clear links between autonomy and job satisfaction. Studies using samples that are more representative of this thesis' population (academics in HEIs) also found similar results between perceived job autonomy and increased job satisfaction (Lacy & Sheehan, 1997;

Sharma & Jyoti, 2009; Waltman, Bergom, Hollenshead, Miller, & August, 2012), demonstrating the similarities between teachers and academics in all levels of education. Additionally, Skaalvik and Skaalvik (2014) found that autonomy was a significant predictor of engagement levels of teachers.

Studies on the education sector also highlight the importance of skill variety (SV) in the workplace. A factor analysis of the salient characteristics that contributes to job satisfaction in the teaching environment found SV to be an indispensable factor (Lester, 1987). In addition to job satisfaction, SV was also found to be correlated with growth satisfaction (Pounder, 1999) and general needs satisfaction (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). Furthermore, studies have indicated the importance of SV as an important job resource and protective factor against burnout in teachers and academics (Rosenblatt, 2001; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Hakanen, Bakker, & Jokisaari, 2011). Additionally, SV was also found to be a useful predictor of organisational commitment and organisational citizenship behaviour (Firestone & Pennell, 1993; Feather & Rauter, 2004), In a study of teacher core job characteristics, it was found that SV contributed the most towards explaining teacher's organisational commitment (Charters, Bogen, Dunlap, & Harris, 1984). Furthermore, Tang (2018) found that the acquisition and development of additional soft skills is integral to improving the work experience of teachers in HEIs, further emphasising the importance of SV in the academic workplace.

While few studies have examined the factors of Task Significance (TS) and Task Identity (TI) in the workplace, the few that have found that they represent factors that are valued highly by academics. Research by Ssesanga and Garrett (2005) on academics in Uganda found that academics drew a significant amount of meaning and satisfaction in their workplace from being

able to share their knowledge with their students, seeing their role as significant in the lives in their students. Similarly, in a research conducted on academics sampled from 23 different HEIs in the U.K., Oshagbemi (1997) found that academics experienced a significant amount of job satisfaction from the significance of being able to help their students learn (TS), as well as being able to observe the growth and development of their students throughout their course in university, a significant measure of TI.

Finally, studies conducted on the educational workplace also offers support for the importance of the final job characteristic of feedback and its relationship with improved work outcomes. An early study by Sergiovanni (1967) found that recognition and feedback was one of the key factors affecting the satisfaction level of teachers. Frase and Sorenson (1992) further backs this finding, where a study on teacher motivation and satisfaction found feedback to be one of the strongest predictors of both work satisfaction. Teachers who were given social recognition either from their peers or students were significantly more positive in their jobs (Evans, 2001). Oshagbemi's (1997) study on academics in HEIs demonstrated the same relationship between feedback and job satisfaction, while Chen, Yang, Shiau, and Wang's (2006) attempt to develop an employee satisfaction model for workers in the higher education sector found both autonomy in decision-making, and feedback and recognition to be on the top of the list of desires by members of academia in HEIs. Feedback was additionally found to be a significant job resource against burnout (Rothmann & Essenko, 2007), and teachers who regularly received feedback from their organizations or students reported higher levels of commitment to their job and organization. Additionally, feedback serves as an important source of motivation among academics in HEIs in Malaysia (Islam & Ismail, 2008). Van den Broeck et al. (2008) also found

feedback to be a core characteristic of academic work engagement, as it fulfilled an important psychological need for teachers in the workplace.

In summary, while studies incorporating the JCM in the academic workplace is limited in number, the available literature regarding the job characteristics of academic work more than demonstrates the importance of the JCM's characteristics. This further supports the suggestion that the JCM is an appropriate model for the education sector, despite it being initially designed with industry in mind (Kopelman, 1985). However, the JCM's characteristics are not the only significant factors in the academic workplace, which the following sub-chapter demonstrates.

3.3. Burnout in Academia: a chronic problem

Research on the academic work field often points to an undeniable reality: the academic field is an increasingly stressful workplace (Kyriacou, 1987). Sanford (2017) found that teachers currently experience extremely high levels of stress in their jobs. The substantial amount of research studying the role of stress and burnout among academics points to a phenomenon that is fast becoming a topic of major international concern (Kyriacou, 1987). Stress-related burnout has been found to be the biggest contributor to teacher attrition (Owens, 2013; Unterbrink et al., 2014; Yu, Wang, Zhai, Hong, & Yang, 2015), and drastically affected overall teaching quality (Wong, Ruble, Yu, & McGrew, 2017). This suggests that stress-related burnout is a major problem currently faced by academic institutions and their staff, one which has been found to be very costly both in terms of financial losses as well as the potential loss of human capital (Cordes & Dougherty, 1993).

As Beausaert, Froehlich, Devos, and Riley (2016) and Salvagioni et al. (2017) suggests, stress is one of the key indicators and predictors of burnout in the academic workplace. Research by Ogungbamila (2013) on health workers, teachers, and policemen found that teachers report

similar levels of underachievement as health workers, and that service personnel had a tendency to face higher levels of burnout compared to other sectors. This was further supported by the findings of Johnson et al. (2005), who found that educators have one of the highest stress and burnout levels compared to workers in human services and other jobs. Wang, Pyun, Koh, and Kwon (2017) expounds further, finding that teachers who reported high levels of stress were more likely to experience burnout and develop turnover intentions. The relationship between stress and burnout is clearly elucidated in research; the stressful work conditions of modern day academia is fertile ground for the development and growth of burnout. Yet, why is this a concern? In order to better understand the widespread phenomenon of burnout in academia and its inherent problems, it is imperative to first understand the concept of burnout and what it entails.

3.3.1. Models of Burnout

Burnout as a psychological construct was first suggested by Freudenberger (1974). Through an observation of volunteer staff in a clinic catered towards treating drug addictions, Freudenberger surmised burnout to be phenomenon where an individual's mental and physical resources is depleted in their attempts to meet their expectations or goals, which can be unrealistic in nature. Said expectations and goals could stem from the individual himself, or placed upon him by society at large. This seeming disconnect between expectations and reality would thus lead to the experience of burnout (Freudenberger, 1974). The physical symptoms of burnout as explained by Freudenberger was a sense of exhaustion and headaches resulting from an excess of work demands, accompanied with psychological symptoms such as anger and closed-mindedness. However, Freudenberger's description of burnout is primarily descriptive,

with little to no set standards as to what constituted depletion of resources, leading to numerous early research on burnout being unempirical in nature (Schaufeli & Buunk, 2003).

Burnout as a psychological construct was further contextualised by Maslach and Jackson (1981) with the establishing of the Maslach Burnout Inventory (MBI). According to Maslach and Jackson (1981), burnout consists of three dimensions, Emotional Exhaustion (EE), Depersonalization, and Personal Accomplishment (PA). Emotional Exhaustion is defined as the extent to which an individual feels that he or she is drained of energy due to the constant need to meet needs and expectations of either themselves or others. Depersonalization on the other hand referred to the extent that an individual feels personally detached from others within their work, viewing them more as objects rather than people, which resulted in increased cynicism and apathy towards others. Personal Accomplishment referred to an individual's reduced feelings of competence as well as their ability to succeed in their workplace, which inevitably leads to individuals developing depressive symptoms and losing interest in their work.

The establishment of the construct of burnout across three measurable dimensions by Maslach and Jackson (1981) has led to a more psychometrically-valid construct as a whole, and is now arguably the most commonly-accepted definition of burnout in the literature (Maslach, Schaufeli, & Leiter, 2001). Further extensions of the original burnout model proposed by Maslach and Jackson (1981) have seen the addition of the dimensions of cynicism and professional efficacy, where cynicism is the measure of an individual's apathy or indifference towards his or her work, and professional efficacy is the measure of an individual's effectiveness in their workplace (Maslach, Jackson, and Leiter, 1996).

Despite its popularity, there is criticism regarding the model of burnout proposed by Maslach and Jackson (1981). According to Kristensen, Borritz, Villadsen, and Christensen

(2005), some of the drawbacks of the MBI model of burnout include an unclear relationship between MBI and the concept of burnout. As suggested by Maslach and Jackson (1981), burnout is defined by the simultaneous occurrence of all three dimensions of burnout in an individual, yet the MBI measures all three dimensions independently, and factor analysis of the structure of the MBI has found that the three dimensions are separate and distinct from each other (Kristensen et al., 2005), indicating one concept of burnout but three separate operational definitions with its own antecedents and consequences. Additionally, it was also argued that the model of burnout proposed by the MBI confuses state, coping strategy, and effects (Kristensen et al., 2005), with EE as a state, Depersonalization as a coping strategy, and PA as an effect of burnout.

In response to this, a new model of burnout was proposed by Kristensen et al. (2005) in the seminal PUMA study on burnout levels among various demographics. According to Kristensen et al. (2005), the core characteristic of burnout can be classified as fatigue and exhaustion, in tandem with the definitions of other burnout-researchers such as Schaufeli (Schaufeli & Greenglass, 2001). As such, the model of burnout is one where an individual attributes a sense of fatigue and exhaustion to specific domains of life. Kristensen et al. (2005) specifically suggests three domains of life – personal, work-related, and client-related burnout. This model naturally results in a significant change in the way burnout is to be measured in the workplace, as the subsequent section will discuss.

3.3.2. Measurements of Burnout

With the increased proliferation of studies measuring burnout and its effects on the workplace (Schaufeli & Buunk, 2003), effective, psychometrically-valid measures to gauge burnout levels have been developed in order to further understand the phenomenon of burnout in the workplace. One of the earliest psychometric measures developed was the Maslach Burnout

Inventory (MBI) (Maslach & Jackson, 1981), which is one of the most widely-used tools to measure burnout.

Maslach Burnout Inventory (MBI). The MBI was initially develop and tested on 1025 participants recruited from a variety of health and services occupations such as nurses, police, teachers, psychologists, and doctors. Three dimensions of burnout were found after factor extraction, which were Emotional Exhaustion, Depersonalization, and Personal Accomplishment, the results of which formed the MBI General Survey (MBI-GS). Over time, the MBI has been extended to better accommodate specific fields, such as human services (MBI-HSS) and education sector (MBI-ES) (Maslach, Jackson, Leiter, Schaufeli, & Schwab 1986). The MBI has been found to be both a reliable and valid measure, having been applied across multiple occupational groups (Bakker, Demerouti, & Schaufeli, 2002), with up to 90% of researches studying burnout using one of the three versions of the MBI (Schaufeli & Enzmann, 1998).

Oldenburg Burnout Inventory (OLBI). An extension of the basic model of the MBI, the OLBI was designed by Demerouti, Bakker, Vardakou, Kantas, and Aristotelis (2003) to measure general burnout levels. However, the OLBI was designed to address a psychometric weakness present within the MBI-GS, which was the negative framing of all items in the subscale of exhaustion and cynicism, and the positive framing of all items in the professional efficacy subscale (Demerouti & Bakker, 2008). The OLBI addresses this weakness by incorporating positively-worded and negatively-worded items for all sub-scales in order to ensure that both ends of the continuum are adequately represented. The OLBI was initially tested on 232 Greek employees, and was found to possess a valid factor structure. Further studies by

Demerouti and Bakker (2008) and Reis, Xanthopoulou, and Tsaousis (2015) further supports the OLBI as a valid and reliable psychometric tool to measure burnout.

Copenhagen Burnout Inventory (CBI). Arising from the criticism of the MBI and the model of burnout as proposed by Maslach and Jackson (1981), the CBI was developed by Kristensen et al. in 2005 to better measure burnout according to their proposed new model. The development of the CBI was carried out by analysing data obtained in the five-year PUMA study with 1024 participants recruited from a variety of work demographics including prison staff, social workers, health workers, and homecare workers. Initial analysis supports the three-factor structure of personal, work-related, and client-related burnout suggested in the CBI, and all scales were found to be internally consistent and significantly correlated with each other. Additional research on the CBI has found it to be reliable and consistent across different cultures such as Taiwan (Yeh, Cheng, Chen, Hu, & Kristensen, 2007) and New Zealand (Milfont, Denny, Ameratunga, Robinson, & Merry, 2008), suggesting that the proposed model of burnout suggested in the CBI is one that is both valid and culturally-transferrable.

3.3.3. Antecedents and correlates of burnout in academia

With burnout being found to be one of the biggest factors to teacher attrition (Unterbrink et al. 2014), it is imperative that a deeper understanding of the factors that lead to burnout in academics is obtained. This section will explore some of the most common contributors to academic burnout as suggested by the present literature.

Work Overload. One of the most significant factors contributing to the experience of burnout among teachers is work overload (Burke & Greenglass, 1995). Since the 1980s, research on work-related burnout in the education field has highlighted high workloads as a key factor (Cunningham, 1983), and that has been little, if any, significant change in the decades since, with

the academic workplace still struggling with work overload (Sabagh, Hall, & Saroyan, 2018). Work overload is found to be present in the academic workplaces of East Asia (Khalil, Khan, Raza, & Mujtaba, 2017), North America (Burke & Greenglass, 1995), the Middle East (Friedman, 2002), and Europe (Kyriacou, 2001); evidence that the phenomenon of work overload in education is not a culturally-specific problem.

Work overload is defined as the mismatch between a teacher's skills and abilities and the requirements of the tasks that they are given (Byrne, 1999). One reason for why those in the teaching profession frequently find themselves experiencing overload could due to the nature of their work. Similar to other service sectors, the field of education is one that requires a significant amount of emotional labour (Khalil et al., 2017). Teachers who reported high levels of emotional labour in their workplace due to their care for students also frequently reported higher levels of burnout. Additionally, due to the demands of the modern academic workplace, faculty staff are also required to take on additional roles such as administrative duties (Burke & Greenglass, 1996; Kyriacou, 2001; Sohail, Daud, & Rajadurai, 2006; Kokkinos, 2007), which further exacerbates the issue of work overload for teachers.

Role Conflict and Role Ambiguity. The requirements of educators to perform multiple roles in the interest of cost-saving (Sohail, Daud, & Rajadurai, 2006) inevitably contributes to the phenomenon of role conflict and ambiguity. Similar to work overload, the issues of role conflict and role ambiguity seem to be an ever-present in the academic workplace (Cunningham, 1983; Kyriacou, 2001). A longitudinal study of psychological burnout found that both role conflict and role ambiguity in the academic workplace were significant contributors to teachers ultimately experiencing work-related burnout (Burke & Greenglass, 1995).

The negative effects of role conflict and ambiguity is exacerbated by the difficulties academics increasingly find themselves having when they need juggle between their duties as an educator and their duties as administrative or management staff in the workplace (Kyriacou, 2001). The requirements of academics to take on various roles was found to be significantly correlated with burnout levels (Lackritz, 2004). With the recent expansion of the Malaysian academic sector (Tierney & Sirat, 2008) and the increased roles that Malaysian academics find themselves being required to play to keep up (Wong & Heng, 2009), it is more than likely that Malaysian academics will continue to struggle with the problem of role ambiguity and role conflict, as they seek to strike a balance between the institutions bottom line and their role as educators. An increase in role clarity can bring about significant positive effects, with Joiner and Bakalis (2006) finding that academics who perceived role clarity in their workplace were more committed to their organizations.

Time Pressure. Exacerbating the problem is that a majority of academics now face increasingly high time pressures in their workplace (Cunningham, 1983). Malaysian academics are increasingly required to handle bigger classes due to ever large numbers of enrolment (Knight & Sirat, 2011), but little has changed in terms of how much time they are given to fulfil their teaching duties. An increase in workload and non-increase in time inevitably leads to more and more academics reporting time constraints as a significant source of stress and burnout (Kyriacou, 2001; Watts & Robertson, 2011). Research has found that excessive pressures due to time constraints led to increased reports of work-related burnout among teachers (Kokkinos, 2007).

Lack of Organisational Resources/Support. The lack of organisational resources and support for teachers in the workplace is another common factor found in numerous research on

academia (Cunningham, 1983; Burke & Greenglass, 1995; Sabagh et al., 2018). Examples of this in the education workplace includes red tape and bureaucracy, lack of organisational resources, lack of supervisor support, lack of peer support, and low levels of rest and recovery time between work (Burke & Greenglass, 1995; Burke, Greenglass, & Schwarzer, 1996; Caruso, Giammanco, & Gitto, 2014; Gluschkoff et al., 2016). Literature makes a clear case for the importance of organisational support in the academic workplace. Joiner and Bakalis (2006) found that when academics were provided with adequate organisational support in terms of supervisor and co-worker support, they reported higher levels of job commitment, while Ling and Bhatti (2014) found clear relationships between social support in the workplace and increased job performance among Malaysian academics. Furthermore, Masum, Azad, and Beh (2015) found that organisational resources such as supervisory support led to an increase in reported job satisfaction levels among academics,. Additionally, academics also reported better work-life balance as a result of greater perceived organisational support (Kinman & Jones, 2008).

3.3.4. Consequences of burnout in academia

Research on work-related burnout reveals several outcomes of burnout on both the individual as well as the organization. The consequences of burnout can be best separated into three main sections, which are physical, psychological, and occupational consequences:

Physical consequences of burnout. Research on burnout has linked it to a variety of negative physical consequences. One of the most common physical consequences is the increase in musculoskeletal (MS) disorders among individuals who experience burnout in their workplace (Toppinen-Tanner, 2011). Studies on the risk factors of the development of MS disorders in the workplace frequently identifies burnout as a key factor (Armon, Melamed, Shirom, & Shapira, 2010). In their research on the prevalence and onset of MS disorders among employees, Armon

et al. (2010) found that an increase in burnout levels was associated with a more than two-fold increased risk of MS. Honkonen et al. (2006) on the other hand found burnout to be associated with MS disorders primarily among women, while men were at higher risk of developing cardiovascular diseases as a result of burnout.

The increased risk of cardiovascular disease as a result of burnout is also supported by Burke, Greenglass, and Schwarzer (1996). In a comprehensive study of burnout consequences, Salvagioni et al. (2017) also found increased risk of coronary, gastrointestinal, and MS disorders, on top of elevated chances of type 2 diabetes and high cholesterol. A side effect of these physical disorders is that burnout also leads to an increased risk of drug abuse among workers, a relationship found in studies by Burke and Greenglass (1995) and Salvagioni et al. (2017).

Psychological consequences of burnout. In addition to physical disorders, research also points to the development of psychological disorders as a result of burnout. One key negative outcome of work-related burnout among teachers is the loss of job satisfaction (Cunningham, 1983). Psychological disorders such as depression, insomnia, and general mood and mental disorders are also found to be common pathological conditions as a result of burnout (Burke et al., 1996; Salvagioni et al., 2017). Aside from psychopathological symptoms, burnout also led to teachers giving lower ratings to their overall life quality (Burke & Greenglass, 1995), and increased mental and physical disengagement with their jobs (Cunningham, 1983).

Occupational consequences of burnout. More than just the individual, the consequences of work-related burnout also negatively affect the organization as a whole, resulting in overall losses for the institution. Numerous research on teacher burnout has shown a general downtrend in terms of overall performance of teachers (Cunningham, 1983). Additionally, faculty staff who reported higher levels of burnout were also more likely to report

lower levels of work engagement (Sabagh et al., 2018). Salvagioni et al.'s (2017) meta-analytical review of the consequences of burnout across 36 studies showed that the most common occupational consequence was an increase in job dissatisfaction and absenteeism. The same trend could be seen in the academic workplace, where burnout resulted in increased levels of workplace absenteeism and turnover intentions among teachers (Cunningham, 1983; Burke & Greenglass, 1995).

In summary, research on burnout has demonstrated how the academic workplace is particularly prone to the development of burnout among its staff, due to the nature of the work as well as the nature of the sector. Additionally, the consequences of burnout in academia are clearly shown, and does not bode well for both the academic or HEIs in general. As such, it is imperative that the factor of burnout be taken into consideration when analysing the Malaysian higher education sector, in order to determine its prevalence and influence within the sector in this period of time. However, burnout is frequently mentioned by research to be one part of a dichotomy, with engagement frequently being mentioned as its polar opposite (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2006). Therefore, it is important for any analysis on the role of burnout in a particular work sector to also include an examination of engagement as its opposite work outcome. The following segment will thus examine the factor of engagement in the academic workplace to determine its antecedents, consequences, and its relationship with workplace characteristics and burnout among Malaysian academics.

3.4. Engagement in the workplace: the polar opposite of burnout?

An unintentional consequence of research on burnout is the increase in research on work engagement as well, as the two constructs seem to be closely intertwined (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2006). Research on the phenomenon of burnout in the workplace

frequently points to its negative relationship with engagement (Gonzalez-Roma et al., 2006; Sabagh, Hall, & Saryoan, 2018), suggesting that one is possibly the antipode of the other (Bakker, Schaufeli, Leiter, & Taris, 2008). Some researchers have even been found to use measurement tools designed to assess burnout such as the OLBI to assess engagement levels in the workplace, demonstrating how closely inter-connected burnout and engagement is (Gonzalez-Roma et al., 2006). Indeed, Gonzalez-Roma postulates that the core characteristics of burnout and engagement can be seen as opposites of each other on two dimensions, which are "energy" and "identification", where burnout normally indicated a reduction in both dimensions while engagement normally represented an abundance of both.

However, although research has shown that the existence of one factor negatively affects the other in a somewhat directly antagonistic relationship, it would be disingenuous to thus suggest that engagement and burnout are simply polar opposites of each other on a single dimension or construct (Schaufeli & Bakker, 2004). For instance, research on the factor structures of burnout and engagement reveal that while engagement and burnout shared some similarities in terms of their factor structures, they did not correlate identically, with certain dimensions being distinctly different (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). It was also found that burnout was primarily predicted by job demands and a lack of job resources, while engagement was exclusively predicted by job resources in the workplace, and had little to no correlation with job demands (Schaufeli & Bakker, 2004). Furthermore, a thorough investigation into the factor structure of both constructs found that while one dimension of burnout seems to be the opposite of a dimension of engagement (cynicism – identification), the other dimensions such as exhaustion vs vigour were two distinctly separate constructs, further establishing that while burnout can be seen at most as a closely related mediator of engagement,

they are not parts of the same construct on different ends of a continuum (Demerouti, Mostert, & Bakker, 2010).

The inherent differences between burnout and engagement spurred the development of engagement measurement tools like the Utrecht Work Engagement Scale (UWES) in order to better measure engagement in the workplace that could not be encapsulated by the burnout assessment scale such as the MBI (Schaufeli et al., 2002). Due to these differences, it is imperative that we first define what engagement actually is.

3.4.1. Definition and Models of Engagement

Perhaps one of the earliest definitions of engagement was offered by Kahn (1990), who defined engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). According to Kahn (1990), to be engaged thus meant to be "psychologically present" when performing a task. However, this definition of engagement is nebulous at best, as there is very little in the way of an operational definition of what it means to be "psychologically present". The definition of work engagement was further refined by Schaufeli et al. (2002), to a "positive, fulfilling, work-related state of mind characterized by vigour, dedication, and absorption" (p. 74). As suggested by Schaufeli et al. (2002), engagement primarily consists of three dimensions; vigour (defined as high levels of mental energy and mental resilience in the workplace), dedication (defined as being heavily involved in one's work and experiencing significance, enthusiasm, and a sense of challenge in it) and absorption (defined as being full engrossed or immersed in one's work, where time is perceived to pass by quickly and it is difficult to extricate oneself from one's work) (Bakker & Demerouti, 2008).

One of the models frequently associated with and used to measure engagement in the workplace is the Job Demands-Resources (JDR) Model (Bakker & Demerouti, 2007). The JDR posits that every workplace comprises its own specific sources of job demands and resources, which serves to either energize or deplete an individual. Job demands are defined as any physical, social, psychological, or organisational factors of the job that requires an individual to utilize effort resulting in costs to the individual such as work pressure or overload, while job resources are aspects of the job that serves the function of providing the individual with additional resources to meet the demands of the job such as social support and autonomy (Bakker & Demerouti, 2007).

The JDR model is frequently used as the model of job burnout and engagement as it offers a framework within which to study the antecedents and outcomes of work engagement and burnout (Bakker & Demerouti, 2007; 2008). Through the JDR model, is it possible to assess the factors in the workplace that contribute towards an increase or decrease in work engagement levels through assessing whether those factors represent job demands or job resources.

3.4.2. Measurement of Work Engagement

One of the most commonly used psychometric measure of work engagement is the Utrecht Work Engagement Scale (UWES). The UWES was initially developed in 2002 by Schaufeli et al. as a psychometric tool to better encapsulate and measure the construct of engagement in the workplace. Prior to the development of the UWES, engagement was mostly assumed to be the exact opposite of burnout, and thus could be measured using burnout-specific tools such as the MBI (Schaufeli et al., 2002). Schaufeli et al. however, disagreed that engagement was simply the opposite end of the three dimension of burnout (Exhaustion,

Cynicism, and Personal Accomplishment), and instead suggested that engagement consisted of the three dimensions of Vigour, Dedication, and Absorption.

An analysis conducted on a sample of 933 participants supported the hypothesis of Schaufeli et al. (2002), where a three-factor structure of work engagement was established. Over time, the UWES has been applied in various settings and demographics, and the three-factor structure suggested by Schaufeli et al. (2002) has been found to be consistently valid and reliable (Storm & Rothmann, 2003; Bakker, Demerouti, & Verbeke, 2004; Yi-Wen & Yi-Qun, 2005; Barkhuizen & Rothmann, 2006). For the sake of parsimony, the UWES has also been shortened to a nine-item measure (UWES-9) (Schaufeli, Bakker, & Salanova, 2006). A test of the UWES-9 on demographics recruited from 10 different countries demonstrated that the UWES-9 still adequately measured the three-factor model of engagement reliably and consistently (Schaufeli et al., 2006), increasing support for the overall validity and reliability of the UWES.

3.4.3. Antecedents and correlates of work engagement

Job Resources. Scholarship on work engagement have consistently shown that job resources are a key factor in encouraging workplace engagement (Bakker & Demerouti, 2008). Job resources, as defined in the JDR (Bakker & Demerouti, 2007) refers to physical, psychological, social, or organisational factors that:

- Alleviate the pressure of job demands
- Encourage the completion or work demands and goals
- Encourage the development and growth of the individual in the workplace

As can be seen in the definition provided by Bakker and Demerouti (2007), job resources may be extrinsic in nature – helping an individual complete their tasks, or intrinsic in nature – helping an individual develop and grow in the workplace.

Numerous studies have demonstrated the importance of job resources in the workplace. For instance, Rothmann & Jordaan (2006), in a research on the work engagement levels of 471 academics in South African HEIs found that job resources predicted 26% of the variance of the vigour subscale, and 38% of the variance of dedication subscale of engagement. Furthermore, it was found that an increase in job resources significantly predicted work engagement levels of telecom managers, while an increase in job demands with a simultaneous decrease in job resources resulted in a significant drop in work engagement levels and significantly predicted burnout (Schaufeli, Bakker, & van Rhenen, 2009). A further longitudinal study on 163 Dutch employees found that job resources were significantly positively related to increased levels of work engagement (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). These studies demonstrate the clear relationship between job resources and engagement levels in the workplace, even across different populations. However, understanding the relationship between job resources and engagement would be inconsequential if one did not also know what constitutes job resources. Research on job resources points to several key variables in the workplace that serves a function as job resources.

One of the key sources of job resources is the characteristics of the job such as autonomy, skill variety, feedback, task identity, and task significance, as suggested by Hackman and Oldham (1976). May, Gilson, & Harter (2004) found that the five JCM factors served key roles as job resources due to the fact that the presence of these five factors led to job enrichment and meaningfulness, which is significantly related to work engagement. Furthermore, research conducted on 745 employees recruited from 17 different organizations in Belgium found that task autonomy, skill variety, and feedback were significant job resources that contributed to the workers' needs satisfaction, and were predictive of lower levels of exhaustion and higher levels

of vigour (van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). Rothmann and Essenko (2007) also found that the job characteristics of autonomy, feedback, and skill variety were all significant job resources that were negatively correlated with burnout, and predictive of job engagement. The same results were also found among Dutch employees, who reported job autonomy and performance feedback as significant sources of job resources (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

In addition to job characteristics, organisational factors such as supervisory support, social belongingness, and growth and advancement opportunities also played an important role as job resources. Employees who perceived an increased sense of belongingness also reported increased levels of work vigour (Van den Broeck et al., 2008). The importance of supervisory support, growth opportunities, job advancement, and social support was also found to be significant in the academic workplace (Rothmann & Jordaan, 2006; Klusmann, et al., 2008) and the corporate workplace (Xanthapoulou, et al., 2007). Additionally, teachers also found innovativeness to be a significant job resource that enabled them to cope with stress and increased their work engagement levels (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007).

Personal Resources. Personal resources on the other hand are resources that stem from the beliefs and self-evaluations of an individual that is enables them to perceive a sense of control over their work environment (Hobfoll, Johnson, Ennis, & Jackson, 2003). The importance of personal resources towards the experience of work engagement is also clearly shown in research. Personal resources was found to be positively correlated with work engagement levels (Xanthopoulou et al., 2007). Additionally, a study on 714 Dutch employees, found that aside from being positively correlated with work engagement, personal resources also

mediated the relationship between job resources and engagement, and changed the perception of employees towards their job resources (Xanthopoulou, Bakker, Demerouti, & Schaufli, 2007).

Research on personal resources in the workplace frequently point to coping, self-efficacy, organisational-based self-esteem, and optimism to be the most widely used (Xanthopoulou et al., 2007, 2009; Bakker & Demerouti, 2008). Research on coping strategies as a personal resource in the academic workplace found that teachers who used direct, active coping strategies such as adopting a mastery orientation and planning reported high levels of work engagement compared to teachers who used palliative coping strategies such as self-handicapping or avoiding of tasks (Parker & Martin, 2009). Additionally, Storm and Rothmann (2003) found that members of the police force in South Africa who used an active coping style and taking measures to remove stressors were more engaged in their workplace.

With regards to self-efficacy, a study by Schwarzer and Hallum (2008) among German and Syrian educators found that self-efficacy was an important personal resource and it mediated the relationship between job stress and burnout Similarly, Li, Wang, Gao and You (2015) also found that elf-efficacy mediated the relationship between personality, coping methods, and the reported levels of work engagement among teachers in China (Li, Wang, Gao, & You, 2015). Additionally, Skaalvik and Skaalvik (2014) further found that self-efficacy was a significant independent predictor of work engagement among educators, indicating that self-efficacy has both direct and indirect effects with engagement for teachers, which was further confirmed in a study by Simbula, Guglielmi, and Schaufeli, 2011. One reason for the importance of self-efficacy as a personal resource could be because individuals who have higher self-efficacy levels are more likely to perceive themselves as being able to cope with and handle stressors at work, making them more likely to be engaged rather than avoiding the work (Bandura, 1977).

Individual Characteristics. Previous Research has also indicated the role individual characteristics play in harnessing levels of work engagement. For instance, a study on 1939 educators found that organisational characteristics only accounted for a small amount of the variance of work engagement, and that the personal characteristics of teachers themselves were a significant factor on whether or not they experienced engagement in their work (Klusmann, et al., 2008). Individual characteristics that were found to correlate with work engagement levels included personality and work orientation.

Kokkinos (2007), found that those with higher levels of neuroticism were more at risk of experiencing lower work engagement levels and higher levels of burnout among a sample of educators in Cyprus Similarly, Langelaan, Bakker, van Doornen, and Schaufeli (2006), also found that neuroticism was a significant predictor of burnout in their study among 572 Dutch employees. It was also found that high work engagement levels were characterised by low levels of neuroticism and high levels of extraversion (Langelaan, et al., 2006). Additionally, personality was also found to significantly influence self-efficacy, which leads to effects on work engagement (Mojsa-kaja, Golonka, & Marek, 2015). This relationship between personality and work engagement has also been found to be salient among academics (Zaidi et al., 2013).

With regards to work orientation, Fouche, Rothmann, and van der Vyver (2017) found that teachers who viewed their job as a calling were less likely to experience burnout, and more likely to report greater levels of work engagement. A study conducted on educators in Zambia also found that a calling orientation had a direct impact on their work engagement levels (Rothmann & Hamukang'andu, 2013). Dobrow and Tosti-Kharas (2012) further discovered that individuals who believed in a calling were more resilient to challenges and negative criticism. Duffy, Dik, and Steger (2011) further discovered that Calling was weakly correlated with

withdrawal intentions. Academics in HEIs who possessed a Calling orientation in their workplace was also found to be more resilient to job demands and stressors, and were more dedicated to their work (Oates, Hall, & Anderson, 2005). Additionally, Castillo et al. (2017) found that educators who had a passion for teaching (which is closely linked to the Calling orientation) were more engaged and less likely to experience burnout. The influence of passion in the academic workplace is further supported by Trepanier et al. (2014), who found that teachers' passion mediated the relationship between job demands and job engagement and burnout levels.

Calling orientations were also found to be positively correlated with commitment, productivity, a willingness to sacrifice, and higher life and work satisfaction, which are all positive indicators of work engagement (Bunderson & Thompson, 2009; Peterson, Park, Hall, & Seligman, 2009; Steger & Dik, 2009; Cardador, Dane, & Pratt, 2011; Duffy, Allan. Autin, & Douglass, 2014). One reason for this could be due to the fact that individuals who adopted the Calling orientation derived the highest sense of meaning from their work, viewing it as socially useful and fulfilling. Ponton, Brown, McDonnell, Clark, Pepe, and Deykerhoff (2012) particularly linked Calling with the essence of meaning in work. As suggested by Fouche et al. (2017), meaningful work is one of the key predictors of increased work engagement.

3.4.4. Consequences of increased work engagement

Psychological Benefits. Increasing engagement in the workplace leads to several positive outcomes. As stated earlier, workers who are engaged find their jobs more meaningful and are less likely to report turnover intentions (Dik, & Steger, 2011; Ponton et al., 2012). The same result was also found in the education workplace, where teachers who experienced high levels of work engagement reported lower levels of job burnout and turnover intention, and higher levels

of job satisfaction (Hoigaard, Giske, & Sundsli, 2012). Additionally, research by Saks (2006) on the consequences of work engagement found that increased engagement levels in an organization were linked to reports of increased overall job satisfaction, increased organisational commitment, and an increase in organisational citizenship behaviours among the staff. As suggested by literature, an increase in engagement also correlates with a decrease in burnout risk (Sabagh, Hall, & Saroyan, 2018). A possible reason for this as suggested by Bakker (2011) is due to the findings that suggest engaged workers adopt proactive coping strategies that change their work and work environments in order to facilitate work engagement.

Organisational Benefits. In addition to psychological improvements, engagement has also been found to lead to organisational benefits. Engaged workers have been found to be more productive in the workplace (Bakker, 2011). A study on the relationship between job resources, engagement levels, and organisational financial returns found that employees who were more engaged, led to an improvement in the daily financial returns for the company (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Furthermore, Bakker, Demerouti, and Verbeke (2014) found that engagement positively affects role performance of employees across different work sectors such as banking, insurance, and chemical industries. Similar findings were also found in studies conducted on teachers (Oates, et al., 2005; Bakker & Bal, 2010).

In summary, research suggests that engagement in the workplace is significantly antagonistic to the experience of workplace burnout. As previously discovered, burnout represents a significant problem in the academic workplace (Johnson et al., 2005). Hence, an understanding of the factors that lead to work engagement, as well as the relationship between workplace characteristics, engagement, and burnout is important in order to better understand how the Malaysian academic workplace can be improved upon, to alleviate the high levels of

burnout and to increase the work engagement levels of Malaysian academics. The following section will assess and summarize the relationships between the factors of this study in order to better paint a clearer picture of what this thesis aims to examine.

3.5. Assessing the relationship between the JCM, burnout, and work engagement in the academic workplace

3.5.1. The relationship between the JCM and Job Meaningfulness

As Hackman and Oldham (1976) posits, the presence of the five work characteristics of Autonomy, TS, TI, SV, and Feedback are critical towards the development of meaningfulness in the workplace. Research applying the JCM on a variety of workplaces further confirms this (Fried & Ferris, 1987). While researches applying the JCM to the academic context is limited, the few that have done so offers empirical support for its applicability (Barnabe & Burns, 1994; Houkes, 2002). Furthermore, research conducted in HEIs highlights similar factors that correlate with the JCM (Oshagbemi, 1997), and these factors have been found to contribute to an increase in workplace meaningfulness for academics (Charters et al., 1984; Ssesanga & Garett, 2005). Consequently, the research suggests that there is a possible relationship between the JCM's characteristics and workplace meaningfulness in the Malaysian academic context, based on the findings of Fried & Ferris (1987) as well as the findings of previous researches in the academic context highlighting the importance of the JCM's characteristics (Oshagbemi, 1997) .

3.5.2. The relationship between Job Meaningfulness, Burnout, and Work Engagement

Previous studies has demonstrated clear links between job meaningfulness, burnout, and work engagement (van Zyl, Deacon, & Rothmann, 2010; Rothmann & Hamukang'andu, 2013). The presence of the five job characteristics postulated in the JCM was found to lead to increased workplace meaningfulness, which led ultimately to the increase in reported levels of work

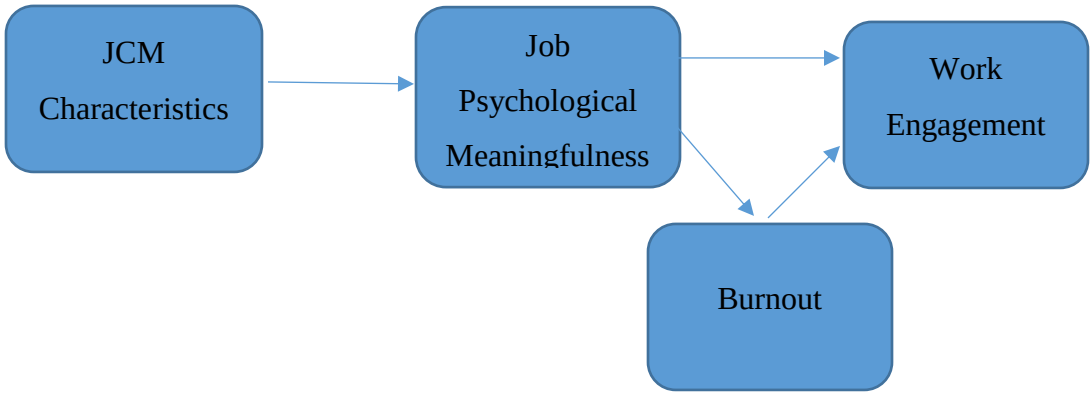
engagement (May, Gilson, & Harter, 2004). A study on the relationship between role-fit, job meaningfulness, and work engagement among industrial organisational psychologists in South Africa found that employees who found their work to be meaningful also reported higher levels of work engagement (van Zyl, et al., 2010). In addition, Rothmann and Hamukang'andu's (2013) research on teachers also found that work meaningfulness was positively and significantly related with their reported levels of work engagement. Hirschi (2012), in a study on work meaningfulness and its relationship with work engagement among a sample of German respondents which were comprised of professionals such as educators and engineers found that workplace meaningfulness was a significant factor in the experience of work engagement, mediating the relationship between work engagement and other work characteristics.

The significance of burnout as a prevalent factor in the current academic work context (Johnson et al., 2005) supports its inclusion as one of the factors of interest in this study. Additionally, research on burnout suggesting its intertwined relationship with work engagement (Gonzalez-Roma et al., 2006) emphasizes the importance of including it in the analysis of the relationship between work characteristics, work meaningfulness, and work engagement. As highlighted by Bakker and Demerouti (2008), burnout is often seen as the antipode to engagement, and literature suggests that high levels of burnout will influence the engagement levels of individuals in a workplace (Bakker, Schaufeli, Leiter, & Taris, 2008).

3.5.3. Hypothesised Relationship Model between JCM, Burnout, and Engagement

The hypothesised relationship between this study's factors are shown in Figure 3.1. below:

Figure 3.1. Hypothesised Relationships between variables



As the model in Figure 3.1 shows, it is hypothesised that job characteristics will be a significant predictor of job psychological meaningfulness, which in turn will positively predict work engagement among Malaysian academics. Furthermore, based on the suggestions of the current literature regarding Malaysian academia as well as job psychological meaningfulness and work engagement, it is also predicted that burnout will be a significant factor that predicts work engagement levels as well as mediates the relationship between job psychological meaningfulness and work engagement for Malaysian academics.

3.6. Research Aims

The goal of this research is to explore the Malaysian academic workplace in order to provide a clearer picture of the present-day work conditions of Malaysian academics. Existing research on this particular area has been mostly focused on specific factors that influence the Malaysian academics in their work, but fails to provide an overall picture of the characteristics of the Malaysian academic workplace based on a sound psychological model within which to analyse the relationships between said characteristics and their effects on work outcomes. As such, this study aims to explore what are the factors that constitute the Malaysian academic workplace via a qualitative analysis, and juxtapose the findings with the characteristics of the

JCM in order to provide a better understanding of its relationships with the work outcomes of the Malaysian academic workplace.

Secondly, this thesis aims to test whether the JCM is a viable theoretical framework for the Malaysian academic workplace. Most research conducted on the applicability of the JCM as a work design theory has mostly been conducted in Western populations, and few of those have been conducted on higher education workplaces in particular. This research which focuses on the Malaysian higher education context will address this particular gap, and contribute to the literature regarding the JCM as a work design theory. Furthermore, this research will utilise several psychometric scales in the analysis of the relationships between work characteristics and work outcomes. Examination of the factor structure of these instruments with a Malaysian population will contribute to the literature regarding the validity and reliability of said instruments in a new cultural context.

Thirdly, a majority of literature regarding workplace meaningfulness frequently suggests that an increase in meaningfulness leads to an increase in work outcomes such as engagement. This study aims to discover whether that is the case in Malaysia, by examining the relationship between the work meaningfulness levels of Malaysian academics and their reported work engagement. Additionally, work-related burnout is also found to be a common problem in the higher education work context, even in Malaysia. Thus, this research will also examine the relationship between work-related burnout of Malaysian academics and their work engagement levels.

In accordance with these aims, the following five research questions and their corresponding hypotheses are developed:

3.7. Research Questions and Hypotheses

This study addresses the following research questions and their corresponding hypotheses as stated below:

3.7.1. Research Question One (RQ1): What factors constitute the Malaysian academic workplace?

3.7.2. Research Question Two (RQ2): Are the reported factors by Malaysian academics similar to the characteristics of meaningful work as postulated in the JCM?

Although existing literature suggests several likely factors that will be present in the Malaysian academic workplace, a hypothesis regarding expected specific factors is not offered due to the qualitative nature of this phase of the study.

3.7.3. Research Question Three (RQ3): Will the relationship between the workplace variables found in the qualitative phase be quantitatively generalisable to the Malaysian academic population at large?

H1a: Burnout levels among Malaysian academics will be higher than the general burnout mean reported in the Copenhagen Burnout Inventory.

H1b: Perceived organisational support will negatively predict burnout.

H1c: Perception towards work will negatively predict burnout.

H1d: Autonomy will negatively predict burnout.

H1e: Social support will negatively predict burnout.

H1f: Feedback will negatively predict burnout.

H2a: Autonomy will significantly predict job psychological meaningfulness.

H2b: Task Significance will significantly predict job psychological meaningfulness.

H2c: Task Identity will significantly predict job psychological meaningfulness.

H2d: Skill Variety will significantly predict job psychological meaningfulness.

H2e: Feedback will significantly predict job psychological meaningfulness.

H3a: Perception towards work will significantly predict job psychological meaningfulness.

H3b: Task Variety will significantly predict job psychological meaningfulness.

H3c: Congruence with personal values will significantly predict job psychological meaningfulness.

H3d: Social support will significantly predict job psychological meaningfulness.

3.7.4. Research Question Four (RQ4): What is the relationship between job psychological meaningfulness, burnout, salary, and engagement among Malaysian academics?

H4a: Job psychological meaningfulness will positively predict work engagement levels.

H4b: Burnout will negatively predict work engagement levels.

H4c: Burnout will mediate the relationship between job psychological meaningfulness and work engagement.

H4d: Salary will not be a significant predictor of work engagement.

3.7.5. Research Question Five (RQ5): Does job psychological meaningfulness mediate the relationship between work characteristics and work engagement as suggested by the JCM?

H5a: Job psychological meaningfulness will mediate the relationship between autonomy and work engagement.

H5b: Job psychological meaningfulness will mediate the relationship between task significance and work engagement.

H5c: Job psychological meaningfulness will mediate the relationship between task identity and work engagement.

H5d: Job psychological meaningfulness will mediate the relationship between skill variety and work engagement.

H5e: Job psychological meaningfulness will mediate the relationship between feedback and work engagement.

3.8. Chapter summary and conclusions

The first part of the chapter examined the applicability of the JCM as a theory of work design to the academic workplace, which research suggests is appropriate. Subsequently, this chapter reviewed the present literature regarding the prevalence of burnout in academia, and the construct of work engagement and its relationship to burnout and work outcomes. This was followed by an assessment and summary of the proposed relationships between the variables examined in this study. This chapter ends with a presentation of the research aims, research questions, and the hypotheses offered in conjunction with said research questions. The next chapter explains the research methodology and research design used to answer the research questions posed in this chapter.

Chapter 4: Research Methodology

4.1. Chapter Overview

This chapter presents the research methodology for the three empirical studies conducted as part of this thesis. It begins by explaining the rationale for the approach used in this study, before explaining the methodology of the first qualitative study, followed by the two quantitative studies. The methodology of the empirical studies consists of the sample recruited and sampling method used, the settings and instruments employed, as well as the procedures, ethical considerations, and data analysis strategies of each study. It concludes with a summary of the key points of this chapter.

4.2. Rationale for a Sequential Exploratory Approach

The overall goal of this thesis is to develop a deeper and holistic understanding of the work characteristics of the Malaysian academic workplace, using the framework of the Job Characteristics Model (Hackman & Oldham, 1976). To achieve this, this thesis utilises a sequential exploratory approach to data collection and analysis. This approach is characterised by an initial qualitative data collection and analysis of the results, followed by a follow-up phase focused on quantitative data collection and analysis (Creswell et al., 2003). In a sequential exploratory approach, emphasis is placed on the initial qualitative phase which seeks to develop the overarching narrative of the particular topic being studied, as this particular approach is better suited to the exploration of a phenomenon (Creswell & Plano Clark, 2006). According to Morgan (1998, as cited in Creswell et al., 2003), this approach is particularly useful when testing the elements of a theory emerging from the qualitative phase, and also enables the researcher to generalize the qualitative findings to a wider population using a quantitative approach as a follow-up.

The advantages of the sequential exploratory design is its parsimonious structure, which makes it easier for researchers to explore and describe a particular phenomenon (Creswell et al., 2003). Additionally, this approach also enables the researcher to expand upon the qualitative findings by determining its generalisability, and is particularly useful for researches that are focused on developing a new framework or instrument. Nonetheless, this approach also poses a few risks, particularly with regards to the development of a framework, as the initial qualitative analysis may be too underdeveloped, rendering it unsuitable as a theoretical basis for the follow-up qualitative phase (Creswell et al., 2003).

This approach was chosen for this thesis as it provides a suitable method to achieve the aims of this research. In order to obtain a holistic view of the work context of Malaysian academics, it is logical that this thesis first begins with an exploratory qualitative study looking at the various characteristics – work or individual- as reported by the academics themselves. This will provide an unbiased, ecologically valid account of the factors that make up Malaysian academic work, as the variables measured in the follow-up quantitative study will be based on real experiences of the respondents rather than an a priori selection of variables by the researcher, which poses the risk of being too narrow in perspective and thus inadequately encompassing the workplace variables that play a significant role (Creswell & Plano Clark, 2006).

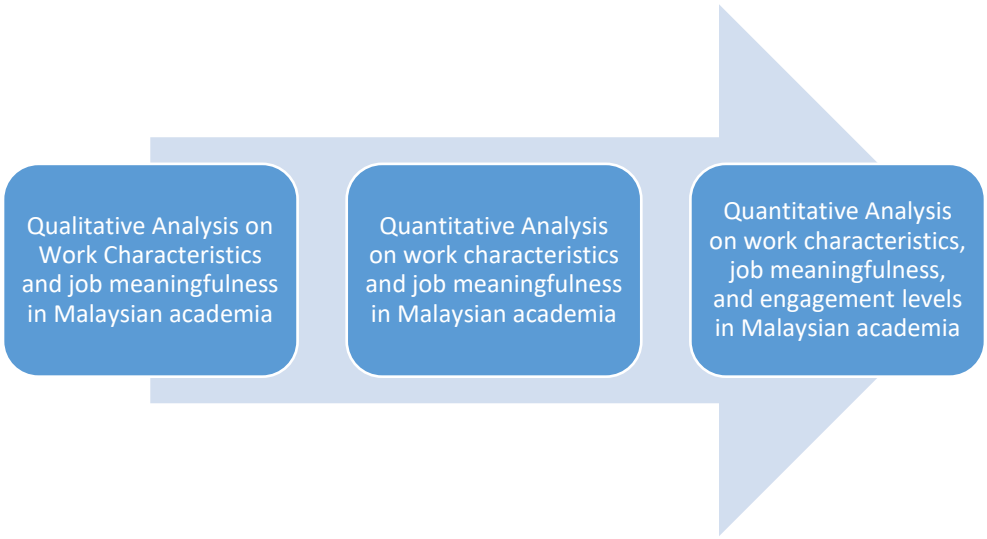
Additionally, as Creswell et al. (2003) suggests, this approach is also uniquely suited to further examining the findings of the qualitative analysis in a quantitative context to determine its generalizability. As the goal of this research is to determine what constitutes the work experience of Malaysian academics at large, a simple qualitative analysis to understand the context of work lacks the statistical generalizability that this research aims towards. A follow-up

quantitative phase exploring the relationships between the reported factors in the initial qualitative study addresses this issue, as it allows the findings regarding the relationship between various work characteristics to be tested in a large population of Malaysian academics to determine if the majority also report similar relationships between work characteristics.

As previously mentioned, one of the weaknesses of this approach regards the possibility of the qualitative analysis being underdeveloped, or yielding non-significant information rendering the follow-up quantitative study to be weakly theoretically grounded (Creswell et al., 2003). This research addresses this issue through the use of a well-established theoretical framework of workplace design, the JCM (Hackman & Oldham, 1976). As this research seeks to determine the applicability of the JCM as an appropriate model for the Malaysian academic context rather than developing an entirely new model in a grounded theory approach, the threat of a possibly underdeveloped theory in the qualitative phase is lessened. The emergent themes that are discovered in the qualitative phase of this study will be further juxtaposed against the theoretical model of the JCM, in order to determine if the reported themes are similar to the work characteristics of the JCM. Subsequently, the follow-up quantitative analysis will also analyse the findings of the qualitative study in accordance with the JCM's suggested directions and relationships, to determine if the relationships found in this study mirrors that of the JCM in general.

The sequential exploratory approach of this thesis can be summarised as below:

Figure 4.1. Sequential Exploratory Approach Process Flow



4.3. Study 1

This study uses a qualitative approach, utilizing interviews as the data collection method. An interview is primarily a conversation, with the express purpose of gathering descriptions of the real-life phenomena in question for analysis purposes (Kvale, 1996). As Cohen, Manion, and Morrison (2007) suggests, the interview is a useful method for exploring the construction of meaning and experience in a natural setting. An interview is also a powerful tool as it is able to construct a holistic picture of the experiences of others, communicated through the expression of their thoughts and words (Berg, 2007).

Research indicates four primary types of interviews which are frequently employed in social sciences – the structured interview, unstructured interview, semi-structured interview, and the focus-group interview (Berg, 2007). The key characteristic of a structured interview is that it is mostly organized around a pre-determined set of questions. While some of its benefits are that it is a direct and simple method that is consistent across respondents, the main drawback of a structured interview is that it does not allow participants the freedom to elaborate and provide additional information that is not within the scope of the questions asked (Berg, 2007). The unstructured interview on the other hand, is an open method of interviewing with no particular

fixed questions that dictate the direction of the interview. This method provides for greater amounts of flexibility to both the researcher and the participant, where both parties are able to explore any topics or questions that may arise throughout the course of the interview process (Berg, 2007). However, a drawback of this method is the lack of structure that a set of questions can provide, which may lead to the interviewer or the interviewee losing track of the topic at hand. Furthermore, conducting unstructured interviews introduces the possibility of a lack of consistency across interviews among different participants, as the direction and depth of the interview itself is dependent on the quality of the responses from each different individual. This may lead to problems with the reliability of the study, as well as pose a potential threat to the attainment of theoretical saturation as a result of unrelated findings across respondents.

Addressing the inherent weaknesses of both the structured and unstructured interview methods is the semi-structured interview, which combines the consistency of the structured interview with the freedom and flexibility of the unstructured interview (Berg, 2007). In a semi-structured interview, the researcher creates a check-list of pre-determined questions that will serve as guiding questions for the interview, but also makes room for the exploration and expansion of an interviewee's responses through probing questions that may not be a part of the pre-determined list (Berg, 2007). Lastly, the focus group interview is a particular interviewing technique conducted among two or more participants who share similar traits or experiences, in order to obtain their respective views (Berg, 2007). The focus group interview is particularly useful as it may enable respondents to jointly develop ideas from their shared experiences, and potentially offers a richer set of responses compared to individual participants' responses (Berg, 2007).

Thus this study primarily utilises the semi-structured interview method as the data collection method, except for one particular instance where two participants were interviewed simultaneously in a focus-group setting for the sake of convenience. The reason the semi-structured interview method was chosen was because it offered a degree in consistency which the other methods could not (Creswell, 2016) – ensuring that the same questions regarding their workplace characteristics were asked to each respondent – and also offering a chance for the respondents themselves to elaborate on particular topics of interest to them in order to obtain a richer account of the workplace characteristics of Malaysian academics.

4.3.1. Sample

4.3.1.1. Sampling Strategy

Ideally, in order to obtain a truly representative sample for the sake of generalisability and validity, a random sampling strategy without replacement should have been utilised in this study. However, this method proved to be extremely difficult due to time and resource constraints, as such a method would have required access to a national database of all academics in Malaysia which does not currently exist, and establishing one would simply be too costly and time consuming. Furthermore, in order to access participants from public HEIs, additional documentation would have been required in accordance with government regulations from the respective regulatory and institutional authorities (National Science Council, 2017), applied through the ERAS (Educational Research Application System) platform. This proved to be problematic, as a pre-requisite for approval was that the study did not pertain to any educational policies (Ministry of Education, 2016), preventing this study from obtaining permission as educational policies was a potential scope of study for the qualitative analysis.

Additionally, HEIs are located all over the country, separated by large distances in some instances, making recruiting a geographically representative sample close to impossible. Hence, this study utilised a convenience/snowball based sampling method consisting of the researcher's own contacts formed through four years of service in the private higher education sector. This resulted in a sample that was heavily skewed towards private HEIs, and lacked the participation of Malay academics, a demographic that is more prevalent in public HEIs (Arshad, 2016). The limitation of this sample will be discussed in subsequent sections.

Faculty staff from five different private HEIs located in Kuala Lumpur and Selangor were approached to participate in this research. As the largest city in Malaysia and the state within which the capital is located, Kuala Lumpur and Selangor are also the two locations with the highest concentration of HEIs in Malaysia, with close to 40 HEIs within the immediate vicinity of the state, higher than any other state in Malaysia. Due to this, the researcher deemed that a sample of Malaysian academics obtained from Selangor would be more representative compared to a sample obtained from other states with much fewer HEIs.

4.3.1.2. Sample Size

The sample sizes required for qualitative studies are generally smaller compared to quantitative studies (Creswell, 2003). While sample sizes in quantitative researches are primarily focused on minimum numbers to ensure generalizability and statistical power, the key characteristic of determining an adequate sample size in qualitative research is theoretical saturation – where the data collected from participants no longer reveals any new findings and begin to be repetitive in nature (Morse, 2004). Thus, appropriate sample sizes for qualitative research ranges from 5 – 25 participants (Creswell, 2003) in order to obtain theoretical saturation, at which point a further increase in sample size becomes redundant. This study

recruited 15 respondents, and the resulting data analysis clearly demonstrated theoretical saturation, implying that the sample size was adequate.

4.3.1.3. Description of participants

Respondents in this study were active academic faculty staff in five HEIs in the Klang Valley and the state of Selangor, Malaysia. Respondents ranged from 27 years to 58 years old, with 53% of respondents between the age ranges of 25-34, 33% within the range of 35-45, and 13% being 46 years or older. The mean age of respondents was 36.3 years. Over half of the respondents (53%) identified themselves as married, while the rest were reportedly single. Two participants had a basic undergraduate degree, three possessed Doctorate degrees, while the rest had Masters degrees. Respondents taught a variety of subjects, including Social Sciences and Humanities, Language, Business, and Science. 33% of respondents taught at a pre-university level, while 67% of respondents taught at a degree-level or higher. Majority of respondents were full-time staff of their organizations, with only one respondent working part-time. Four respondents were junior lecturers, eight respondents were senior lecturers, and the remaining three respondents were heads of department.

4.3.2. Setting

To ensure ecological validity, the preferred setting for the interviews to be conducted was the offices of respondents or its immediate vicinity where possible. As such, interviews with participants were mostly conducted either on-site in the participants' workplace, or in an off-site, quiet setting nearby as chosen by the participants in order to facilitate audio-recording. Any follow-up session conducted for member checking and data validation were conducted on-site in the participants' workplace. Interview durations ranged between a minimum of 30 minutes to one hour and 16 minutes, depending on the depth of the participants' responses.

4.3.3. Instruments/Questions

A semi-structured interview was conducted which consisted of 10 questions pertaining to the respondents' workplace and work experiences. The questions focused on aspects of the respondents' work ranging from general descriptions of their daily tasks and work environments, their perceptions towards their job, suggestions that they had pertaining to aspects of their job, their future plans regarding their job, as well as their motivations for choosing academia as a full-time career. The list of questions asked to all respondents are as below:

List 4.1. Interview Questions

Questions	Explanation and Justification
1. Can you explain in detail what your job as a lecturer entails?	Explores the context of their jobs and provides an initial understanding of what it entails.
2. How would you personally define your work environment?	Explores the academics' perspectives and views towards their job
3. What effect, if any, do you think your work environment has on you as a member of academia?	Explores any possible interaction between the academic and his/her workplace
4. What are the aspects of your job that you find most enjoyable? Why?	Explores the possible work resources perceived by academics
5. What are the aspects of your job that you find least enjoyable? Why?	Explores the possible work challenges perceived by academics
6. What do you suggest can be done to improve upon the least enjoyable aspects of your job?	Explores in greater detail what the challenges are, including what makes them challenging to the Malaysian academic
7. If given a choice, what changes would you make to your work environment (policies, culture, workload, responsibilities, etc) that you believe would maximise your potential and satisfaction as a lecturer/member of academia?	Explores what Malaysian academics consider the ideal workplace, in order to shed light on the job characteristics that they perceive to be important to the meaning of their work
8. Do you plan to remain within academia for the foreseeable future? If yes, why? If no, why not?	Explores the turnover intentions of Malaysian academics as well as their motivations
9. Why did you choose academia as a job (and future career path, if "yes" to question 8)?	Explores the underlying motivations for joining Malaysian academia
10. Can you recall your most memorable experience(s) as a lecturer?	Explores significant instances in the work experience of Malaysian academics in order to determine what factors contribute to a meaningful work experience

These 10 questions were chosen as it was felt that they served to be useful starting points with which to begin the discussion on the aspects of work for Malaysian academics. As the interview was a semi-structured one, additional probing questions were also asked based on the responses given to these questions. Theoretical saturation was achieved in this research, indicating that these 10 questions were more than sufficient in terms of understanding what constitutes the work experience of Malaysian academics.

4.3.4. Procedure

Respondents were first contacted via email or text messaging to inquire as to their willingness to participate as a respondent in this study. Meetings were then organised with respondents who indicated their willingness and interest to participate. Meeting were generally held on weekdays, either during or immediately after the office hours of respondents. At the beginning of the interview session, respondents were informed as to the nature of the study, its aims, and were provided with a detailed information sheet attached with a letter of informed consent (refer to Appendix A for sample of informed consent). The interview only commenced after respondents had signed and returned a copy of the informed consent sheet.

During the process of the interview, a voice recorder was used to record the verbal contents of the interview for the purposes of transcribing. All respondents were asked the same 10 basic questions as listed above, in the exact order. Probing questions were asked of the respondents depending on their answers to each of the 10 questions. The interview ended upon the answering of the last question in the pre-determined list and its associated probing questions, or when the participant indicated that they had to leave (none did so before the answering all questions). Participants were then thanked for their time, and the interview was concluded. All interviews proceeded as expected, with only two instances where the interview was temporarily

stopped due to environmental disturbances (noise levels in the setting became too high for the interview to be recorded clearly). Those interviews were immediately picked up right where it was left off the moment the environmental situation permitted, and concluded with no further disruptions.

4.3.5. Ethical Considerations

Ethics clearance for this study was obtained from the Faculty of Arts and Social Sciences Research Ethics Sub-Committee, University of Nottingham Malaysia Campus, on the 8th of April, 2016 see Appendix B1). This study ensured ethical actions in the following four areas:

4.3.5.1. Informed Consent

Respondents were provided with an informed consent form, explaining in detail the aims of the research, what would be required of them should they choose to participate, and the consequences, if any, should they choose to withdraw participation at any point in time. Interviews were only conducted with respondents who signed and returned the informed consent form.

4.3.5.2. Voluntary Participation

Respondents were informed prior to the start of the interview that their involvement in this study was completely voluntary, and that there were to be no negative consequences should they choose to withdraw their participation at any moment in time, for any reason whatsoever.

4.3.5.3. Privacy and Confidentiality

Respondents were ensured of their anonymity and confidentiality in this study via the use of pseudonyms throughout the entire transcribing process. Names of the respondents were not mentioned in this research, and all personally identifying information mentioned in the course of the interview were redacted and replaced with asterisks in order to conceal the information.

4.3.5.4. Deception and Harm

No deception was used in this research, as respondents were simply required to answer a set of interview questions. In addition, respondents who took part in this study were given a small token of appreciation at the end of the interview.

4.3.6. Data Analysis Strategy

Social sciences have posited four main approaches that are commonly used in qualitative research, which are narrative, phenomenological, grounded theory, and ethnographic approach (Creswell, 2003). The narrative approach places emphasis on the stories of individuals, weaving the recounted experiences of different individuals into a coherent and chronological narrative within which a larger story is told (Creswell, 2003). The phenomenological approach on the other hand, focuses on the describing of the common characteristics that different individuals have in common when they experience a particular phenomenon in order to distil a universal essence, a "grasp of the very nature of the thing" (van Manen, 1990, p. 177, as cited in Creswell, 2003).

Meanwhile, the grounded theory approach is one which focuses on using qualitative responses in the generation or discovery of a theory rather than just a descriptive analysis (Creswell, 2003). This approach is built on the belief that theory cannot be constructed through simple theoretical hypotheses, but must rather be grounded on the reality of experience collected from individuals. Lastly, the ethnographic approach concerns itself with examining the shared experiences of a specific culture-sharing group, in order to determine if their relative experiences are the results of their culturally-specific influences (Creswell, 2003).

Of the four approaches to data analysis discussed, the phenomenological approach is the most useful for the purposes of this study. As the purpose of this study is to understand the work

experience of Malaysian academics, the phenomenological approach is the most appropriate method as it allows for the distillation of the various experiences of Malaysian academics into a unified, common essence of what the Malaysian academic work means in general. Specifically, Hycner's (1985) phenomenological data analysis strategy was used as a guiding framework for the data analysis of this study.

The first step in phenomenological analysis as suggested by Hycner (1985) is the transcription of the interview into written form. During the transcription process, it is important that as much information as possible is retained in its original form, including significant non-verbal and para-linguistic communication. In this research, the interviews were transcribed verbatim onto a digital platform (Microsoft Word). This included the vocalisations of respondents that may not contribute to coherent sentences such as the use of filler words or slang (e.g. "Umm…" "I hate it la!"). This is of particular importance because while para-linguistic elements may not hold any meaning in isolation, they represent a critical part of total communication (Abercrombie, 1968), and has a possibility of conveying or changing the meaning of a statement based on the paralinguistic context within which it was said.

The second step suggested by Hycner (1985) is the use of bracketing and phenomenological reduction, which involves an approaching of the data "with an openness to whatever meanings emerged" (Hycner, 1985, pg. 280). Bracketing is the suspending of the researcher's own interpretation and meaning from being projected on the world of the interviewee to the extent that it is possible, in order to ensure that what is found in the analysis is the objective shared experience of the interviewee rather than what the researcher expects to find. In this research, bracketing was done by first listing down the pre-suppositions of the

researcher based on past personal experience as an academic in order to ensure that those pre-supposition do not influence the data analysis.

Thirdly, the interview and transcripts were reviewed multiple times in order for the researcher to be familiarised with it, and to obtain a general sense of the interviews, as suggested by Hycner (1985). Fourthly, the general units of meaning were delineated (coding). In this phase, the researcher processes the entire transcript in detail to identify significant verbal and non-verbal cues that may elicit meanings from participants (Hycner, 1985). This process was done in the most general sense, with every potential unit of meaning identified and coded regardless of whether it addresses the research questions of the study. A sample of the units of general meaning highlighted can be found in Appendix C (Excerpt 4.1). The next step in Hycner's (1985) strategy involved highlighting particular units of meaning that were relevant to the research questions. Units of meaning that were related to the research questions of the qualitative study (*RQ1 and RQ2*) were highlighted, and units of meaning that were unrelated were dropped from the dataset to eliminate redundancies, which represents another step in the data analysis strategy (Hycner, 1985). The following steps included clustering the units of meaning based on their inherent similarities into sub-themes or clusters with regards to the research question, followed by a synthesising of emergent themes from said clusters. The themes, sub-themes, and a sample of their relevant units of meaning can be found in Appendix C (Table 4.2). The themes found in this study will be further discussed in Chapter 6.

4.3.7. Coding Strategies

Coding entails the selection and retention of particular units of meaning that are deemed important for the data analysis, and can range from a single word to an entire sentence or an entire section of text (Saldana, 2009). There are multiple strategies to coding, depending on the

ultimate objective of the researcher. In this study, the raw data was put through two cycles of coding. The First Cycle coding methods are basic coding strategies that involve highlighting codes that may or may not be relevant to the overall research question. There are several methods of First Cycle coding (Saldana, 2009); however, for parsimonious purposes, this study will only focus on the chosen coding methods in First Cycle coding – Descriptive Coding.

Descriptive Coding is a coding method where units of meaning are highlighted and given descriptive words and phrases generated by the researcher that encapsulates that the unit of meaning is about. This is done by summarizing in a word or phrase the basic topic of what the unit of meaning is about (Saldana, 2009). Through this first cycle, significant statements were manually underlined without bias nor in reference to the theoretical framework and variables of the study in order to ensure that the researcher maintained open to all possibilities and theoretical directions that is possible from the dataset (refer to Step 4 in Hycner's data analysis strategy). Once completed, the extracted statements were put through a Second Cycle of coding, to reorganize and reanalyse the codes obtained from the First Cycle.

Second Cycle coding refers to advanced ways of reanalysing data that is coded through First Cycle coding methods (Saldana, 2009). This cycle of coding methods requires that the categories that were found in the First Cycle are then grouped together in order to develop a coherent synthesis of the data and to enable the perception of the overall themes present within the dataset and its relationships with each other, which is the primary goal of Second Cycle coding (Saldana, 2009). In this phase, it is thus not uncommon for First Cycle codes that do not fit into any Second Cycle categories to then be dropped as redundancies from the dataset.

Similar to First Cycle coding, there are many different methods of Second Cycle coding that are available to qualitative researchers. This section will only focus on the method that was

used in this study, which is Focus coding. Focus coding is a method in which the most commonly-occurring or salient First Cycle codes are grouped together under the umbrella of a higher-order code, possibly resulting in a drastic reduction of the total amount of codes in the study based on the categorization criteria (Saldana, 2009). This method of coding requires that the researcher makes decisions on which First Cycle codes makes the most logical sense when grouped together under a larger, overarching code.

This coding strategy was chosen as it is the most appropriate method for this study's aims, which is to determine the factors and variables that make up the Malaysian academic workplace. Thus, Focused coding allows for the grouping of similar codes into overarching variables that account for a significant variance in the meaning of the Malaysian academic workplace, such as the grouping of the codes of "autonomy" and "recognition" into the higher-order code of "Factors that energize Malaysian academics". Focused coding thus allows for a more parsimonious theoretical diagram of the factors that make up the Malaysian academic work context, as well as the relationships between said factors. The theoretical diagram is further assessed and explained in Chapter 6.

4.3.8. Data Validation Strategy

As qualitative research does not lend itself to the psychometric and statistical validation commonly used in quantitative studies due to its non-numerical nature, different strategies to validate the data need to be employed. There are several methods of data validation options open to qualitative researchers, among which the most commonly-used are inter-coder reliability, member-checking, triangulation, clarifying researcher bias, and the collecting and use of rich and thick descriptions.

Inter-coder reliability refers to method by which the researcher's codes are validated by an independent individual (Mouter & Noordegraaf, 2012). If the external coder's own findings achieve a minimum of 80% agreement with the researcher's original code, inter-coder reliability is said to have been established. This validation method is useful for qualitative research as it reduces the possibility of interpretive bias from the researcher as a result of expectations or prior experiences. In this study, the codes that were generated were recorded into a codebook. A non-participant individual with prior experience in qualitative analysis was recruited to independently code a sample of the transcripts using the codebook as a reference. A minimum of 80% inter-coder agreement was achieved with the external coder. Out of the initial 20 codes, 18 were agreed upon between the researcher and the external coder, while 2 of the codes (*Recognizing Students' Needs* and *Organisational Policies*) were either dropped from the dataset or collapsed under other codes as suggested by the discussion between the external coder and the researcher.

Another validation technique for qualitative studies is the use of member-checking. Member-checking is the process in which the researcher solicits the viewpoints of the respondents themselves in order to determine the validity and credibility of the findings, and is considered to be a useful validation strategy for qualitative research as it gives the respondents a voice in the interpretation of their experiences (Creswell, 2003). Follow-up meetings were held with three out of the 15 respondents (20% of the sample), where the codes and themes that were synthesised in the study were shown to the respondents for them to share their views and opinions on. Respondents generally agreed with the codes and themes, finding it to be an accurate representation of their personal work experience.

A third validation technique that has been found to be critical to qualitative research is the triangulation method (Creswell, 2003). The term "triangulation", borrowed from navigational

parlance describes the process of determining a single, accurate position using the convergence of information from multiple instruments or sources (Rothbauer, 2008). In social science, triangulation refers to the use of multiple sources of information to determine the accuracy and validity of a particular finding, with the general assumption being that one can be more assured that their findings are accurate if different methods or sources of information produces the same conclusion as the findings. According to Denzin (1978), there are four types of triangulation:

- Data triangulation: involves the use of data collected from different time, space, and persons
- Investigator triangulation: involves the use of the perspectives of multiple researchers in the same investigation
- Theory triangulation: involves the use of a theoretical model to analyse the data
- Methodological triangulation: involves the use of more than one method to collect data, such as interviews, observations, and literature research, and comparing the data obtained from different methods

This study used both theory and methodological triangulation in the validation of the findings. Theory triangulation was used through the comparison of the themes emerging from the study with the theoretical framework of the JCM (Hackman & Oldham, 1976) in order to determine if the reported relationships between work characteristics and outcomes were supported by the theory. For instance, the JCM postulates the presence of five workplace characteristisc which jointly contribute to the experience of job psychological meaningfulness. The themes that emerged from this study were thus triangulated to determine which, if any, of the five JCM characteristics were present in the accounts of the participants' when they described meaningfulness in their workplace. As will be discussed in Chapter 6, when

respondents recounted their experiences of job psychological meaningfulness, several themes and subthemes emerged that were analogous to the JCM, lending credence to the validity of the data obtained.

Additionally, methodological triangulation was also used – where the themes of the study were compared to the findings of prior studies conducted in HEI settings to check for similarities in the data. For instance, the experience of heavy workloads and a lack of workplace resources are common findings that are prevalent across almost all studies conducted on the Malaysian academic workplace. Thus, it is expected that the respondents' accounts of their workplace experience in this study would at the very least mirror that of their counterparts as described in previous studies, and this was found to be true. Further instances of convergence between the suggestions of previous literature and the findings of this study is detailed in Chapter 6.

Furthermore, prior clarification of researcher experience and biases is also suggested as an important validation strategy in qualitative research (Creswell, 2003). This strategy consists of the researcher stating beforehand his or her own experiences with and perceptions of the studied phenomenon, in order to make clear to the reader the possible biases that may come into play during the data analysis, and to increase the validity of the study's findings (refer to Chapter 6.2).

Finally, the producing of rich and thick descriptions was used as a further validation strategy in this study. Describing the experiences, settings, and respondents of the study in detail further validates the data as it allows for the transferability of the information to other settings that may share similar characteristic (Creswell, 2003). In this study, the work experiences and context within which respondents experienced them as well as the background of the respondents themselves were described in detail (refer to Chapter 6.3). Additionally, the codes that contributed to the individual themes in this study, as well as the interconnectivity of the themes

were described and discussed in order to increase the validity and transferability of the findings to other, similar contexts.

4.4. Studies 2 and 3

As the data collection for both quantitative studies in this research was conducted simultaneously, the methodology for both studies were identical, and will be jointly discussed in this section. Studies 2 and 3 uses a survey research approach, utilising questionnaires as the method of data collection. The use of questionnaires in quantitative studies is one of the most popular methods of data collection due to its ease of use (Muijs, 2004). Survey research is particularly useful when attempting to provide statistically valid estimates of behaviours or characteristics within a large population (Fowler Jr., 2013). In the case of this research, the population in question is the Malaysian academic population, and the estimates of the characteristics that this study seeks to provide pertains to the job characteristics that make up the Malaysian higher education work context, as well as its relationships with the work outcomes of meaningfulness and engagement.

There are a few merits for the use of questionnaires as a data collection strategy (Kothari, 2004). One major merit that was particularly appreciated in this research is the relatively low costs involved in data collection even when the potential population is potentially large and geographically diverse such as the Malaysian academic population. Combined with the convenience of online hosting platforms such as Qualtrics, this data collection method allowed for the sampling of a relatively large amount of participants in this study. This will be discussed in further detail in the subsequent section of this chapter.

Additionally, questionnaires are generally reliable as the responses are free from the threat of interviewer bias – respondents answer in their own words and at their own time

(Kothari, 2004). Furthermore, most established questionnaires used in psychological research represent instruments that are psychometrically validated, which increases the validity of the study's findings. The psychometric properties of the instruments used in this study will be discussed briefly in the subsequent section of this chapter pertaining to the description of instruments, and a more extensive examination of it will be discussed in Chapter 5 of this research.

4.4.1. Sample

4.4.1.1. Sampling Strategy

As previously mentioned, the ideal sampling method for this study would have been random sampling without replacement. However, this proved to be impossible in this study due to time and resource constraints. Therefore, this study utilised a convenience and snowball sampling method. Physical surveys were given out to academics in four private HEIs in the Klang Valley, Selangor, where the researcher worked at or had access to via ex-colleagues. However, this method resulted in a very low yield, where only 78 copies were returned to the researcher.

Majority of the responses analysed in this study were obtained via an online distribution of the survey link hosted on the Qualtrics digital survey hosting platform. Links to the survey were sent via email to contacts in Malaysian HEIs provided by friends and former colleagues who agreed to assist in the data collection process. The said links were then forwarded by those contacts to their respective academic faculties. Additionally, the link to the online survey and the requirements for joining the research was also posted on an online Facebook-hosted forum whose members consisted primarily of actively-teaching Malaysian academics (DSG.org). To mitigate the risk of having respondents who do not fit the demographic requirements of the study

(i.e. working in a Malaysian HEI), detailed instructions pertaining to the demographic qualifications required to take part in the study were posted along with the link, and the online survey was designed with a forced response item where respondents had to indicate the type of Malaysian university that they were currently actively working in (IPTS or IPTA), before they were allowed to answer the questionnaires. This served to ensure that respondents to the survey were indeed currently working in Malaysian HEIs.

4.4.1.2. Sample Size

Three hundred and fifty participants participated in this study. However, the adequacy of this sample size is dependent on the kinds of statistical analysis that was conducted in this study. Three different types of statistical analyses were conducted, each having different requirements for what constitutes a suitable sample size. This section will therefore discuss the sample size requirements of each statistical analysis independently, along with whether or not the final sample size in this study fulfilled the minimum requirements.

Multiple Regression Analysis. According to Tabachnick and Fidell (2014), the minimum sample required for a regression analysis is heavily dependent on the power, alpha level, number of predictors, and effect sizes. This study consisted of multiple regression analyses, with each differing in terms of their predictor variables or their dependent variables. Specifically, the two different dependent variables in the regression analysis were Job Psychological Meaningfulness (JPM), and Burnout. The model with the highest number of predictor variables in this study were the regression analysis for the JCM's characteristics on JPM, with six predictor variables and one dependent variable. Thus, the calculation for the minimum sample size will be based on this particular model. According to the rule of thumb suggested by Green (1991), the minimum sample size required to test an overall model is

calculated with the equation of 50 + 8*k*, where *k* is the number of predictors in the regression analysis. However, if one is testing for the effects of individual predictors, the calculation for the minimum sample size as suggested by Green (1991) is 104 + *k*. Using these calculations, the minimum required sample size for an overall regression analysis with six predictors is 50 + 8(6), which equates to 98 participants. The minimum sample size required to test for the effects of individual predictors on the other hand is 104 + 6, which equates to 110 participants. The sample size in this study was thus considered to be enough for a regression analysis.

Factor Analysis and SEM. This study also conducted an Exploratory Factor Analysis and a Confirmatory Factor Analysis using structural equation modelling (SEM). In both Exploratory and Confirmatory Factor Analysis, the Maximum Likelihood Estimation (MLE) method was chosen, as the data distribution was found to be normal and an MLE method would thus be more unbiased (Hair et al., 2014). The minimum required sample sizes for factor analysis differs significantly from that required in a regression analysis. However, research suggests that using "rules of thumb" may not be entirely accurate (MacCallum, Widaman, Zhang, & Hong, 1999; Wolf, Harrington, Clark, & Miller, 2013). According to Wolf et al. (2013), the minimum required sample in the CFA is heavily dependent on the factor structure, the number of indicators for each factor, as well as their respective magnitudes. Consequently, a single factor structure with four indicators loading at a magnitude of .80 only required 30 cases, while a two factor CFA with three indicators loading at .50 was found to require 460 cases. It was also found that models with less indicators required a greater number of minimum cases.

In this study, all but one of the psychometric instruments on which factor analysis was conducted had a single-factor structure, with the only exception being the Feedback subscale which CFA found to have a two-factor structure. There were three indicators on the two-factor

structure of the Feedback scale, with all items having a magnitude of more than .60, which are comparatively higher than Wolf et al.'s (2013) reported numbers. Additionally, MacCallum et al. (1999) suggests that for scales with a small number of factors and between three to four indicators for each factor, at least 300 cases would be required. The sample size of 350 in this study falls within both the ranges suggested by MaCallum et al. (1999) and Wolf et al. (2013), leading to belief that this sample size meets the minimum requirements for EFA and CFA.

4.4.1.3. Description of Participants

Compared to the sample obtained in the qualitative analysis, this sample proved to be more representative in several ways. Firstly, this sample consisted of participants from both private and public HEIs. This was possible due to the data collection method used in this study, where participants answered an anonymous online survey in their own capacity rather than as a member of their institution. Additionally, participants also participated in this study online, thereby circumventing the need to obtain governmental approval as would be required in the initial qualitative study which was conducted on site in the HEI, which would have required the permission to be obtained from their respective organisations and severely limited the recruitment of public university respondents due to the permission required from the Ministry of Education. Secondly, based on the reports of the participants who were willing to divulge the name of their institutions in the survey, it was found that HEIs across all 14 states in Malaysia were represented, with the greatest representation coming from Kuala Lumpur and Selangor, with 15 HEIs represented respectively. The following table displays the breakdown of the number of HEIs and the states that they were located in:

Table 4.3. Breakdown of respondents from HEIs by state

State	Total No.
Kuala Lumpur	15
Putrajaya	1
Selangor	15
Melaka	4
Pahang	4
Negeri Sembilan	2
Johor	7
Perlis	2
Penang	4
Kedah	2
Perak	4
Kelantan	3
Terengganu	2
Sabah	3
Sarawak	3

As shown in Table 4.3, respondents in this study were active academic faculty from at least 71 HEIs across all 14 states of Malaysia. 60.28% of the respondents identified themselves as working in a private HEI, with the remaining 39.72% identifying themselves as academics in public HEIs. Respondents ranged from 22 years to 74 years old, with a mean age of 44.95 years (8 of the 350 respondents declined to reveal their age). The gender of respondents was heavily skewed, with only 24.85% males and the remaining 75.15% being females. With regards to qualification, majority of respondents (65.4%) reported possessing a Masters degrees, while

22.8% of respondents possessed Doctorate degrees. A further 10% of respondents possessed a basic undergraduate qualification, while 1.7% of respondents declined answer the question.

An overwhelming majority of respondents were full-time staff of their organisations (92.57%) and only 7% of respondents worked part-time. 50% of respondents were junior or new lecturers, 42% of the respondents were senior lecturers, 4.85% of the respondents were either assistant associate professors, and 2.85% of respondents worked as as deans or heads of department. There were no full professors in the sample.

With regards to monthly salary, 27.14% of respondents earned between RM2000-RM4000, while 30.57% earned between RM4001-RM6000. 22.28% earned between RM6001-RM8000, 9.14% earned between RM8001-RM10000, and the remaining 3.42% reported a monthly salary of more than RM10000. 7.42% of respondents declined to share their monthly income.

4.4.2. Setting

Participants were given the freedom to complete the questionnaire at their own pace and in a location of their own choosing. For participants who completed the physical questionnaires, the setting was their respective offices. Participants who completed the digital survey completed it via the online platform, Qualtrics.

4.4.3. Instruments/Questions

The instruments used in this study included the Copenhagen Burnout Inventory (Kristensen, Borritz, Villadsen, & Christensen, 2005), the Job Psychological Meaningfulness Questionnaire (May, Gilson, & Harter, 2004), the 8-item Survey of Perceived Organisational Support (Eisenberger, Huntington, Hutchison, & Sowa, 1986), the Work and Meaningfulness Inventory (Steger, Dik, & Duffy, 2012), the Index of Autonomous Functioning (Weinstein,

Przybylski & Ryan, 2012), and the Work Design Questionnaire (Morgeson & Humphrey, 2006). The scales are described in detail below (refer to Appendix D1 to D8 for a sample of the questionnaires used):

4.4.3.1. The Copenhagen Burnout Inventory (CBI)

The CBI is a 3-part questionnaire designed by Kristensen, Borritz, Villadsen, and Christensen (2005) that measures burnout levels across three distinct dimensions; personal burnout, work-related burnout, and client-related burnout. As this study only measures the burnout experienced by Malaysian academics in their workplace, only the work-related burnout scale was administered, which consists of 7 items assessing the state of exhaustion of respondents in their workplace. A sample of the items pertaining to work-related exhaustion include: *Is your work emotionally exhausting?* rated on a five-point scale, from 1 (To a very low degree) to 5 (To a very high degree) for items 1-3, and a five-point scale, from 1 (Always) to 5 (Never/almost never) for items 4-7.

In accordance with the CBI scoring manual, each answer has a corresponding score over 100, with 1 = 0, 2 = 25, 3 = 50, 4 = 75, and 5 = 100. The total burnout score is average of the scores across all items on the scale, with a maximum score of 100 and a minimum score of 0. Higher scores indicated higher levels of burnout among respondents. According to Kristensen et al. (2005), the CBI has reported internal consistency of $\alpha = 0.87$. In this study, the internal consistency of the CBI was found to be relatively robust, with $\alpha = 0.79$.

4.4.3.2. Job Psychological Meaningfulness Questionnaire (JPM)

The Job Psychological Meaningfulness is a unidimensional scale which consists of 6-items constructed by May, Gilson, and Harter (2004), which measures the degree of meaning that respondents experience in their work-related activities. A sample of the items in the JPM

include: *The work I do on this job is worthwhile*. Respondents are required to rate their level of agreement with the statement of the items on a five-point Likert scale with 1 being "Strongly Disagree" and 5 being "Strongly Agree". The scores of the JPM are calculated by summing up and averaged across the number of items in the scale. A higher score indicated a greater level of perceived job psychological meaningfulness in the workplace. According to May et al. (2004), the JPM has reliable internal consistency, with a reported $\alpha = .90$ (May et al., 2004). In this study, the internal consistency of the JPM was found to be even higher, with $\alpha = .95$.

4.4.3.3. 8-item Survey of Perceived Organisational Support (SPOS-8)

The 8-item survey of Perceived Organisational Support is a unidimensional, reduced-item version of the original 36-item POS by Eisenberger, Huntington, Hutchison, and Sowa (1986) which was originally designed to measure an individual's perception of the level of organisational support offered by the organization in the workplace. Despite the drastic reduction in the number of items in the SPOS-8, it was found to be a more efficient scale and did not lose any of its internal consistency or overall validity (Rhoades & Eisenberger, 2002; Worley, Fuqua, & Hellman, 2009). The SPOS-8 is used to measure employee's perception regarding the extent to which their organization values their contributions to the company and supports them in their work. A sample of the items in the SPOS-8 include: *The organization really cares about my general satisfaction at work*. Respondents are required to rate their agreement with the statement on a 7-point Likert scale from 0 (Strongly Disagree) to 6 (Strongly Agree).

The SPOS-8 is scored by calculating the sum of all items and averaging it out over the total number of items. A higher score indicated that respondents perceived higher levels of organisational support from their institutions. The 8-item SPOS has a reported internal

consistency of α = .93 (Eisenberger et al., 1984). Analysis conducted in this study found the internal consistency to be a lower, but still robust α = .89.

4.4.3.4. Work and Meaning Inventory (WAMI)

The Work and Meaning Inventory is a 10-item scale designed by Steger, Dik, and Duffy (2012), which measures the extent to which respondents perceive their work to be meaningful on three dimensions which are *Positive Meaning, Meaning Making, and Greater Good* (Steger, Dik, & Duffy, 2012). A sample of items from the three subscales include: *I have found a meaningful career; I view my work as contributing to my personal growth;* and *The work I do serves a greater purpose*. Respondents were required to rate their level of agreement with the given statements on a five-point Likert scale with 1 being "Absolutely Untrue" and 5 being "Absolutely True".

The mean scores for each subscale was obtained by summing the scores of all the items in the subscale and averaging it across the number of items in each subscale. Alternatively, the WAMI could also generate a total mean score combining all three subscales (Steger, Dik, & Duffy, 2012). The WAMI was found to have an internal consistency of α = .93 (Steger, Dik, & Duffy, 2012). This study found a slightly lower but still robust internal consistency for the WAMI, at α = .81.

4.4.3.5. Index of Autonomous Functioning (IAF)

The IAF is 15-item measure designed by Weinstein, Przybylski, & Ryan (2012) that measures trait autonomy in individuals across three dimensions which are *Authorship/Self-congruence, Susceptibility to control,* and *Interest-taking*. The three subscales measure distinctly separate and independent, albeit highly correlated dimensions of trait autonomy, with the

subscale of *Authorship/Self-congruence* accounted for the highest proportion of the variance of trait autonomy as measured by Weinsten et al. (2012).

In this study, only the subscale of *Authorship/self-congruence* was utilized (e.g. My decisions represent my most important values and feelings) to measure the extent to which academics felt that their job actions were in sync with their personal choices, values, and beliefs. A sample of the item in the *Authorship/self-congruence* scale includes: *My decisions represent my most important values and feelings*. Respondents were required to rate their agreement with the given statements on a Likert scale ranging from 1 (not at all true) to 5 (completely true). The scoring of the IAF consists of obtaining the mean score for all items on the subscale. The internal consistency for the *Authorship/self-congruence* subscale was found to be high, $\alpha = .89$ (Weinstein et al., 2012). In this study, the internal consistency of $\alpha = .86$, which is almost similar to the reported scores by Weinstein et al. (2012).

4.4.3.6. Work Design Questionnaire (WDQ)

The Work Design Questionnaire (WDQ) is a comprehensive survey designed to assess job characteristics in the workplace (Morgeson & Humphrey, 2006), and is seen as an extension and improvement upon the measure of the Job Design Questionnaire (JDQ) by Hackman & Oldham (1976). The WDQ assesses 21 distinct characteristics of job design that can be grouped under one of four main categories: *Task Characteristics*, *Knowledge Characteristics*, *Social Characteristics*, and *Contextual Characteristics*. The category of *Task Characteristics* pertains to the characteristics that are related to how the work itself is accomplished, or the nature of the job itself (e.g. autonomy). *Knowledge Characteristics* is primarily concerned with characteristics that pertain to the skill, knowledge, or abilities that is demanded from an individual to be able to complete the job (e.g. information processing). On the other hand, the category of *Social*

Characteristics pertains to work characteristics that are related to the social elements of a workplace that facilitate or hinder the work (e.g. feedback from others). Finally, *Contextual Characteristics* pertains to the characteristics that are related to the environment within which the job is done (e.g. ergonomics). Respondents respond to each of the WDQ's subscales using a Likert scale indicating their agreement with the given statements, with ratings ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The scoring process for the subscales of the WDQ is relatively straightforward as well; the average of the scores of all items on each individual subscale is calculated as the score for that particular subscale (Morgeson & Humphrey, 2006).

The flexibility of the WDQ as a measurement tool for work environments lies in its ability for its individual subscales to be used as an independent scale by itself, without any negative effects to its reliability or validity (Morgeson & Humphrey, 2006). In this respect, the WDQ resembles more towards a battery of psychometric questionnaires that measure separate aspects of the workplace rather than a single, unified questionnaire. In this study, 10 out of the 21 subscales of the WDQ that measured the relevant work characteristics found to be present in the Malaysian academic workplace was used:

Autonomy. The Autonomy subscale of the WDQ consists of three further subscales which measures different facets of autonomy, which are *Work Scheduling Autonomy, Decision-Making Autonomy,* and *Work Methods Autonomy*.

Work Scheduling Autonomy (WSA) The WSA subscale is a three-item subscale that measures the specific facet of work autonomy with regards to scheduling – that is, the freedom of an individual to determine the schedules of his or her own work. A sample of the items in the WSA subscale include: *This job allows me to make my own decisions about how to schedule my work*. According to Morgeson and Humphrey (2006), the WSA subscale has an internal

consistency of α = .85. Reliability analysis conducted in this study using the Statistical Package for the Social Sciences (SPSS) version 20 yielded α = .86, which is almost similar to the findings of Morgeson and Humphrey (2006).

Decision-Making Autonomy (DMA) The DMA subscale is a three-item subscale that measures the specific facet of work autonomy with regards to decision-making – that is, are the extent to which individuals are allowed to make decisions on their own in their work without having to refer to a superior. A sample of the items in the DMA subscale include: *The job gives me a chance to use my personal initiative or judgement in carrying out the work*. The DMA subscale has a reported internal consistency of α = .85 (Morgeson and Humphrey, 2006) while a reliability analysis in this study yielded α = .84.

Work Methods Autonomy (WMA). Similar to its two previous counterparts, the WMA subscale is a three-item subscale that measures the specific facet of work autonomy with regards to the methods that is used in order to accomplish the work – that is whether or not the job allows for the worker to decide on how to achieve the goals set before them. A sample of the items in the WMA subscale include: *The job allows me to decide on my own how to go about doing my work*. The WMA subscale has a reported internal consistency of α = .88 (Morgeson & Humphrey, 2006), which is identical to the values obtained from a reliability analysis performed in this study.

Task Variety (TV). The TV subscale is a four-item scale that measures the extent to which the job requires the performing of a variety of tasks in order to complete the job. A sample of the items include: *The job involves doing a number of different things.* The TV subscale has a reported internal consistency of α = .95 (Morgeson & Humphrey, 2006), and a reliability analysis conducted in this study yielded α = .90, which was lower but still acceptable.

Task Significance (TS). The TS subscale is a four-item scale that measures the extent to which an individual perceives the job tasks to have a significant effect on the lives of other people beyond the organization. A sample of the items include: *The results of my work are likely to affect the lives of other people*. The TS subscale has a reported internal consistency of α = .87 (Morgeson & Humphrey, 2006), while this study's reliability analysis yielded a lower alpha level of α = .87.

Task Identity (TI) The TI subscale is a four-item scale that measures the extent to which the job requires an individual to be a part of its entire process from conception to completion. A sample of the items include: *The job is arranged so I can do an entire piece of work from beginning to end*. The TI subscale has a reported internal consistency of α = .88 (Morgeson & Humphrey, 2006), while this study's reliability analysis yielded a lower alpha level of α = .87.

Feedback From Job (FFJ) The FFJ subscale is a three-item scale that measures the extent to which the job itself provides information to the individual regarding work performance. A sample of the items include: *The job itself provides feedback on my performance*. The FFJ subscale has a reported internal consistency of α = .86 (Morgeson & Humphrey, 2006), similar to this study's reliability analysis.

Skill Variety (SV) The SV subscale is a four-item scale that measures the extent to which the job itself requires the use of a variety skills in order to complete it. A sample of the items include: *The job requires me to utilize a variety of different skills in order to complete the work*. The SV subscale has a reported internal consistency of α = .86 (Morgeson & Humphrey, 2006), while this study's reliability analysis yielded a higher alpha level of α = .90.

Social Support (SS). The SS subscale is a six-item scale that measures the extent to the job itself is a source of interpersonal relationships and social support. A sample of the items

include: *People I work with take a personal interest in me*. The SS subscale has a reported internal consistency of α = .82 (Morgeson & Humphrey, 2006), while this study's reliability analysis yielded a lower alpha level of α = .80.

Feedback From Others (FFO) The FFO subscale is a three-item scale that measures the extent to which the individual receives feedback pertaining to the quality of his work from his colleagues in the job. A sample of the items include: *Other people in the organization, such as managers and coworkers, provide information about the effectiveness (e.g. quality and quantity) of my job performance*. The FFO subscale has a reported internal consistency of α = .88 (Morgeson & Humphrey, 2006), while this study's reliability analysis yielded a higher alpha level of α = .89.

4.4.3.7. Shortened Utrecht Work Engagement Scale (UWES-9 by Schaufeli, Bakker, & Salanova, 2006)

The UWES-9 is a nine-item measure developed by Schaufeli et al. (2006) to be a more efficient scale compared with the longer version of the UWES-17. The UWES-9 measures the extent to which individuals are engaged in their work on the three original dimensions of the UWES-17, which are *Vigour*, *Dedication*, and *Absorption*. A sample of items from all three dimensions' subscales are included: *At my work, I feel bursting with energy; I find the work that I am enthusiastic about my job;* and *I am immersed in my work*. Respondents were required to indicate how common they found the statements to be in their job on a seven-point Likert scale ranging from 0 (Never) to 6 (Always/Every day).

The mean scores for each subscale was obtained by summing the scores of all the items in the subscale and averaging it across the number of items in each subscale. Alternatively, the average of all nine items on all three subscales could be calculated to obtain a general score of

work engagement (Schaufeli et al., 2006). The UWES-9 was found to have an internal consistency which varied between .85 and .92, depending on the 10 countries that it was originally tested in (Schaufeli et al., 2006). In this study, the UWES-9 was found to have an internal consistency of .90.

4.4.4. Procedure

Participants in this study were administered either the physical questionnaire or given the online link to the survey. Participants who were administered the physical questionnaire were required to read, sign, and return the informed consent letters before being allowed to proceed with answering the questionnaires (refer to Appendix A2 for a sample of the informed consent administered to participants). Participants who completed the questionnaire online were required to first indicate in the forced response item that they had read the informed consent letter and were willing giving consent to participate in the study before they were allowed to proceed to the subsequent sections of the survey. The entire process took approximately 30 minutes to complete all the questionnaires in the survey.

4.4.5. Ethical Considerations

Ethics clearance for this study was obtained from the Faculty of Arts and Social Sciences Research Ethics Sub-Committee, University of Nottingham Malaysia Campus, on the 13th of June, 2017 (refer to Appendix B2). This study ensured ethical actions in the following four areas:

4.4.5.1. Informed Consent

Respondents were provided with an informed consent form, explaining in detail the aims of the research, what would be required of them should they choose to participate, and the consequences, if any, should they choose to withdraw participation at any point in time. Respondents were only allowed to answer the questionnaires once they had signed and returned

the physical copy of the letter of informed consent or indicated their consent on the online survey.

4.4.5.2. Voluntary Participation

Respondents were informed prior to the start of the interview that their involvement in this study was completely voluntary, and that there were to be no negative consequences should they choose to withdraw their participation at any moment in time, for any reason whatsoever.

4.4.5.3. Privacy and Confidentiality

Respondents were ensured of their anonymity and confidentiality in this study as no personally identifying information was collected as part of the survey. Additionally, potentially sensitive information such as the respondents' age and the name of the institution they were currently working at were left as optional items so respondents could choose not to answer should they feel that it would give away their identity.

4.4.5.4. Deception and Harm

No deception was used in this research, as respondents were simply required to answer a set of surveys. The procedure also did not contain any elements that would have exposed respondents to the risk of harm or injury.

4.4.6. Data Analysis Strategy

Descriptive and inferential statistics were used to analyse the data collected in this study. Descriptive statistics consisted of means, standard deviations (S.D.) and percentages which were primarily used to summarise key information regarding participants. Inferential statistics analyses were then used to explore the relationships between the variables in this study based on the data collected via the questionnaires used. This study utilised the IBM Statistics Package for Social Sciences (SPSS) version 20 and Analysis of Moment Structures (AMOS) version 22 for

inferential statistical analysis of the data. The threshold for statistical significance in this study was set at a minimum of 0.05 level ($p < .05$) for all analysis, and any relationships whose significance was above the threshold was considered to be statistically non-significant and could be disregarded.

4.5. Chapter summary and conclusions

This chapter explains the rationale for the sequential exploratory design adopted in this study in order to answer its research questions. It then explained in detail the methodology for all three studies that were conducted as part of this research, including the different samples obtained, the instruments used, the procedures followed and the ethical considerations for each study. The next chapter will explore the validation procedures carried out with the instruments used in this study to ensure the validity and reliability of the study's findings, in addition to validating said instruments for use on the Malaysian population.

Chapter 5: Assessing the factor structure of the study's instruments

5.1. Chapter Overview

This chapter will explain how the factor structures of all the instruments used in this study were assessed, and detail any of the changes that were made to the instruments in the process of its validation for use on the Malaysian population. It ends with a summary of the key points of interest found during the validation process of the instruments in this study.

5.2. Strategy for assessing the study's instruments

5.2.1. Using Exploratory Factor Analysis to analyse the initial factor structure

Exploratory Factor analysis (EFA) is commonly used by researchers to identify the latent constructs underpinning a set of measured variables (Fabrigar, Wegener, MacCallum, & Strahan, 1999). EFA is mostly used during the development of a new scale in order to determine the underlying constructs for a set of measured variables (Worthington & Whittaker, 2006). However, because this study represents possibly one of the first opportunities for a majority of the instruments to be used in a Malaysian sample it was deemed necessary to conduct an EFA in order to examine whether the suggested factor structure of the scales are suitable for the study's sample.

EFA was conducted using the Maximum Likelihood Estimation (MLE) method, as although it is best suited for samples with normal distributions, it has been found to be robust even against violations of normality (Hair et al., 2014). All EFAs were conducted with an oblique rotation, since the items measured the same construct (Field, 2017). The minimum parameters that were used for the identification of significant factors is an eigenvalue of more than one (Field, 2017).

5.2.2. Using Confirmatory Factor Analysis to analyse the proposed factor structure

Confirmatory factor analysis (CFA) is a useful tool for validation of a questionnaire because it enables the structure of the measurement to be defined a priori, which allows for the model to be specified according to the original suggestions of the author (Byrne, 2010). Additionally, the SEM was used to test the model fit of the instrument because of its ability to accommodate measurement errors and is thus appropriate for examining the relationship between the items and variables of the scale (Hair et al., 2014).

CFA in this study was conducted using the MLE method, similar to the initial EFA. To assess model fit, the following three measures of fit were used:

- Standardized root mean square residual (SRMR) values close to 0.08 or below
- Root mean square error of approximation (RMSEA) values close to 0.06 or below
- Comparative Fit Index (CFI) values which are equal to or > 0.95

These three measures of fit were chosen as the parameters in this study as suggested by multiple researchers (Hu & Bentler, 1999; Lei & Wu, 2007) to be the most appropriate for assessing model fit in a CFA. However, according to MacCallum, Browne, and Sugawara (1996), an RMSEA value in the range of 0.05 to 0.10 can also be considered a fair fit for the model. As such, although this research will endeavour to keep to the stricter parameters as suggested by Hu and Bentler (1999) and Lei and Wu (2007), RMSEA values that are below 0.10 will also be considered.

5.3. Copenhagen Burnout Inventory (CBI)

The CBI (Kristensen, Borritz, Villadsen, & Christensen, 2005) measures burnout across three dimensions of *personal, work-related,* and *client-related burnout*. According to Kristensen et al. (2005), the core characteristic of burnout measured by the CBI is exhaustion or fatigue, two

terms that are used interchangeably. Unlike the Maslach Burnout Inventory, which measures burnout on the three dimensions of Emotional Exhaustion, Depersonalisation, and Personal Accomplishment, the CBI only measures one general dimension of burnout for each individual scale. The factor structure of each of the CBI's scales independently should therefore theoretically only reveal one factor upon which all items load on (Kristensen et al., 2005).

The CBI as a psychometric instrument has been validated for use in different demographics such as Spain (Molinero, Basart, & Moncada, 2013), New Zealand (Milfont, Denny, Ameratunga, Robinson, & Merry, 2008), and Taiwan (Yeh, Cheng, Chen, Hu, & Kristensen, 2007). The CBI has also been used in a Malaysian context (Mustafa, Santos, & Chern, 2014). Additionally, a translated Malay-version of the CBI has been tested on a sample of medical students in Malaysia, where support for the three-factor structure was found, although Item 7 was dropped from the work-related scale in order to improve overall model fit (Chin et al., 2018).

5.3.1. Step 1: Testing the initial factor structure of the CBI using EFA

Although Kristensen et al. (2005) suggests that the three scales of the CBI load independently onto a single factor, this study still conducted an EFA on the factor structure of the CBI, specifically the Work-related Burnout subscale as it was the only one used in this study. Bartlett's test of sphericity was found to be significant, ($\chi 2$ (21) = 1251.14, p <.001) and KMO = .87, indicating that it was appropriate to proceed with the factor analytic model. One factor with eigenvalues greater than one was extracted, which had an eigenvalue of 4.10 and accounted for 58.57% of the total variance in the data. All seven items in the questionnaire loaded on to the factor, with factor loadings from -.36 to .84. This finding supported the single-factor structure suggestion of Kristensen et al. (2005). However, factor rotation of the seven items demonstrated

that one of the items in the scale (Item 7 = *Do you have enough energy for family and friends during leisure time?*) significantly differed from the rest, with a negative factor loading (-.36) that was significantly lower than the factor loadings of all other items which had a minimum loading of >.70. The subsequent CFA further analysed this particular discrepancy to determine if the item should be dropped to improve the overall model fit.

5.3.2. Step 2: Testing the suggested factor structure of the CBI using CFA

A single-factor model was specified for the Work-related burnout scale used in this study, in accordance with the suggestion of Kristensen et al. (2005). Based on the criteria for model fit as described above, the single-factor model was found to be a good fit after post-hoc modifications (χ^2 (7) = 10.66, p > .05), SRMR = .01, CFI = .99, and RMSEA = .03.

Figure 5.1. CFA model of CBI scale after post-hoc modifications

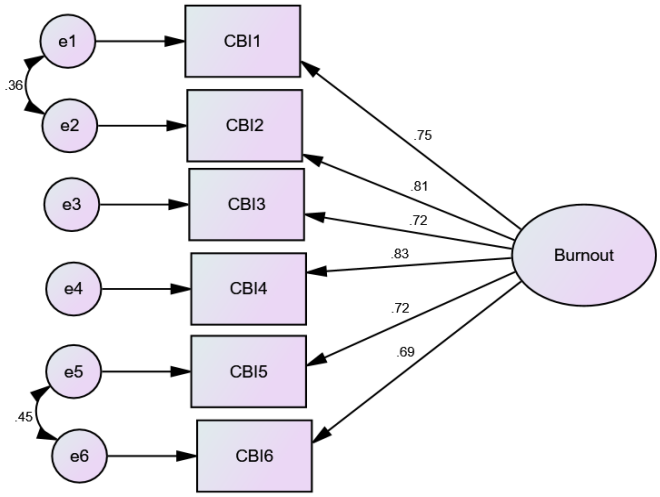


Figure 5.1 displays the post-hoc modifications made to the CBI scale in order to achieve a good model fit. The factor loading of Item 7 (CBI7) was found to be low (<.50), which are similar to the findings of the initial EFA. This item was hence dropped, and the analysis repeated. One possibility for the unsuitability of this item to a Malaysian population could be due to the nature of social interactions between friends and family (measured by Item 7) represents a significant part of everyday interactions (common to Asian-collectivist cultures), and therefore does not

constitute a significant predictor of work-related burnout. The dropping of Item 7 in this study is also similar to the previous validation of the CBI in a Malaysian context, where the same item was also dropped due to low factor loadings in order to achieve good fit (Chin et al., 2017).

In addition to dropping Item 7, a good model fit was achieved when the error terms for Items 1 and 2 and Items 5 and 6 were covaried, possibly due to similarities in the item structure, whereby Items 1 and 2 measured emotional exhaustion and burnout, and Items 5 and 6 measured exhaustion and tiredness,. These are concepts which can be seen as theoretically similar, leading to their shared error variances. Based on these findings, the total CBI score used the subsequent data analysis was calculated based on the mean of the six items that were retained rather than the original seven items as suggested by Kristensen et al. (2005).

5.4. Job Psychological Meaningfulness (JPM) Scale

The JPM (May, Gilson & Harter, 2004) is a unidimensional instrument that was original designed to measure the extent to which individuals were able to perceive meaning in their jobs. The six items that constitute the JPM was drawn from Spreitzer (1995) and May (2003). The initial CFA by Spreitzer (1995) revealed that the items loaded strongly onto the latent construct of meaningfulness, confirming the JPM as a valid, unidimensional scale. Previous validation studies on the JPM however were primarily conducted in a Western sample (i.e. Spreitzer, 1995 and May, et al., 2004) hence it was deemed important to attempt and validate the JPM prior to use in the Malaysian context.

5.4.1. Step 1: Testing the initial factor structure of the JPM using EFA

An initial EFA was conducted to discover its factor structure as applied to this particular demographic and to determine if there were any significant departures from the single-factor model proposed by both Spreitzer (1995) and May et al. (2004). Bartlett's test of sphericity was

significant ($\chi 2$ (15) = 2045.31, p <.001) and KMO was high (.92), indicating that it was appropriate to proceed with the factor analytic model. A single factor was extracted from the data and accounted for 80% of the variance. All items loaded onto the single extracted factor, with loadings ranging from .80 to .94 similar to the findings of May et al., (2004). The findings indicated a high possibility that the scale can be retained for use in its original form in this study.

5.4.2. Step 2: Testing the suggested factor structure of the JPM using CFA

A single-factor model was specified for the JPM, in accordance with the suggestions of May et al. (2004) and was further analysed using a CFA. Based on the criteria for model fit, the single-factor model had an excellent fit after minor post-hoc modifications, (χ^2 (8) = 12.97, p > .05), SRMR = .01, CFI = .99, and RMSEA = .04.

Figure 5.2. CFA model of JPM scale after post-hoc modifications

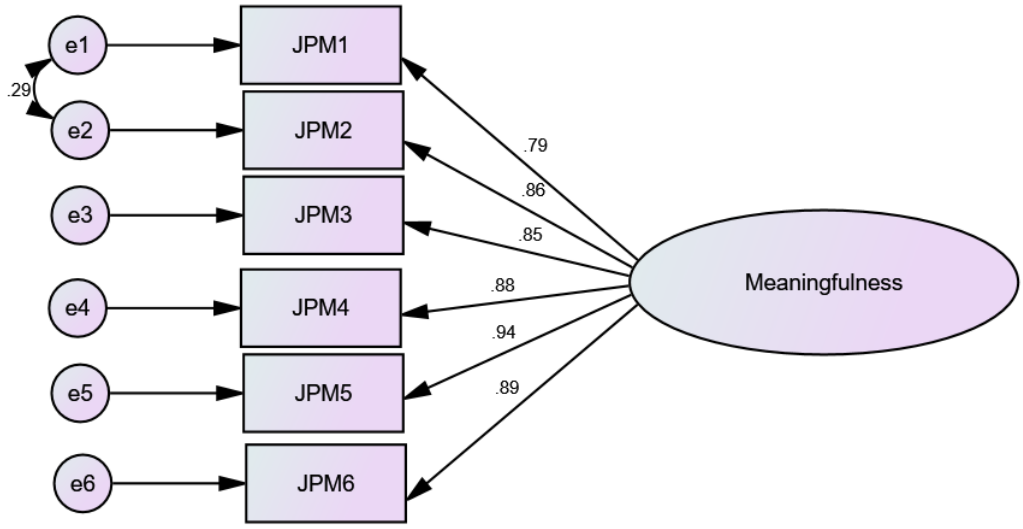


Figure 5.2 shows the post-hoc modifications conducted on the overall model in order to achieve model fit. As shown above, all factor loadings of the items in this scale loaded highly (>.70), thus all items were retained. Additionally, error terms for Items 1 and 2 were covaried and found to be weakly correlated (r = .29), possibly due to similarities in the nature and wording of both items, with Item 1 measuring work that is very important to an individual and Item 2 measuring

job activities that are personally meaningful to an individual. Nonetheless, overall results indicated that the JPM scale was valid for use in this current population without any changes.

5.5. Survey of Perceived Organisational Support 8-item (SPOS-8)

The SPOS-8 is a shortened version of the original Survey of Perceived Organisational Support (SPOS) scale that consisted of 36 items and designed to measure the extent to which individuals perceived their organization to be supportive of them in the workplace (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Previous factor analysis on the SPOS-36 revealed a single factor upon which all items loaded significantly on, suggesting a unidimensional factor structure (Eisenberger et al., 1986). The factor structure of the SPOS-36 was further supported by the subsequent findings of Shore and Tetrick (1991), and Hutchison (1997). Two shortened versions namely, the SPOS-17 and SPOS-8 were later on developed and have both been found to be internally consistent (Rhoades & Eisenberger, 2002).

The SPOS-8 has been validated across different demographics, such as teachers, clerks, insurance executives, faculty staff, and police officers (Eisenberger, Fasolo, & Davis-LaMastro, 1990). However, majority of the studies were conducted using US-based populations. The SPOS has been used in research in a Malaysian context before (Lee, Chitpakdee, & Chontawan, 2011), although this study did not conduct a validation analysis prior to using it. A 12-item version of the SPOS was also utilised in a study on Malaysian academics (Lew, 2009).

5.5.1. Step 1: Testing the initial factor structure of the SPOS-8 using EFA

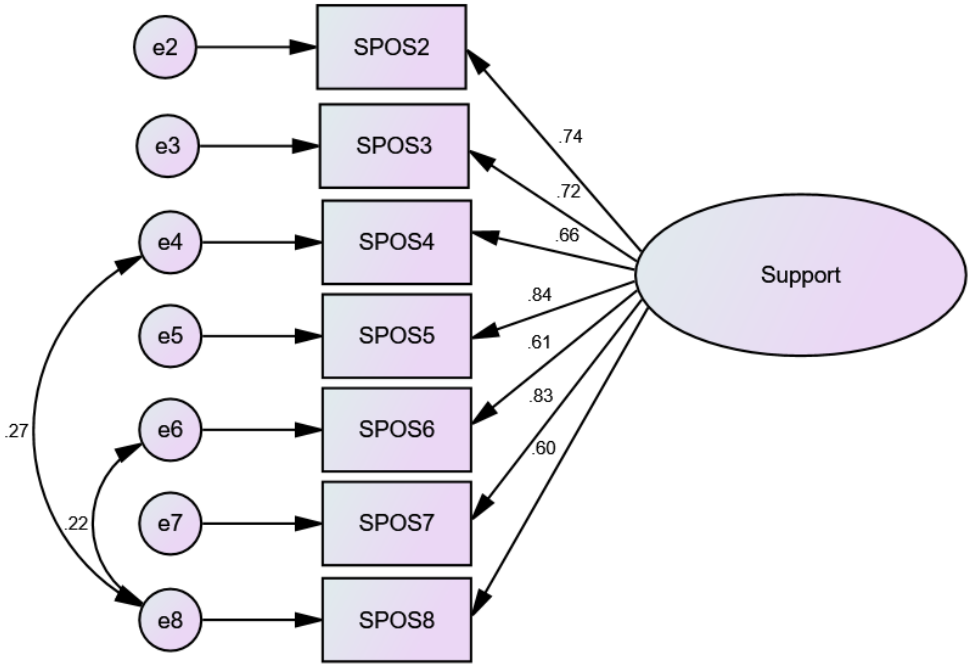
An initial EFA was conducted to test the factor structure of the SPOS-8 to determine if it possessed a similar unidimensional factor structure as suggested by previous researches (Eisenberger et al., 1986; Hutchison, 1997; Rhoades & Eisenberger, 2002). Bartlett's test of sphericity was significant ($\chi 2$ (28) = 1411.67, $p < .001$), and the Kaiser-Meyer-Olkin measure

was high (KMO = .89), indicating that it was acceptable to proceed with the Maximum Likelihood Estimation method of extraction. One factor with eigenvalues greater than one was extracted, accounting for 57.96% of the variance. Factor loadings for all eight items ranged from .64 to .81. This is similar to the literature on the SPOS, which postulates that all items in the SPOS-8 load onto a single factor measuring organisational support (Rhoades & Eisenberger, 2002). However, as indicated by the research, the item with the lowest factor loading (.64) was Item 1, which raises the potential that the subsequent CFA would encounter issues with its factor loading, as Hair et al. (2014) suggests that factor loadings should ideally be more than .70 to be accepted.

5.5.2. Step 2: Testing the suggested factor structure of the SPOS-8 using CFA

A single-factor model was specified for the SPOS-8, as suggested by Eisenberger et al. 1986) (Refer to Figure 5.3).

Figure 5.3 CFA model for SPOS scale after post-hoc modifications



Based on the criteria for model fit, the single-factor model was found to have a fair fit, ($\chi 2$ (12) = 48.15, $p < .001$), SRMR = .03, CFI = .96, and RMSEA = .09. While the chi-square value is normally suggested to be ideally non-significant in order for the model to be accepted, according to Tanaka (1987), the chi-square is a crude test that is highly sensitive to sample size, and can therefore be ignored in favour of other fit indices. Additionally, while the RMSEA was higher than the .06 cut-off suggested by Hu and Bentler (1999), the CFI and SRMR values were acceptable Additionally, the RMSEA it is still within the range of an acceptable fit as suggested by MacCallum et al. (1996), as such the model fit is accepted.

Out of the original eight items, one item (Item 1) was dropped from the model due to a low factor loading (< .60). This finding reinforces the findings of the initial exploratory factor analysis, where Item 1 was also found to have the lowest factor loading. Additionally, the error terms for item 4 and 8 and items 6 and 8 were found to be weakly correlated (r = .27 and r = .22 respectively). This was due to the fact that item 4 and 8 as well as items 6 and 8 were found to have similar wording structure, which may have contributed to their shared error variances. Based on the findings of this validation analysis, the total SPOS score used in the inferential statistics analysis to determine level of perceived organisational support among Malaysian academics was calculated based on the average mean of the seven items that were retained instead of the original eight items as suggested by Eisenberger et al. (1986).

5.6. Work and Meaning Inventory (WAMI)

The WAMI is a multidimensional scale designed by Steger, Dik, and Duffy (2012) and measures how an individual perceives the role of their work activities in contributing towards meaning in their life across three dimensions, which are *Positive Meaning (PM)*, *Meaning Making (MM)*, and *Greater Good (GG)*. According to Steger et al. (2012), *PM* pertains to the

extent to which individuals are able to judge what they do in their work to be meaningful. *MM* on the other hand pertains to the extent to which individuals perceive specific ways in which their life's overall meaning benefits from meaningful work. Lastly, *GG* pertains to the extent to which individuals held the belief that work is meaningful because of its impact on others.

The three-factor structure of the WAMI has been tested multiple times across several different sample groups such as US workers (Duffy, Allan, Autin, & Bott, 2013), Turkish workers (Akin, Hamedoglu, Kaya, & Saricam, 2013) and also across different age groups (Allan, Duffy & Douglass, 2015). All these studies suggested a good fit for the three-factor structure of the WAMI.

However there has been no evidence obtained as to whether the WAMI has been used in the Malaysian context as far as the researcher is aware of. This attempt is thus very likely the first of its kind to attempt to validate the WAMI to the Malaysian academic population.

5.6.1 Step 1: Testing the initial factor structure of the WAMI using EFA

An initial EFA was conducted to assess the factor structure and determine if it was similar to previous researches that validated the WAMI (Akin et al., 2013; Allan et al., 2015). Bartlett's test of sphericity was significant ($\chi 2$ (45) = 1722.24, p <.001), and KMO was high (KMO = .91), indicating that it was appropriate to proceed with the factor analytic model. One factor with an eigenvalue of 5.34 was extracted, which accounted for 53.34% of the variance in the data. Factor loadings for all 10 items ranged from -.47 to .80.

These findings were contrary to the findings of Steger et al. (2012) and Duffy et al. (2013), who both found statistical support for a three-factor structure of the WAMI. Additionally, while Akin et al. (2013) found that all 10 items of the WAMI had relatively high, positive factor loadings on to three factors, the results from this EFA highlighted interesting

factor loadings for some items, specifically regarding Item 2 (.54) and Item 3 (-.47), which were found to be lower than the factor loadings of the other eight items on the scale. Thus, a follow-up CFA was conducted to compare the respective model fit values between a single-factor structure suggested by this EFA and a three-factor structure as suggested by past research (Steger et al., 2012).

5.6.2. Step 2: Testing the one-factor structure vs the suggested three-factor structure of the WAMI using CFA

Two models were specified for the WAMI: a single-factor structure based on the findings of the initial EFA, and a three-factor structure as suggested by Steger et al. (2012). The respective fit indexes are shown in Table 5.1 below:

Table 5.1.
Comparison of fit indices between a one-factor and three-factor structure of the WAMI

	Single-factor structure	Three-factor structure
$\chi 2$	70.50*	71.03*
SRMR	0.03	0.03
CFI	.96	.96
RMSEA	.08	.09
AIC	104.50	109.03

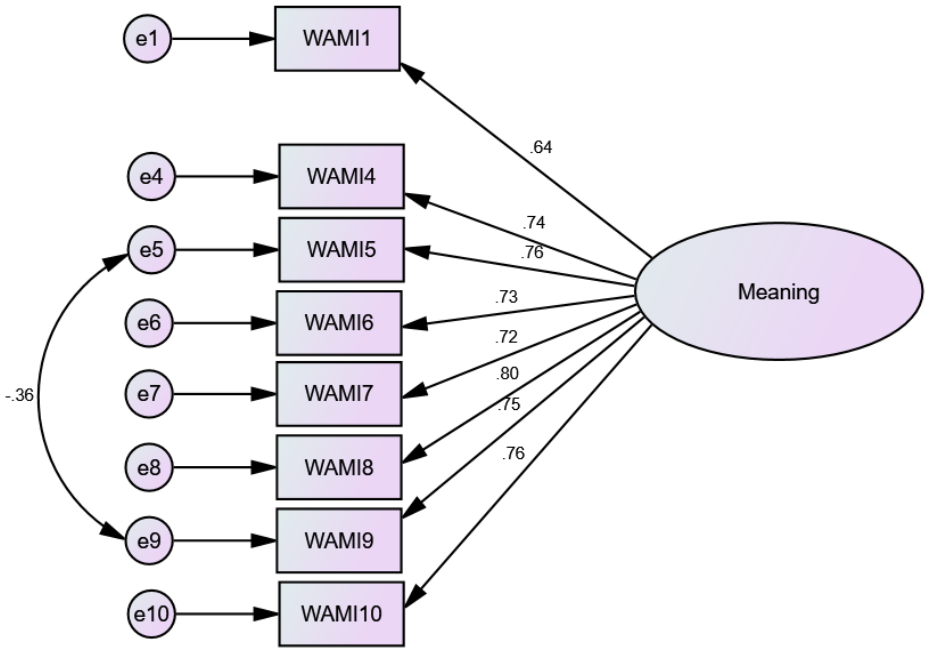
Note: * = $p < .05$

As can be seen in Table 5.1, the fit indices for a single-factor structure are comparatively more acceptable compared to the fit indices for the three-factor structure, specifically with regards to CFI, RMSEA, and AIC. Although the SRMR value for the three-factor structure is marginally better than that of the single-factor structure, according to Burnham, Anderson, and Huyvaert (2011), models with lower levels of AIC is generally considered to have a better fit. Thus, based

on the current comparison, it was felt that a single-factor structure of the WAMI measuring a general construct of work-related meaning was more appropriate to this study compared to a three-factor structure.

This finding is interesting as it revealed that among Malaysian academics, their work activities contributed towards a sense of meaning in their lives only through one general dimension. A further analysis of the items that were dropped reveals that the dropped items originated from the suggested subscales of *MM* and *GG* (Steger et al., 2012), suggesting that Malaysian academics possibly view their work-related activities primarily through a *PM* perspective, where work-related meaning was derived from the perspective of whether or not it contributed to their personal purpose and meaning in life.

Figure 5.4. CFA model of the WAMI scale after post-hoc modifications



As Figure 5.4 shows, post-hoc modifications resulted in Items 2 (*I view my work as contributing to my personal growth)* and 3 (*My work really makes no difference to the world*) being dropped due to low factor loadings (.55 and -.47 respectively), which is similar to the results of the initial

EFA where both Items 2 and 3 were found to have the lowest factor loadings. Additionally, the error terms of Items 5 and 9 were found to be correlated, possibly due to the inherent similarities between the items, with item 5 measuring the extent to which an individual possesses a good sense of what makes work meaningful while item 9 measured the extent to which an individual's work helps them make sense of the world. Based on the findings of this validation analysis, the total WAMI score used in the inferential statistics analysis to determine level of perceived meaningfulness of work activities among Malaysian academics was calculated based on the average mean of the eight items that were retained instead of the original 10 items as suggested by Steger et al. (2012).

5.7. Index of Autonomous Functioning – Authorship/Self-congruence (IAF-AS)

The IAF scale is a multidimensional scale developed by Weinstein, Przybylski, and Ryan (2012) that measures trait autonomy across three dimensions which are *Authorship/Self-congruence (AS), Interest-taking (IT),* and S*usceptibility to control (SC)*. *AS* is explained as the extent to which an individual perceives himself to be the author of his behaviour and his actions to be congruent with his personal values, needs, and interests (Weinstein et al., 2012). *IT* on the other hand, is explained as the extent to which an individual is able to reflect and take action based on the highest levels of personal interest and gain in terms of self-development (Weinstein et al., 2012). Lastly, *SC* is defined as the extent to which an individual is prone to acting in response to pressure, either from others, or from self-imposed obligations. While the three subscales of the IAF are generally utilised together, it is also possible to utilise the subscales of the IAF independently to measure specific traits of autonomy (Weinstein et al., 2012).

Being a relatively new instrument, there is a dearth of research regarding the validity and applicability of the IAF beyond the findings of Weinstein et al. (2012). A study conducted on

students in a HEI in Lithuania applying the IAF found that the three-factor structure possessed a good fit (Paradnike & Bandzeviciene, 2015) supporting the suggestion of Weinsten et al. (2012). A more recent study conducted on participants from a HEI on the US/Mexico border also utilised the IAF as a measurement tool, however, no model fit analysis was conducted in the study (Richards, Cabriales, & Field, 2016). To the best of the current knowledge, the IAF has not been validated in an Asian context, and this study is likely the first of its kind to validate the IAF as a psychometric tool to the Malaysian academic context. However, since this study only utilised the *AS* subscale, validation will only be conducted for that scale.

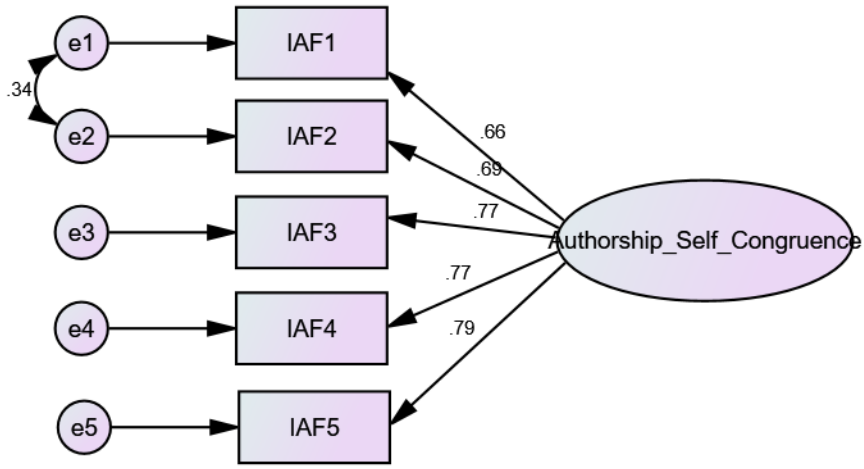
5.7.1. Step 1: Testing the initial factor structure of the IAF-AS using EFA

As the IAF has likely never been tested on a Malaysian population before, an initial EFA conducted to test the factor structure of the IAF-AS subscale was conducted to determine if it differed significantly from the factor structure suggested by Weinsten et al. (2012). Bartlett's test of sphericity was significant ($\chi 2$ (10) = 773.10, $p < .001$), with an acceptable KMO of .84, suggesting that it was appropriate to proceed with the factor analytic model. One factor with an eigenvalue of more than one was extracted which accounted for 64.87% of the total variance in the data. Factor loadings of all five items ranged from .72 to .76. The single-factor structure of the IAF is similar to the initial findings of Weinstein et al. (2012).

5.7.2. Step 2: Testing the one factor structure of the IAF-AS using CFA

A single-factor structure was specified for the IAF-AS scale, as suggested by Weinstein et al. (2012) (Refer to Figure 5.5).

Figure 5.5. CFA model of the IAF-AS after post-hoc modifications



Based on the criteria for model fit, the single factor model was found to have a good fit, (χ2 (4) = 9.32, p > .05), SRMR = .01, CFI = .99, and RMSEA = .06 after post-hoc modifications.

All five items were retained with acceptable factor loadings (>.60). After post-hoc modifications, the error variances for Items 1 and 2 were weakly correlated (r = .34), possibly due to the similarity between the two items, where Item 1 pertained to the decisions representing ones' most important values and feelings while Item 2 pertained to an individual strongly identifying with the things that one does, which is theoretically similar in nature. All items were retained for use in this study due to sufficiently high factor loadings.

5.8. Work Design Questionnaire (WDQ)

The WDQ (Morgeson & Humphrey, 2006) is a multi-dimensional scale designed to measure factors of work design across 21 independent dimensions, drawn from a variety of workplace literature "related to work design, job design, work characteristics, job characteristics, job demands, and job content" (Morgeson & Humphrey, 2006, p.1322). Since its creation, the 21-factor structure of the WDQ has been validated across different demographics and cultures (see Bayona, Caballer & Piero, 2015; Stegmann et al., 2010) but there has been no evidence available as to whether the WDQ was ever validated in a Malaysian context. However this study

will only utilise 10 out of the 21 factors of the WDQ namely *Autonomy, Task Variety, Task Significance, Task Identity, Feedback From Job, Skill Variety, Social Support,* and *Feedback From Others*.

5.8.1. Step 1: Testing the initial factor structure of the 10-factor WDQ using EFA

An initial EFA conducted to test the factor structure of the WDQ was conducted to determine if 10 factors would be extracted as suggested by Morgeson and Humphrey (2006). Bartlett's test of sphericity was significant ($\chi 2$ (666) = 9392.15, $p < .001$) and KMO = .90, indicating that it was appropriate to proceed with the factor analytic model. However, despite items from 10 factors being analysed, only seven factors with eigenvalue of more than one was extracted, accounting for 69.64% of the total variance in the data. The pattern matrix of the factor loadings of the items from all 10 of the subscales is shown in Table 5.2:

Table 5.2.
Pattern Matrix for the factor loadings of items in the WDQ

Item	Factor						
	1	2	3	4	5	6	7
WSA1			.71*				
WSA2			.69*				
WSA3			.73*				
DMA1			.68*				
DMA2			.76*				
DMA3			.75*				
WMA1			.79*				
WMA2			.84*				
WMA3			.79*				
TV1		-.55*					
TV2		-.87*					
TV3		-.90*					
TV4		-.88*					
TS1	.48*						
TS2	.54*						
TS3	.92*						
TS4	.90*						

TI1			-.65*	
TI2			-.70*	
TI3			-.88*	
TI4			-.81*	
FFJ1	.20*			
FFJ2	.42*			
FFJ3	.47*			
SV1				.87*
SV2				.92*
SV3				.69*
SV4				.85*
SS1		.62*		
SS2		.89*		
SS3		.83*		
SS4		.19*		
SS5		.28*		
SS6		.32*		
FFO1	.80*			
FFO2	.86*			
FFO3	.81*			

Note: WSA = Work Scheduling Autonomy; WMA = Work Methods Autonomy; DMA = Decision-Making Autonomy; TV = Task Variety; TS = Task Significance; TI = Task Identity; FFJ = Feedback From Job; SV = Skill Variety; SS = Social Support; FFO = Feedback From Others.

As the pattern matrix in Table 5.2 demonstrates, the initial EFA's results indicated that all items from the three autonomy subscales loaded onto a single factor (Factor 3), while all items from the two feedback subscales loaded onto another single factor (Factor 4). All other subscales were found to possess their own independent factor structure. The results of the EFA is contrary to the suggestions of Morgeson and Humphrey (2006) as well as the findings of Bayona, Caballer, & Peiro (2015) and Stegmann et al. (2010), who found distinctly separate constructs even for the subscales of autonomy and feedback. Thus, a follow-up CFA was conducted to further analyse the model fit indices of the subscales, particularly for the autonomy and feedback subscales, and

to determine if the initial factor structure as suggested by the EFA would be a better fit for the current population or the factor-structure as suggested by past research (Morgeson & Humphrey, 2006).

5.8.2. Step 2: Testing the one factor structure vs. the three factor structure of the WDQ-Autonomy suscale using CFA

Two models were specified for the autonomy subscale of the WDQ: a single-factor structure based on the findings of the EFA, and a three-factor structure as suggested by Morgeson and Humphrey (2006). The respective fit indexes are shown in Table 5.3 below:

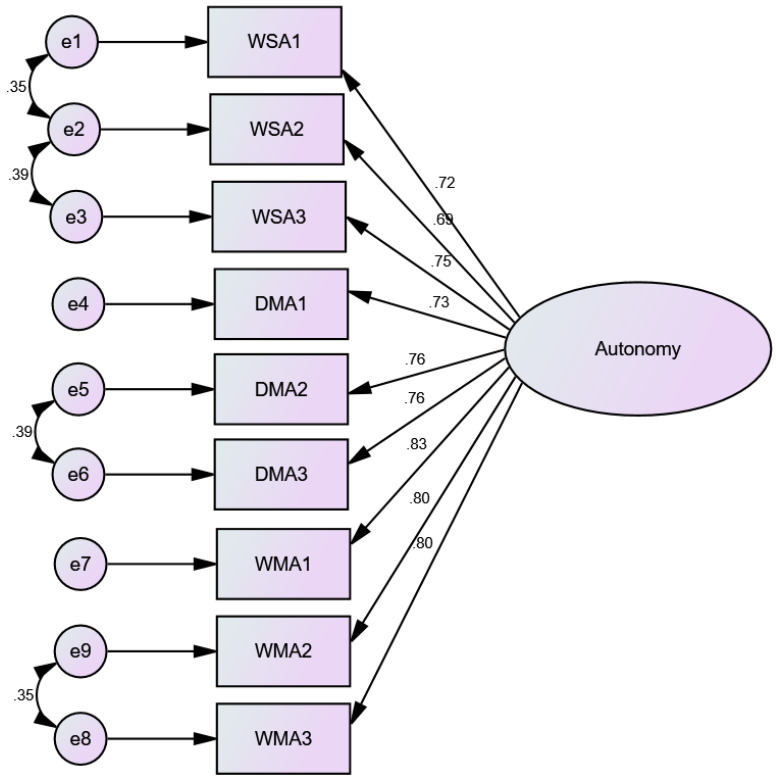
Table 5.3.
Comparison of fit indices between a one-factor and three-factor structure of the Autonomy subscale

	Single-factor structure	Three-factor structure
$\chi 2$	84.96*	87.85*
SRMR	0.03	0.03
CFI	.97	.97
RMSEA	.08	.08
AIC	128.96	129.85

Note: * = $p < .05$

As Table 5.3 shows, the fit indices for the single-factor structure is comparatively better than the fit indices for the three-factor structure in terms of AIC value. As a lower AIC value is generally considered to be indicative of a better fit, the single-factor structure for Autonomy was adopted for this study (Burnham, Anderson, & Huyvaert, 2011) (Refer to Figure 5.6)

Figure 5.6 CFA model of the Autonomy Subscale after post-hoc modifications



All nine items were retained with high factor loadings (> .70). Post-hoc modifications revealed that the error terms between several items were correlated, possibly due to similarities in the structure or nature of the items. Interestingly, a theoretical implication of the adoption of a single-factor structure for autonomy in this study indicates that the three different types of work-related autonomy was not significantly perceived in the Malaysian academic workplace, and that Malaysian academics generally perceived autonomy as a unidimensional factor. What this means for the workplace literature will be discussed in greater detail in Chapter 9.

5.8.3. Step 3: Testing the one-factor structure vs. the two-factor structure of the WDQ-Feedback subscale using CFA

Two models were specified for the feedback subscale of the WDQ: a single-factor structure based on the findings of the EFA, and a two-factor structure as suggested by Morgeson and Humphrey (2006). The respective fit indexes are shown in Table 5.4 below:

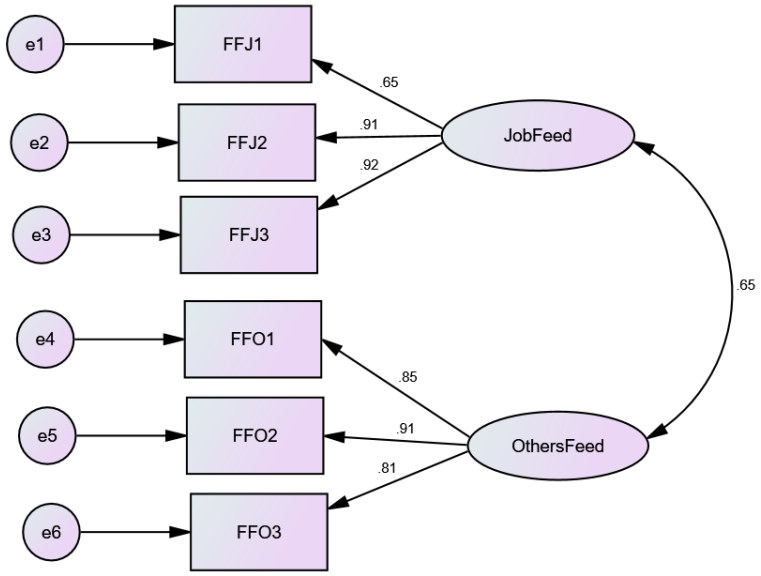
Table 5.4.
Comparison of fit indices between a one-factor and two-factor structure of the Feedback subscale

	Single-factor structure	Two-factor structure
$\chi 2$	360.32*	22.37*
SRMR	.11	.02
CFI	.74	.99
RMSEA	.33	.07
AIC	384.33	48.37

Note: * = p > .05

As Table 5.4 shows, the fit indices for the two-factor structure was comparatively better. As such, this study adopted the two-factor structure of feedback: FFO and FFJ, in accordance with the findings of past research (Morgeson & Humphrey, 2006) (Refer to Figure 5.7).

Figure 5.7. CFA model of the Feedback Subscale after post-hoc modifications

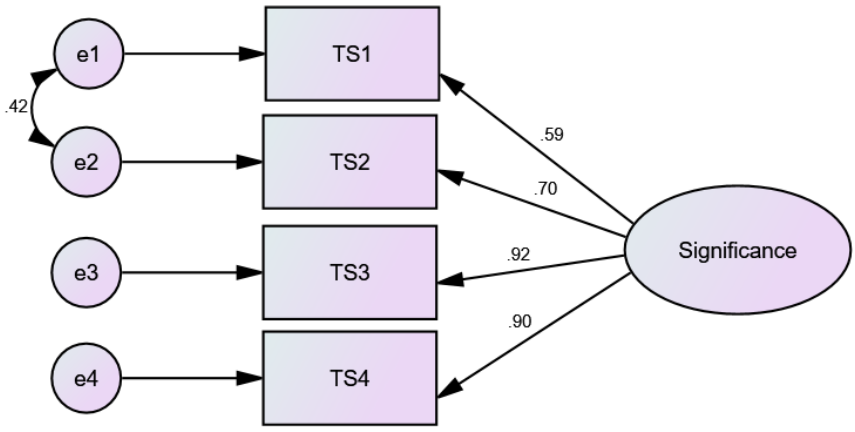


No post-hoc modifications were necessary to improve model fit. All items were retained with high factor loadings (>.8).

5.8.4. Step 4: Testing the one-factor structure of the Task Significance (TS) subscale using CFA

A single-factor structure was specified for the TS subscale according to the suggestion by Morgeson & Humphrey (2006) (Refer to Figure 5.8).

Figure 5.8. CFA model of the TS subscale after post-hoc modifications



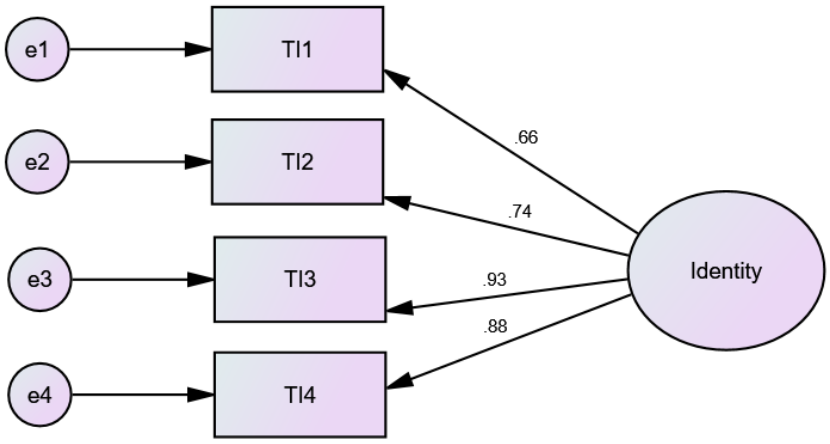
Based on the assessment criteria, the model was found to have a good fit, ($\chi 2$ (1) = 1.13, p > .05), SRMR = .00, CFI = 1.0, and RMSEA = .02 after post-hoc modification. As Figure 5.8 shows, the

factor loading for Item 1 was marginally acceptable (.59), while the factor loadings for the rest of the factors were well above acceptable-levels. As a result, all items in the TS were retained. Error terms for Items 1 and 2 were found to be correlated, possibly due to similarities in wording, with Item 1 measuring how work significant affects the lives of other people and Item 2 measuring how the job is significant and important in the broader scheme of things.

5.8.5. Step 5: Testing the one-factor structure of the Task Identity (TI) subscale using CFA

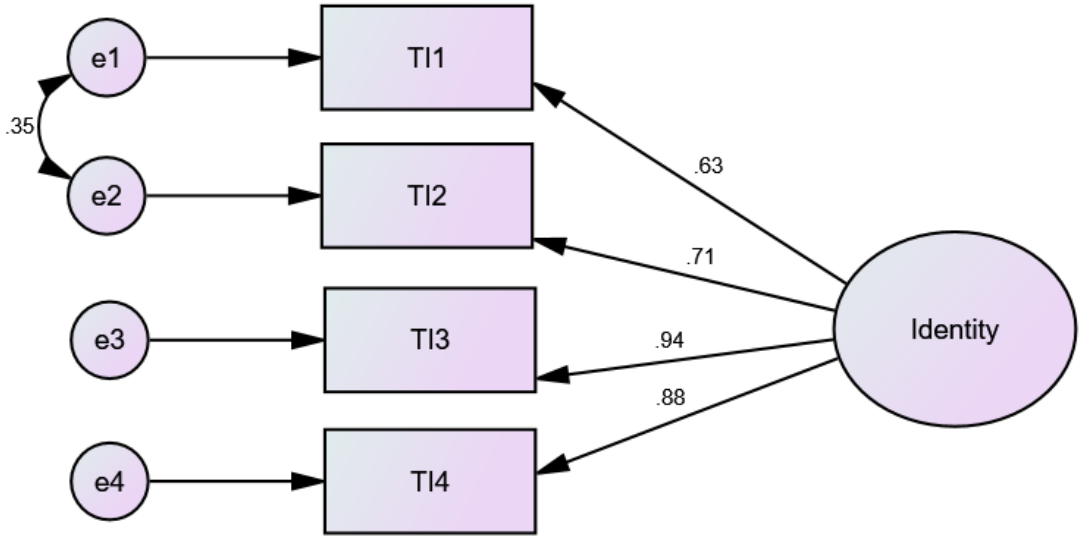
A one-factor model was specified for the TI subscale (Morgeson & Humphrey, 2006). (Refer to Figure 5.9 below)

Figure 5.9. CFA model of the TI subscale before post-hoc modifications



The initial model without post-hoc modifications was found to possess a bad fit: ($\chi 2$ (2) = 38.86, $p < .001$), SRMR = .04, CFI = .95, RMSEA = .23. As such, post-hoc modifications were necessary in order to improve the model fit through covarying the relevant error terms between items (Refer to Figure 5.10 below)

Figure 5.10. CFA model of the TI scale after post-hoc modifications

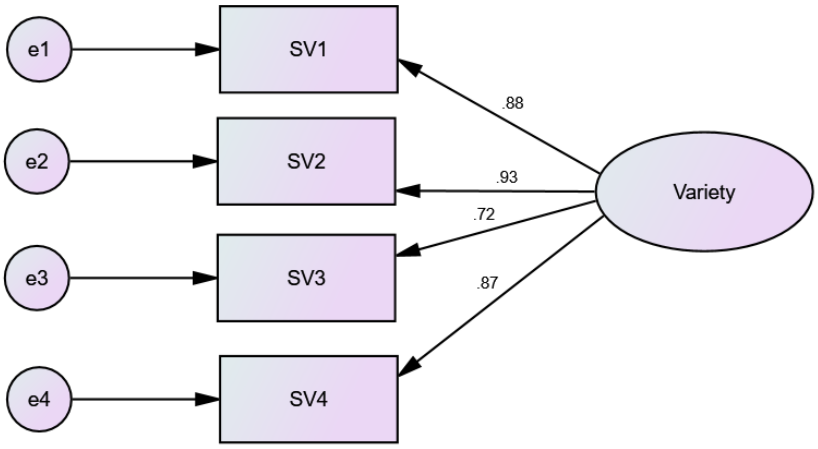


When error terms between Items 1 and 2 were covaried, the overall model was just-identified: (χ2 (1) = .000, p > .05), SRMR = .00, CFI = 1.00, RMSEA = .00, which indicates that the model cannot thus be found to be false (Kenny, 2014). Thus, while the TI scale was utilised in this study, its validity when applied to the Malaysian population is questionable at best. The implications of this will be discussed further in Chapter 7. All four items were retained with acceptable factor loadings (>.6).

5.8.6. Step 6: Testing the one-factor structure of the Skill Variety (SV) subscale using CFA

A one factor model was specified for the SV subscale (Morgeson & Humphrey, 2006).

Figure 5.11. CFA model of the SV subscale

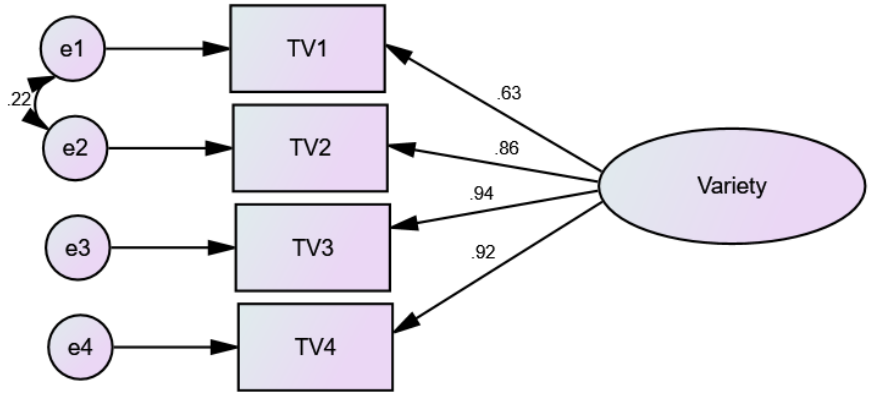


The model fit was found to good: ($\chi 2$ (2) = 6.18, p <.05), SRMR = .01, CFI = .99, and RMSEA = .07, with no post-hoc modifications necessary (Refer to Figure 5.11 above). All four items were retained with high factor loadings (>.70).

5.8.7. Step 7: Testing the one-factor structure of the Task Variety (TV) subscale using CFA

A one-factor structure was specified for the TV subscale (Morgeson & Humphrey, 2006).

Figure 5.12. CFA model of the TV scale after post-hoc modifications

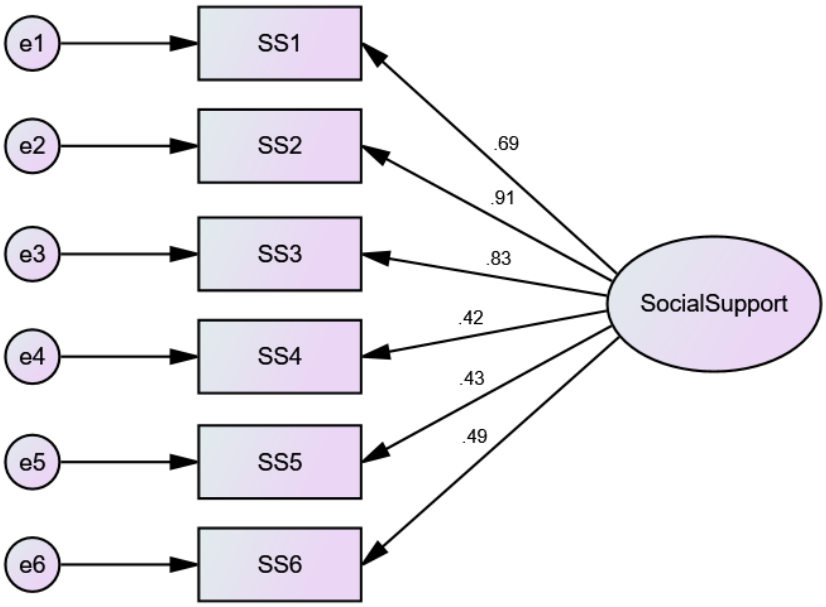


The model fit was found to be good: ($\chi 2$ (1) = 1.60, p > .05), SRMR = .00, CFI = .99, and RMSEA = .04. Error terms between Item 1 and 2 were covaried, possibly due to similarities in the items' focus, with Item 1 focusing on "a great deal of task variety" and Item 2 focusing on "doing a number of different things". All items were retained with acceptable factor loadings (>.60).

5.8.8. Step 8: Testing the one-factor structure of the Social Support (SS) subscale using CFA

A one-factor structure was specified for the SS subscale (Morgeson & Humphrey, 2006).

Figure 5.13 CFA model of the one-factor SS subscale



The model fit was found to be poor: ($\chi 2$ (9) = 109.28, $p < .001$), SRMR = .08, CFI = .87, and RMSEA = .17. Additionally, as Figure 5.13 shows, half of the items on the SS scale (Items 4-6) were found to have low factor loadings (<.40). This was despite the initial EFA and suggestions by Morgeson and Humphrey (2006) indicating a one-factor structure of for the SS scale of the WDQ.

Nonetheless, further analysis of the items in the SS subscale revealed that the items in question could be divided into two main categories: perceived social support, and received social support. Items 1 to 3 represented perceived social support (*I have the opportunity to develop close friendships in my job; I have the chance in my job to get to know other people; I have the opportunity to meet with others in my work*), where the items were phrased from a sense of possibility and opportunity, while Items 4-6 represented the second dimension of received social support (*My supervisor is concerned about the welfare of the people that work for him/her; People I work with take a personal interest in me; People I work with are friendly*), where items were phrased from an ex-post facto perspective of having already received care and concern

from others around them . The orientation of these items could have played a role in influencing how respondents reacted to the items, and it was deemed suitable by the researcher that separating these items into two latent factors could yield a better model fit. This is also supported by existing literature which suggests that there are distinct differences between SS that is received by an individual or merely perceived (Schwarzer & Leppin, 1991).

5.8.9. Step 9: Testing the two-factor structure of the Social Support subscale using CFA

A two-factor structure was specified, with the latent variables being *Perceived Social Support* and *Received Social Support*. Items 1 to 3 of the SS subscale were loaded onto the *Perceived SS* factor, while Items 4 to 6 were loaded onto the *Received SS* factor (Refer to Figure 5.14).

Figure 5.14 CFA model of the two-factor structure of the SS subscale



Model fit indices for the two-factor structure was better: ($\chi 2$ (8) = 37.34, $p < .001$), SRMR = .04, CFI = .96, RMSEA =.10. All items also loaded onto their respective factors with more

satisfactory factor loadings (>.59) compared to the single-factor structure. Based on these findings, a two-factor structure of social support was used for this study. The implications of this are discussed further in Chapter 9.

5.9. Shortened Utrecht Work Engagement Scale-9 items (SUWES-9)

The SUWES-9 is a shortened, nine-item measure of the original UWES-17, which was found to still possess high internal reliability and validity (Schaufeli, Bakker, & Salanova, 2006). The UWES-17 is a multidimensional scale designed by Schaufeli and Bakker (2003) to measure work engagement across three dimensions: *Vigour, Dedication, and Absorption*. Factor analyses of the UWES-17 reveals support for a three-factor model of work engagement as suggested by Schaufeli et al. (2006), with studies in Spain, Netherlands, and Portugal all showing similar results (Salanova, Schaufeli, Llorens, Pieró & Grau, 2000; Schaufeli et al., 2002a; Schaufeli, Martínez, Marques-Pinto, Salanova & Bakker, 2002b; Schaufeli, Taris & Van Rhenen, 2008). However, contradictory results have also been found, with Sonnentag (2003) finding that a single-factor model for the UWES was more suitable for a German-speaking sample.

The UWES-17 has been validated using the Malaysian population numerous times. Sulaiman and Zahoni (2016) validated the UWES-17 on a sample of Malaysian salespersons, and found a similar three-factor structure as suggested by Schaufeli & Bakker (2003), although with a reduced 14-item scale instead of the original 17-items. Additionally, the UWES-17 has also been validated on a population of white-collar employees of two Malaysian HEIs, where support was also found for a three-factor model of engagement (Ahmed, Abdul Majid, & Mohd Zin, 2016). However, this study is the first of its kind to validate the shortened version of the UWES (UWES-9) on a Malaysian academic population. Furthermore, unlike the study by Ahmed et al.

(2016), the sample for this study is recruited from a much wider range of Malaysian HEIs. Therefore, the findings of this validation study on the UWES-9 is expected to be more representative and generalizable to the Malaysian academic population.

5.9.1. Step 1: testing the initial factor structure of the SUWES-9 using EFA

An initial EFA was conducted to examine its factor structure and to determine if it significantly differs from the suggestion of Schaufeli et al. (2006). One factor with eigenvalues greater than one was extracted and accounted for 58.55% of the total variance. Factor loadings for all nine items ranged from .45 to .86. Items 1 and 9 were found to have low factor loadings (.45 and .53 respectively). These findings differ significantly from the three-factor structure suggested by Schaufeli et al. (2006). Consequently, a CFA was conducted to determine which factor-structure was more appropriate for use in this study.

5.9.2. Step 2: testing the one-factor structure vs. the three-factor structure of the SUWES-9 using CFA

The two models were compared using CFA; a single-factor structure as found in the EFA and a three-factor structure as suggested by Schaufeli et al. (2006). The respective fit indices for both models are shown in Table 5.5.

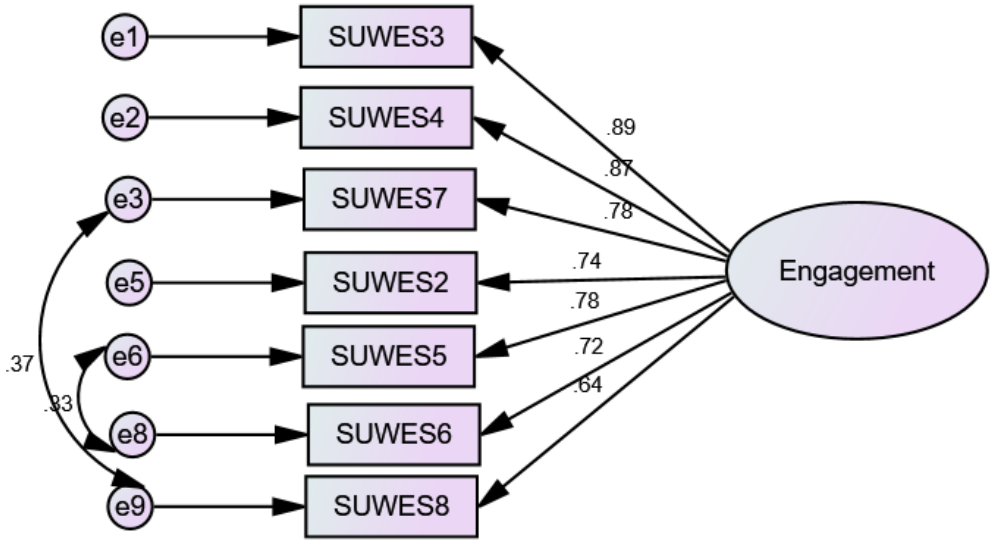
Table 5.5.
Comparison of fit indices between a one-factor and three-factor structure of the UWES-9

	Single-factor Model	Three-factor Model
$\chi 2$	40.19*	99.47*
SRMR	.03	.04
CFI	.98	.94
RMSEA	.08	.15
AIC	72.19	133.47

Note: * = p < .05

As Table 5.5 suggests, the fit indices for a single-factor structure is comparatively better than the indices for a three-factor structure. As such, the single-factor model of engagement was adopted for use in this study (Refer to Figure 5.15 below).

Figure 5.15 CFA model of the UWES-9 after post-hoc modifications



As Figure 5.15 shows, post-hoc modifications resulted in the dropping of two items (Item 1 and Item 9) from the overall model due to low factor loadings (<.60). Additionally, error terms for some of the items were covaried in order to improve model fit. The remaining seven items had suitable factor loadings (>.60). As such, work engagement scores used in the inferential analysis of the study only used the values from the seven retained items instead of all nine of the original items as suggested by Schaufeli et al (2006).

5.10. Chapter summary and conclusions

This chapter examines the validation analysis of each instrument used in this study. It was found that a majority of the instruments had valid factor structures as suggested by their authors. However, a few of the instruments required post-hoc modifications in order to better fit the current population. Major modifications to the factor-structure were required for some of the

scales such as the WAMI, the Autonomy and Social Supoort subscales of the WDQ, and the UWES-9 in order to be valid for use on the study's sample. The next chapter contains the findings and discussion of the qualitative study conducted to explore the work characteristics and meaning of the Malaysian academic.

Chapter 6: Investigating the work experience of Malaysian academics

6.1. Overview

This chapter investigates the work experience of Malaysian academics. It begins with a clarification of the researcher's background and perspectives, followed by a detailed profile of the respondents in this study. The coding cycles are then explained, followed by an elaboration of the individual themes found via the coding cycles. Then, a brief discussion of the findings and themes is presented, followed by a summary of the key points of this chapter.

6.2. Researcher's Background, Experiences, and Potential Biases

The author of this qualitative inquiry is a Malaysian Chinese male, currently pursuing a doctoral degree by research in the field of Industrial Organisational Psychology, and who has three years of experience as a member of the academic faculty in two private, Malaysian HEIs. The author is currently on a sabbatical in order to complete his Ph.D. dissertation, after which he intends to return to the field of academia. With regards to potential biases, the author's personal experience as a lecturer in a Malaysian HEI has led him to believe that there are certain issues faced by lecturers in Malaysia, such as work overload, time stresses, and lack of organisational support. Additionally, the author also believes based on his own personal experience that certain work characteristics are important in determining whether or not an academic experiences meaningfulness and engagement in their work, such as recognition, social support, and autonomy.

6.3. Profile of Respondents

In order to achieve a rich and thick description, a detailed profile of all respondents in this study is presented, so as to allow the reader to understand the range of characteristics that respondents in this study possess and to establish greater transferability of findings.

Respondent 1 (A.C.). A.C. is a 45 year-old, female, Malaysian lecture of ethnic Chinese descent. She is currently married, with three children, and has a Masters qualification in Economics. *A.C.* has been teaching in HEIs for the past 22 years, first in a small, private college in Selangor before it was bought over by a larger HEI, also based in Selangor. Throughout her entire academic career, *A.C.* has been lecturing primarily on the topic of Economics, teaching undergraduate students, and is currently serving as a member of the academic faculty in the American Degree Programme.

Respondent 2 (S). S is a 40 year-old, female, Malaysian lecture of ethnic Indian decent. She is currently single, and possesses a Masters qualification in Psychology. *S* worked for close to a decade as a social worker dealing with battered women, before making the transfer to the academic field in the past three years. *S* currently lectures in a large, private college in Selangor, teaching Psychology at the undergraduate level in the American Degree Programme.

Respondent 3 (Y.L.). Y.L. is a 34 year-old, female, Malaysian lecturer of ethnic Chinese descent. She is currently married, with one child, and possesses a Masters qualification in English and Applied Linguistics. *Y.L.* began her teaching career in a private high school in Kuala Lumpur, Malaysia, before making the change to academia when she transferred to a private HEI based in Subang Jaya, Selangor. *Y.L.* currently serves as a member of the academic faculty of a semi-private HEI based in Selangor, teaching English and Critical Thinking at the Foundation level as well as coordinating the Masters of International Trade programme.

Respondent 4 (L). L. is a 27 year-old, female, Malaysian lecturer of ethnic Chinese descent. She is currently single, and possesses a Bachelor's degree in Psychology. *L.* has taught Psychology for two years at the pre-university level to students enrolled in the Cambridge A-levels programme in a small, private college in Kuala Lumpur.

Respondent 5 (A). A is a 42 year-old, female, Malaysian lecturer of ethnic Indian descent. She is currently single, and possesses a Doctorate in Counselling as her highest academic qualification. *A* is a qualified counsellor who serves in the counselling clinic of a private HEI in Kuala Lumpur. Additionally, she has also been serving as a member of the academic faculty of the Psychology programme for the past decade, teaching counselling psychology modules to undergraduate students. *A.* is also the head of department of the Masters in Counselling programme, where she teaches, supervises, and trains post-graduate Masters students.

Respondent 6 (E). E is a 29 year-old, female, Malaysian lecturer of ethnic Indian-Eurasian descent. She is currently married, with no children, and possesses a Masters in Social Psychology as her highest academic qualification. *E* began her academic career as a graduate tutor for two years in a private HEI in Kuala Lumpur, before becoming a fully-fledged lecturer upon her graduation with her Masters degree. She is currently the head of department of the undergraduate Psychology programme in a private HEI in Selangor, where she teaches Social Psychology.

Respondent 7 (E.N.) E.N. is a 28 year-old, female, Malaysian lecturer of ethnic Chinese descent. She is currently married, with one child, and possesses a Masters in Clinical Psychology as her highest academic qualification. *E.N.* began her academic career as a graduate tutor for two years in a private HEI in Kuala Lumpur, before pursuing her Masters and returning to lecture in Psychology programme. She is also a qualified clinical psychologist. *E.N.* currently teaches at the undergraduate level, focusing on modules such as the Psychology of Eating.

Respondent 8 (C) C is a 53 year-old, female, Malaysian lecturer of ethnic Indian descent. She is currently married, with two children, and possesses a Masters in Analytical Chemistry, Masters in English, and a Ph.D. in Yoga Studies. *C* began her teaching career at the high-school

level in Singapore, before transferring to a Malaysian HEI based in Kula Lumpur, where she has been teaching for the last 25 years. *C* is also a trainer in diverse areas such as Public Speaking and Creative/Academic writing. Additionally, she also holds the rank of senior lecturer, teaching English and Chemistry to Foundation-level students.

Respondent 9 (C.Y.) C.Y. is a 35 year-old, male, Malaysian lecturer of ethnic Chinese descent. He is currently married, with one child, and possesses a Ph.D. in Physics as his highest academic qualification. *C.Y.* began his academic career in a private HEI in Kuala Lumpur, where he has been teaching for close to half a decade. *C.Y.* is also the head of the Science Department in his current organization, where he teaches Physics at the pre-university level to students in the Cambridge A-levels programme.

Respondent 10 (A.W.) A.W. is a 30 year-old, male, Malaysian lecturer of ethnic Chinese descent. He is currently single, and possesses a Masters in English Literature. *A.W.* has six years of experience lecturing in a private HEI based in Selangor, and currently holds the position of head of the English department. He teaches English Writing and English Literature at the undergraduate level in the American Degree Programme.

Respondent 11 (R) R is a 27 year-old, female, Malaysian lecturer of ethnic Chinese descent. She is currently single, and possesses a Bachelor's degree in English Literature. *R* currently serves as a junior lecturer in a private HEI in Kuala Lumpur. She primarily teaches English Literature at a pre-university level to students who are enrolled in the Cambridge A-levels programme.

Respondent 12 (T) T is a 28 year-old, male, Malaysian lecturer of ethnic Chinese descent. He is currently single, and possesses a Masters in Business Administration as his highest academic qualification. *T* worked for several years in a bank, before making the switch to

academia and serving in a private HEI in Kuala Lumpur. He has been teaching in his current organization for close to four years, and is the current acting head of the Business module for the pre-university, Cambridge A-levels programme, where he teaches pre-university students and coordinates the lecturing team.

Respondent 13 (Y) Y is a 36 year-old, male, Malaysian lecturer of ethnic Chinese descent. He is currently married, with two children, and possesses a Masters in Biblical Studies as his highest academic qualification. Prior to working in academia, *Y* worked for a few years as an IT consultant before moving to his current organization, a small private HEI in Kuala Lumpur, where he has been working for close to five years. *Y* is currently teaches students at the pre-university level and is also the head of the Divinity module for the Cambridge A-levels programme.

Respondent 14 (E.T.) E.T. is a 33 year-old, male, Malaysian lecturer of ethnic Chinese descent. He is currently single, and possesses a Ph.D. in Business Management as his highest academic qualification. *E.T.* has been working in the academic field since his graduation, where he teaches Business, Management, and Psychology modules at the undergraduate level. *E.T.* also teaches and supervisors students at the post-graduate level. Having served for more than six years, *E.T.* holds the rank of senior lecturer in his current organisation, a private HEI situated in Selangor.

Respondent 15 (A.M.) A.M. is a 58 year-old, female, Malaysian lecturer of ethnic Indian descent. She is currently married with two children, and possesses a Masters in English as her highest academic qualification. *A.M.* worked as an educator in the higher secondary level in Singapore for more than 20 years of her career, before making the switch to Malaysian

academia late in her career. She is currently serving as a part-time academic staff in a private HEI in Selangor, where she teaches English Language and Writing to undergraduate students.

6.4. First Cycle Coding

Descriptive Coding, which was used as the first cycle coding strategy, generated a total of 15 descriptive codes from the raw data. These codes were identified due to their recurrence in a majority of the participants' accounts of their work. The descriptive codes generated were: *Autonomy and Trust, Non-enjoyment of administrative duties, Non-academic Multitasking, Lack of time/Overwork, Skill Variety, Work Conditions, Tailored Organisational Support, Turnover Intentions, Role of Money, Social Support, Appreciation, Recognition, Perception of Impactful Work, Personal Meaning and Fulfilment, Personal Improvement and Development,* and *Personal Values and Beliefs* (refer to Table 6.1. for the list of codes and associated sample unit of meaning).

Table 6.1.
List of descriptive codes and sample units of meaning

Descriptive Code	Sample unit of meaning
Autonomy and Trust	"He gives me a lot of freedom for me on how I want to run my classes, control my students, as long as it's in line with a certain direction or policy of the college"
Non-enjoyment of administrative duties	"This is unfortunately part and parcel of the lecturing experience, part of the administrative stuff as well"
Non-academic multitasking	"Outside of teaching, what I do…is attend education fairs…occasionally we do counselling duties as well to help out the marketing department…it's not an official job scope, because I didn't know about this at all when I signed the contract…"
Lack of time/overwork	"Now I do believe that being a good lecturer, especially in a university level, requires research. But that doesn't mean we have the time to do it!"
Skill and Task Variety	"It's not really like you need to help them in regards to family matters, but it's just something that I'm passionate about as a person" "…there are kids who genuinely want to learn, want to know more, understand better, where they went wrong, and how to cope better…so it's our job….it's not a technical job scope, but it's part of nurturing the kids."

Work Conditions	"Improvement in terms of infrastructure, because some of it is just ridiculous…It is a hygiene factor…if there could be evidence that those things were thought about and taken care of without a fuss having to be made by the staff, then it will feel like a much more caring organization la"
Tailored Organisational support	"Because I think at the end of the day we want to be happy where we are, and especially at the workplace where we spend almost 10-12 hours here… so this group of people must be given all this additional support for the entire period"
Turnover intentions	"I want to [remain in academia]…But obviously eventually it will depend on opportunities and finances and circumstances and stuff like that la so it's really hard to say what will happen in the future but that's my…that's what I want to do."
Role of money	"…Ultimately….money can be made through various means….it's just a matter of what you're willing to do. But not every job can give you that sense of…."I put in a 24-hour day but it ultimately has a meaning to it."
Social support	"It's a very good work environment. I think we all tend to help each other when it comes to marking or…there's a lot of….uh…how do you say…we suffer together. Camaraderie…"
Appreciation	"They also put in the effort la, and at the end of the day when they tell you "thank you" then the sense of satisfaction is there la."
Recognition	"When you are teaching they are on the phones, and they are doing something else, they look bored. And that makes the time very very long… It makes me feel like I'm talking to the wall… well if they're not interested in what I have to say, so….why do I have to say it?"
Perception of impactful work	"Here, even though students might forget about you after they graduate, there will be things that you have said to them that will stick… at least you know that you have contributed towards the growth of multiple individuals, so when you go home…I feel like all that stress has some kind of worth to it."
Personal meaning and fulfilment	"I always say this…I've been teaching for more than 20 years, and when you are teaching something, and then the "lightbulb" goes off, that is what…again…that same word. That shows me that what I'm doing is along the right path, you know?"
Personal improvement and development	"So you see, they also teach me…it's a two-way thing you know, and it keeps it fresh." "The one thing I don't like though about my current work culture is the lack of personal developing opportunities"
Personal values and beliefs	"Why academia….Umm…I think it appeals most to my sense of being, does that make sense? It feels more like I'm investing in people's lives…"

6.5. Second Cycle Coding

In the Second Cycle Coding phase, the 16 initial codes were further analysed using *Focused Coding* and grouped into similar categories representing an overarching theme. Codes

that were found to be similar to each other were collapsed to form a single code. A total of 5 themes which were generated which were believed to encapsulate the essence of the Malaysian academic work experience. These themes are: Experienced Work Exhaustion, Organisational Variables on Academic Work, Academic Work Resources, Teaching as a Self-Actualiser, and Academics as Vocation (refer to Table 6.2.).

Table 6.2.
Themes and associated first-cycle codes

Themes	First Cycle Codes
Experienced Work Exhaustion	Non-enjoyment of administrative duties
	Non-academic multitasking
	Lack of time/overwork
Organisational Influence on Academic Work	Work Conditions
	Tailored Organisational support
Academic Work Resources	Autonomy/Trust
	Social support
	Appreciation
	Recognition
	Perception of Impactful Work
	Skill and Task Variety
Teaching as a Self-Actualiser	Personal meaning and fulfilment
	Personal improvement and development
Academics as Vocation	Personal values and beliefs
	Turnover intention
	Role of money

6.6. Themes

The five themes found in this study represented different aspects of the Malaysian academic work that were found to be salient to the respondents. These five themes are believed to encapsulate the essence of what work meant to Malaysian academics, including the challenges that they faced, the role of their organisations in affecting their experience of work, the various resources from which they drew motivation and meaning from, the role of teaching in their personal development and growth, as well as their personal values and beliefs held towards their

job. This subchapter will analyse these fives themes in more detail, and provide examples of statements by respondents that support the formulation of these themes.

6.6.1. Experienced Work Exhaustion

All respondents cited examples of experiencing feelings of tiredness and exhaustion in their work one way or another. An analysis of their accounts of workplace exhaustion found that they stemmed from three main sources, which the following subthemes highlight

Non-enjoyment of administrative duties. Some of the respondents' highlighted their displeasure regarding having to perform excessive administrative duties as part of their work responsibility. Highlighting their already heavy workload in relation to teaching and research, respondents also shared how their administrative duties represented work demands which they had insufficient resources to handle, and interfered with their primary role as academics.

> *All the admin things, all the other nonsense, it takes away from those types of things (research and teaching activities) and honestly, we are human, and if you're going to ask us to do the admin stuff, and on top of that, research, lecture….we teach what…3,4 classes per week?...Something has to give. - A.J.*

> *We are quite heavy in paperwork…a lot of things, paperwork that needs to be always done, and sometimes it interferes with your preparation for teaching. - A.W.*

> *Umm….to be honest, nothing in particular that I really hate, it's just that the procedures that we have to go through to get certain things done, that one is a bit troublesome…The fact that they want us to prepare reports after reports after reports… I think those paperwork can sometimes be a bit unnecessary… And I don't know whether they read it or not in the first place, so you know, asking us to do this additional stuff can sometimes be quite pointless. - T.*

Non-academic multitasking. Most of the respondents mentioned how they were also required to perform tasks that were deemed unrelated to their primary role as lecturers. These includes corporate or organisational duties such as marketing and attending education fairs in order to recruit new students and invigilation duties that were originally under the purview of the exams team. These additional duties often represented an additional burden to the respondents.

> *Every time I come back from (school marketing talks), I'm like "I think that's taken a chunk out of my day, I don't really want to do anything else"….it takes a lot out of me though….I think it channels our resources, and by resources I mean my time and energy away from things which we are supposed to do. – E.T.*
>
> *Sometimes I personally feel that having to invigilate is a sheer waste of time…It's very tedious, and to me that three hours could have been put to good use to something else…- C.*

These roles were also often not part of the official job description and were sometimes not made clear to the respondents prior to the commencement of their work.

> *It's not an official job scope, because I didn't know about this at all when I signed the contract, but this is what the institution requires. - L.*

Lack of time/Overwork. Majority of respondents provided accounts of the heavy workloads they were saddled with in their daily work. Some respondents detailed instances where they had to deal with hundreds of students by themselves. This was compounded by a reported lack of time within which to complete the work that they were assigned to, resulting in some respondents having to extend their working hours in order to complete their assigned tasks.

I got 200 scripts to mark you know…it sucks la… it really sucks…I think the volume…the sheer volume…so like one class has 200 people, times that by 3 classes, and doing all the marking… - E.N.

There's no way we can complete that kind of marking load during working hours, which means that weekends, evenings, are all taken up with completing marking…coz [sic] when we're on campus yes you can argue that we get 8 hours but those 8 hours are split between lectures, meetings, seeing students, so arguably, you may not even get an hour straight worth of time to mark… - E.

Additionally, respondents also shared feeling that they were required to do too much unnecessary work which may not be of much use to their work outcomes, but which are merely redundant organisational requirements such as record keeping and clerical work.

At the same time, I have a feeling that sometimes they make us do too much…I feel like there's something quite unnecessary you know? … The work that you do might be for nothing in the end. – A.W.

6.6.2. Organisational Influence on Academic Work

Additionally, it was clear from the responses of all the respondents that the organisation played a crucial role in influencing the experience of their work. Organisational influence came in two main ways:

Work Conditions. Respondents shared examples of how their work conditions influenced their overall work experience. Several respondents shared how their organisations failed to adequately provide them with facilities and work environments that were conducive to their work experience.

They do very very very [sic] little in terms of satisfying hygiene factors…like the basic things like a non-working air-conditioner…breathing in fumes, industrial cleaners….that's terrible. And I think the motivational fluff [sic] can only take you somewhere. –E.T.

Others recounted experiences where they were denied basic facilities and equipment that they requested in order to carry out their tasks.

It's a hygiene factor…if there could be evidence that those things were thought about and taken care of then it will feel like a much more caring organization. –E.

Respondents linked their physical work conditions to the level of care and respect that their organisations had towards them. When they perceived their work environment to be good, respondents also reported work to be more fun and exciting, while others who perceived bad work environments found it to be demotivating.

I feel the lecturers are not being respected in the workplace…when we ask them for stationery or paper…they are quite rude to us. And I saw my colleagues… when they request for lab items, they can submit the request a few months ago but they are told that they forgot to buy the items or that the request is too late, when it actually isn't. That's part of the environment that I don't like. –Y.L.

Well, we recently changed office and there was a break in the department where some of the department moved to a different office….I mean not a different office but a different physical location….so we have a new location, and it's quite exciting and it's quite fun because I'm enjoying the new location. –A.

Tailored Organisational Support. Accounts of instances where the organisation supported the respondents in their workplace were also shared. An example of organisational

support was T's account of when his company sent him for additional training, "*A simple thing such as they recognize that you have been teaching here and they want me to improve and they send me for training…simple things like that you know, make me feel like "Oh okay. They care actually."* Specifically, respondents emphasised the importance of training programme that was tailored to their needs as a lecturer to be of particular importance to them, which S. and E.T. highlights:

> *They make us go for all this professional development trainings, which most of the time I'm not interested in. it doesn't always relate to me, but when it does, it's really effective… So what they did was they developed this training programme for those that teach big classes… I see this as being very relevant and I use it and love it... But they send us for things like statistics or using something, and I'm just there to fulfil the training hours, so I think they're working on it, but I want something to be more individualized. –S.*
>
> *I think that fits in to the kind of idea of customized not just workload but customized and personalized development... So number one, getting the lecturers to think about doing more teaching or research, giving them that choice, and secondly then tailoring the resources to match with their choices or their portfolios. So I think that's a win-win situation. –E.T.*

Offering additional resources for external projects conducted by the respondents was another example of organisational support that was found to be important in motivating them to do more in their roles.

> *We're having another project where there are things going on, and I'm just asking in emails (about details and instructions) and they (the organization) can't even*

be bothered to answer…it's only when you're trying to do extra, that's the part which is negative…because I'm trying to do extra here and it's not appreciated, so why should I bother doing more? –A.

6.6.3. Academic Work Resources

There were several factors that were found to improve the work experience of the respondents. These variables were seen to be work resources, in that the respondents who perceived these variables also reported greater levels of work motivation and effort. Five main types of work resources were found in this study:

Autonomy and Trust. Responses analysed in this study found that autonomy and trust were found to be core characteristics in the positive work experience of the Malaysian academic. Respondents frequently linked the autonomy they had in their workplace with the level of trust that their organisations had in them. The freedom to dictate the terms of their own work was found to affect the respondents' work satisfaction, motivation, and even turnover intentions.

She's supportive…she doesn't actually micromanage what I do, okay. And as long as [I am able] to justify, she listens, she accepts…she is confident and she trusts us….sometimes we would like to change a little bit the internal assessment and stuff [sic], as long as we are able to justify why, then she's open to change, so it's much easier….like you said, the autonomy is there…- T.

I think it comes down to the element of trust…the fact that your boss trusts you with responsibility…and to me that's very affirming. –Y.

Fantastic. They give me that freedom…they give me a framework, and then tell me "Lecture within that framework". And what I want to do within that…I am given the freedom to go ahead with what I'm doing…It's really wonderful teaching here. –A.M.

> *[Autonomy] is literally a key part. If that changed, it would be one of the factors which would make me look for a different place or a different work environment because it is more than an integral part…it is a critical part. –A.J.*

Social Support. Another work resource reported by respondents in this study is the social support that they received in the workplace. Social support was found to stem from two types of relationships: relationships with peers and superiors, and relationships with students. Some respondents mentioned how the support that they received from their peers and superiors made it easier for them to cope with their job demands. Others shared how the relationship they built with students was one of their favourite parts of their job that kept them interested. For example, S, who faced difficulties due to her workload as the sole Psychology lecturer of her programme, mentioned how peers at work help her cope with the demands of the job:

> *It's very relaxed and happy…we all tend to help each other…we suffer together. Camaraderie…I think there's genuine concern for each other's welfare. It's not just sharing an office, we're genuinely concerned about what's going on in each other's life…Even if they can't physically do the work for us, there is that emotional support which I feel is very very important, which is what makes difficult jobs that we have easier. –S.*

Social Support can also come from superiors such as the case of A.W., "*I have a good relationship with my boss….that's one of the joys working here…because he and I have a good understanding."* and at times also from students as shared by C. and E.

> *I consider them as friends, so I'm not alone again. And some of them can be very very caring…above everything else, it's nice to be around these young people, knowing what they go through in life.* – C.

I love the student interaction, having conversations with students, especially those who have ideas and want to explore them. Those are my favourites, always been my favourite thing. -E.

Appreciation and Recognition. A sense of appreciation and recognition for the work that is done was also found to be integral to the academic work experience. Respondents perceived appreciation and recognition from two main sources – students, and the organisation. This could take several forms, such as students who expressed their thanks for their efforts in teaching them, or feedback from the organisation pertaining to the quality of their work.

They are willing to listen, they are willing to take in, they are willing to adapt. At the end of the day when they score and they come back and they said "Oh thank you for pushing us", then that is the sense of satisfaction. –T.

When they tell me things like "Miss you were very strict in class but I'm so glad you did…" so they are kind of grateful for whatever I imparted to them, so that makes me feel happy. –C.

To a certain extent, you've got external affirmation of the work and quality that is being done …to have her acknowledge and affirm the kind of work that we do, it is very fulfilling…it encourages me to want to do more, to want to achieve more. –Y.

However, when appreciation and recognition were found to be absent in the workplace, respondents perceived it as a lack of personal care and concern, which resulted in dissatisfaction in the workplace.

The company doesn't take care of us as well…There is no annual dinner, staff appreciation, no salary increment, no bonus… -Y.L.

Senior management really really sucks [sic]. They take their staff for granted…expect to squeeze the most out of you without providing resources…you want your workers' loyalty it's very easy…just treat them nice la! But they don't know how to treat people nicely. –E.N.

Perception of Impactful Work. Another job resource evident from the responses is the perception that respondents had towards their work as being impactful. Respondents shared how being able to make a difference in the lives of their students through their teaching helped them to perceive meaning in their jobs and kept them motivated in their work.

I find that the most enjoyable because after explaining all that in detail, they tell me "Now I understand you teacher!"…so that makes me very happy, when a student tells me that they have learnt something…I've been a change in their lives. –C.

I think the teaching element has been fulfilling and very meaningful for me because you go into class and you say something which makes sense to the ears of the students, and you see this little glint or shimmer in their eyes…that itself is fulfilling, because you're not just telling people information, you're empowering them, you're giving them knowledge…which will benefit themselves…and may also have a spill over effect in benefiting people around them, so that in itself gives me a lot of meaning. –E.T.

Skill and Task Variety. The ability to employ different skills and perform additional tasks to help their students learn was also highlighted as a key work resource. Some respondents recounted experiences where they went the extra mile to help their students learn, such as self-mastering and utilising new, computer-based teaching tools so they can improve their classroom experience, as C.Y. did.

> *For the time being I'm very interested in using Javascript for Physics simulation, to be able to prepare questions of moving objects in the Web and post it for my students, so I'm really interested and am currently researching and implementing a system where students can do things online…it's something extra that I feel will help students tremendously. –C.Y.*

Respondents frequently shared their willingness to perform these additional tasks, seeing it as an integral part of their job responsibility.

> *All this additional stuff is things that I'm doing because I think it will help…because as a lecturer I don't think it's just my job to go to class and tell them "This is what you need to know". I think I need to take it beyond that if they're going to actually benefit from the modules….I guess it's concern for the students and whether they're actually learning what they need to…and if there's any way I can try and ensure that every point they are getting access to quality information, then I feel like I'm doing right by them. –E.*

However, respondents also mentioned the negativity that was experienced when their efforts to introduce skill and task variety into their workplace was not met with adequate support from their organisation. One respondent in particular shared how the lack of support for his attempts to organise a field trip resulted in a decrease in his motivation to do something similar in the future.

> *There was one time when we actually want to organize a field trip, a factory visit, and the number of paperwork is just ridiculous…the process is really frustrating…it did happen, because we keep pushing. Definitely [demotivated me], because I know how much trouble you know…unless the kids are really really enthusiastic about it and they*

give us pressure, then only I will start doing it, but if not, chances are I might not just take the initiative to organize everything again. –T.

6.6.4. Teaching as a Self-Actualizer

Interestingly, a common theme across all respondents in this study was that their academic and teaching careers brought with it a sense of self-actualisation. Respondents in this study frequently mentioned the positive impact that teaching had on their own lives; by either imbuing them with a sense of purpose and meaning in life or pushing them towards continuous personal development and growth.

Personal meaning and fulfilment. A sense of personal meaning and fulfilment was found to be a key characteristic in the respondents' accounts of their work. Some of the respondents shared how teaching brought them a sense of reassurance of their identity and life's purpose. Respondents also highlighted the sense of fulfilment that they obtained through guiding and developing students.

I always say this…I've been teaching for more than 20 years, and when you are teaching something and then the "lightbulb" goes off…that shows me what I'm doing is along the right path you know? … It reinstates what I'm doing, that I'm doing something right. –A.M.

I think I'm at peace that I know this is where I'm supposed to be…what does education give me that money cannot…I think it's back to what we said about the love for teaching…when you walk into a class and then you see them light up, smile, get what you wanted them to get, that is very rewarding. So I can't describe for you but that's how I feel, and semester after semester, that's the motivation. –A.C.

To actually speak with students, somewhat impressionable, somewhat younger…they're at the start of their lives, and they might not necessarily have gotten the direction or the kind of guidance which they would have needed in the early stages of their life…I find that to be a little bit more fulfilling, a little bit more meaningful. –E.T.

Personal development and growth. Contributing to the sense of self-actualisation is the experience of continuous personal development and growth in the academic workplace. This was found to come from two sources – from students and from the organisation. Respondents' accounts of how they were challenged in their workplace by their students frequently mentioned how it motivated them and gave them a chance to improve and learn. Additionally, the chance to develop as an academic and explore new initiatives that was provided for by the organisation was also found to be important to the overall work experience.

Every batch of students, every semester, I see new types of excitement, or even they bring new things into my class. They will go and read up somewhere and say "Ms. S, you know there's something like this." And I'm like "Really? I didn't know about it." Then I'll go and I'll look it up and I'm like "Ah! Right!" So you see, they also teach me…it's a two-way thing you know, and it keeps it fresh. –S.*

I know I take it for granted that I know something sometimes, and then somebody asks me a question that kind of throws me for a loop. And I'm forced to re-evaluate how I look something and then realise there's a better way to look at it, so it's definitely not a one-way process. –E.

I think ultimately, each individual must find that they are growing and learning new things, being given opportunities to come up with their own ideas...I sincerely

believe, especially more so in an education institute…we should be experts in human growth potential, capacity building, even among our staff. –Y.

Conversely, respondents who perceived a lack of growth opportunities were unhappier with their jobs, and were less committed to their organisations.

I always feel that there is no room for personal improvement for me in this place. No training given to us here as well. There aren't many people who are more experienced to come and share their experiences with us. Like I can't see a future. –Y.L.

The one thing I don't like thought about my current work culture is the lack of development opportunities…one missing voice is or one missing sort of component is that no one ever comes up to me and says "E., what do you want to do? How can we help you be the kind of lecturer/academic/researcher/consultant that you want to be?" because people's career goals are different… so my ideals and my career goals or the kind of academic I want to be gets "lost in the crowd" so to speak. –E.T.

6.6.5. Academics as Vocation

A combination of several sub-themes that emerged from this study suggests that respondents viewed their jobs from a vocation perspective rather than merely a means of sustaining themselves. This is synthesised from the responses regarding the personal values and beliefs held by respondents towards academic work, the respondents' reported turnover intentions, as well as the role that money played in the overall experience of their work.

Personal Values and Beliefs. In responding to the question of why they chose academia as a career pathway, a majority of respondents expressed a belief that they were called to it. Some respondents highlighted the individual-career fit; the fit between their individual values and beliefs and the academic career the main reason for why they chose it. Personal views

towards the importance and impact of academia was also one of the more common reasons mentioned by respondents for choosing academia as a career pathway.

I think for me it was more a matter of my calling in life. I think that's a…even when I was in college you know, I just kind of like fitted into it… And I had some of my American professors telling me that I belong in academia teaching because you have the penchant for it they said… so that kind of spurred me to really do what I want to do, and then I also love the ability to interact with people….a people person, engaging with lives, and being able to counsel…that's something that I've felt since I was young anyway. –A.W.

Why academia….Umm…I think it appeals most to my sense of being, does that make sense? It feels more like I'm investing in people's lives. –E.N.

What drives me is a sense that education isn't something that we sort of…..go into unless we're concerned for the students that we're shaping. And whether we like it or not, what we do will in some way influence them so I feel like I need to be my best self if I'm going to help them… I can't be in education and just do it as a job, because it isn't la…it is people's lives. –E.

[I am in academia] Because I enjoy lecturing. That's the answer. I enjoy lecturing and like I said earlier, there's only so much I can do as one person. But when you're an academic… It's like I make one lecture and I change 30 minds…and I'm changing 30 minds of people who are capable of doing work…who are going to be doing work in the future. It's not like I'm changing minds of people who don't matter. I'm changing mind of people who are going into the industry. –A.

Turnover Intention. Another key indicator that suggests academics viewed their jobs as a vocation is their perspective towards leaving academia or retiring. When questioned on their career plans for the foreseeable future, a majority of respondents were unequivocal in their intentions to stay in academia.

> *Yeah [I plan to remain in academia]! For the rest of my life…if there was no age limit, I think I will do this job for as long as I can. –A.C.*

> *No! Not at all! No retirement! I enjoy every moment that I'm lecturing. And why would I want to stop something that I have a passion for? –A.M.*

Academia was found to provide a sense of identity for some of the respondents, which contributed to them having low levels of turnover intention.

> *Sometimes I don't understand when people tell me that they have to retire to enjoy life…For some people, enjoying life means going on trips, but that's something I can still do while being on this job…but I realise that after that, you still need to come back to where you belong, and when you don't do what you do every day, I just feel a sense of being lost. –C.*

Role of Money. Respondents shared examples of the diminished role that money played in their experience of academic work. They noted that while an academic career did not pay much compared to corporate roles, it provided them with a sense of fulfilment and meaning that money could not bring, which they found to be a worthwhile trade-off.

> *I can't say (money) is not important….sometimes you do ask yourself if you could be earning much better if you work in a bank or something…but eventually when I re-evaluate my own values and priorities I look back and say "No, I don't think I could do a*

better job than this."…Walking into a class and then seeing your students' faces lighting up when they get what you are saying…I think money can't buy that. –A.C.

Ultimately…money can be made through various means….it's just a matter of what you're willing to do. But not every job can give you that sense of "I put in a 24-hour day but it ultimately has a meaning to it." I mean, the "aha" moment with students is probably one of the best feelings in the world. Or even when they come and ask you a question that you didn't think they would think of…the feeling that comes from that can make your day. –E.

[It's] more fulfilling, more rewarding, and yeah it doesn't pay much, you won't be making big bucks like your CEOs and managers…I guess another trade-off is because of the autonomy…it's generally less stressful, and I find that because this job fits my ideals, my kinds of values, it has less of an ego-depletion effect on me than it otherwise would. –E.T.

6.7. Discussion of findings

This study provides a voice to the Malaysian academic population, a key demographic that is at the centre of Malaysia's plans for future development into an internationally-renowned hub of education (MOHE, 2015), yet is also one which has been found to experience significant increases in workplace issues due to rapidly rising numbers (Sohail et al., 2003; Knight & Sirat, 2011). The lived experiences expressed by the respondents affirmed many of the problems mentioned in the literature regarding the academic workplace (Arokiasamy et al., 2011; Hong & Songan, 2011; Aslan et al., 2014). It also sheds light on the essence of what it means to be an academic in Malaysia, including the motivators and drivers in their work. These narratives as told by the respondents extends the current understanding regarding Malaysian academia,

analyses the impact of the expansion that the Malaysian academic sector is currently experiencing, and re-emphasises the need for additional research and resources to be directed to this sector in order to help it cope with the increasing struggles it currently faces.

6.7.1. The exhaustion of the Malaysian academic

One critical finding of this research is the experienced work exhaustion of the Malaysian academic. Previous findings have highlighted similar issues regarding the overwork of academics in the Malaysian higher education sector (Arokiasamy et al., 2011; Aslan et al., 2014). However, this study further fleshes out what exactly are the issues that contribute towards the overwork and exhaustion of Malaysian academics. As can be seen from the quotes of the respondents, the rising number of students enrolled in Malaysian HEIs is not commensurate with an increase in resources provided to Malaysian academics in order to cope with it, with the increase in work demands far outstripping the providence of work resources. Additionally, the requirement for Malaysian academics to perform administrative duties on top of their already heavy academic workloads further exacerbates the problem of overwork.

The findings of this study also further illustrate the legacy issues that still affect Malaysian academics to this day. As the literature highlights, the economic crisis that hit Malaysia in 1997 resulted in a drastic cut in funding for the education sector as a whole, which resulted in a higher education sector that was underfunded (Mok, 2011, Else, 2016). In response, Malaysian HEIs initiated cost-cutting strategies such as cutting staff numbers and requiring those remaining to take on multiple roles (Sohail et al. 2006). Unfortunately, what began as a cost-cutting strategy to keep the sector afloat now threatens to be a key obstacle to pushing the industry forward, and contributes to the endemic problem of work exhaustion faced by Malaysian academics. As respondents in this study shared, academics in Malaysia are still very

much required to perform non-academic multi-tasking such as marketing duties and clerical work, a legacy characteristic that harks back to the dark period of the Asian Financial Crisis of 1997. While it is undeniable that those strategies helped to keep Malaysia HEIs solvent and operational, the financial context of the modern day Malaysian HEI is markedly different, with recent numbers indicating a thriving growth in numbers of both students and HEIs (Tierney & Sirat, 2008; Grapragasem et al., 2014). Thus, these cost-cutting policies are no longer as essential to the economic survival of HEIs. Furthermore, the exponential increase in student numbers (see: Economic Planning Unit, 2010) since the economic crisis makes the requirement for non-academic multitasking simply untenable for academic staff today; with their increased academic workloads and added pressure to remain competitive in this region (see: Lim, 2010; Hong & Songan, 2011), Malaysian academics simply do not have the time nor the resources to cope with the additional stresses brought about by organisational cost-cutting strategies. The shared experiences of this study sounds the alarm that the system is creaking under the weight of overwork, and urgent changes are required if the academic sector in Malaysia is to develop further. A further discussion of the implications of this can be found in Chapter 9.

6.7.2. The call to academia

Another critical finding of this study was with regards to the views that respondents had towards their work. When asked why they chose academia as a career path, respondents mostly put it down to a sense of vocation and being called towards academia, of working for something that is greater than themselves – “I think the teaching element has been fulfilling and very meaningful for me…you’re empowering them…giving them knowledge which will benefit themselves and may also have a spillover effect in benefiting other people.” With regards to calling, there were two main perspectives reported by respondents in this study – a general sense

of identification with their role as an academic "I think I'm at peace that I know this is where I'm supposed to be", and a religious perspective – "My sense of purpose comes from God's calling upon my life and for now I can see how teaching…is just somewhere I want to be in".

The ubiquity of these perspectives gleaned from the responses provided in this study suggests that calling and a sense of vocation is a significant portion of what it means to be an academic, and this is well supported by previous research on academic motivations. As Bitzer and de Jager (2016) found, a study on accountants holding dual-roles as chartered accountants and lecturers found that they were more likely to consider their vocation and professional identity as lecturers rather than professional chartered accountants, supporting the saliency of the vocational perspective in academia. Indeed, the documentation of the experiences of luminaries such as Nietzche indicated that a sense of calling is inherent in the academic profession (Beland, 2013). A study on Australian academics found that up to 72% considered their role as an academic to be a vocation (Bellamy, Morley, & Watty, 2003). Kotze and Gravett (2013) suggests that this is shaped primarily by the relationships that academics have with their students, which is conducive towards the development of a vocational perspective towards academic work. Research also supports the religious perspective towards academic calling as mentioned by the respondents in this study (Buijs, 2005). Studies conducted on academics who identified as religious found that God and religion is a major factor in influencing their sense of calling to academia (Hall, 2004; Oates et al., 2005).

One possible reason for a sense of calling being linked to academic work is due to its nature. The academic work is unique in its focus on both knowledge creation and dissemination, and it is this focus on intellectual work that characterises it as a vocation (Said, 1994, as cited in Dawson, 2001). Furthermore, research on the modern definition of calling includes perceiving a

sense of purpose as well as the desire and ability to be helpful (Wrzesniewski et al., 1997; Hall & Chandler, 2005). As seen from the findings, these two factors are evident in the experiences of academics – "All this additional stuff is things that I'm doing because I think it will help…it's concern for the students and whether they're actually learning what they need to" – possibly explaining why they perceived academia to be a vocation that they were called to rather than just an ordinary profession.

6.7.3. The role of the HEI in the academic workplace

The results revealed in this study also highlights the important role that HEIs have in influencing the work experience for academics. Respondents shared various instances where the interaction with their work environment was either conducive to their work or demotivated them from working, and embedded within their responses regarding their work conditions was their perception of how much their organisation cares for and respects them. These findings reflect the theoretical postulations of the Two-Factor Theory (Herzberg, 1959), where the lack of proper hygiene factors in a workplace was found to lead to dissatisfaction and demotivation among workers. Furthermore, the negative responses from participants who experienced bad working conditions is also supported by the findings of Tan and Waheed (2011), who emphasised the importance of work hygiene factors in maintaining motivation levels among workers of an organisation. As an analysis of workplace design by the Stoddart Review (2016) suggests, the proper designing of a work environment is intricately linked to satisfaction levels and performance, and Malaysian HEIs would be well-advised to heed these responses from their academic staff if they intend to remain relevant as an institution in an increasingly competitive sector.

Of considerably more importance however, is the emphasis of respondents in this study regarding the providing of organisational support in their workplace. As the selected quotations demonstrate, a majority of respondents in this study shared how they felt it was important that the organisations they served provided support that was specific to their needs and demands. Their relatively muted enthusiasm levels when they perceived their organisation to simply be providing general support for the sake of fulfilling organisational obligations is also illuminative – "They're just going through the motions of having training for the sake of training".

While past research has highlighted the importance of providing organisational support, particularly for teachers (Rothmann & Jordaaan, 2006; Gillespie et al., 2013), the responses in this study shows a difference between generalised organisational support and organisational support that is tailored specifically towards the academic. As previously mentioned, the themes in this study demonstrate that respondents viewed their work as a calling, characterised by their quest for personal and professional purpose and development. They thus expected organisational support in their workplace to be related to the identity that they were seeking to build – "How can we help you be the kind of academic that you want to be?" As a previous finding by Baldwin and Blackburn (1981) suggests, the key characteristic of an effective organisational support programme for academics is a deep understanding of the academic's motivations, talents, and proficiencies. In other words, a "one-size-fits-all" method of organisational support and development programmes is not particularly effective when it comes to academics.

These findings highlight the importance for HEIs to understand that organisational support needs to go beyond just helping their staff achieve the organisation's objectives, but also helping them achieve their own individual objectives for personal development, which may vary from individual to individual. Academics themselves do not represent a uniform population, with

research suggesting clear distinctions between professional interests and goals among academics of different ages and career stages (Klapper, 1969; Fulton & Trow, 1974). It suggests that HEIs need to rethink their role as human-capital developers, embracing the idea that aside from developing graduates as suggested by research (Barro, 2001; Wawire & Nafukho, 2006), human capital development extended to the development of their academic staff as well, as suggested by one of the respondents in this study – "In an education institute…we should be experts in human growth potential, capacity building, even among our staff."

Additionally, the findings suggesting academia as a calling and a lifelong journey of continuous improvement further reinforces the importance of HEIs providing tailored support to their academic staff to encourage them along in their development. As suggested by Hansen (1997), individuals who viewed their work as a calling frequently assessed their careers as a quest for professional and personal development – the development of the "whole person". Consequently, HEIs that fail to pivot towards an academic-identity-building form of organisational support for their academic staff will invariably leave the development needs of their academic staff unmet, and may find themselves losing their academic talent to other rivals.

6.7.4. Academic work resources: designing an effective academic workplace

The respondents' accounts of the parts of their work that they enjoyed the most offers a glimpse into what academics consider as integral to their workplace. One of the most enjoyable aspects of work that all respondents mutually agreed on was the sense of autonomy. This included the freedom to devise and employ new methods of teaching or decide upon their own directions of research, suggesting that autonomy in the academic workplace is closely linked to other work design characteristics such as skill and task variety. The importance of autonomy as a workplace resource is well supported by research (Carr & Melizo, 2013; Littman-Ovadia et al.,

2013). Respondents frequently linked the level of autonomy they enjoyed with the level of trust they perceived their organisation to have towards them, similar to the extant literature (Kenny et al., 2010). The ability to plan, organise, and execute their classes or research projects and the satisfaction respondents gained from it is reflective of the importance of work method autonomy, which is also supported by literature (Sekhar, 2011).

The positive role of social support in the academic workplace was also found to be ubiquitous in the respondents' accounts. The lived experiences of respondents is filled with accounts of how social support from their peers, superiors, or students made their work more bearable, suggesting that social support could be an effective coping mechanism for Malaysian academics in general, which is particularly important given the current stressful context that the sector finds itself in. The role of social support in alleviating job stresses and improving job outcomes is also supported by literature, with Wrzesniewski et al. (1997) finding that meaningful interpersonal relationships was a key contributor to workplace wellbeing.

The recognition and appreciation that respondents obtained as a result of their service was also reported to be one of the more enjoyable aspects of their work. When asked about their most memorable experiences, a majority of respondents' accounts mentioned instances when their students thanked them for their teaching, or attributed their success to their efforts. This type of feedback serves as a sense of social recognition, and has been found to be a positive contributor to workplace wellbeing (Matthauer & Imhoff, 2006; Hviid et al., 2012).

However, perhaps the most salient of the work resources evident from the accounts of respondents in this study is their perception of the impact that their work had. All of the respondents in this study shared how being able to perceive the change in their students as the key motivator that kept them going. The importance of impactful work is highlighted by

Wingerden and van der Stoep (2017), who found that workers who were able to perceive the impact that their work had on others had lower levels of burnout and higher levels of workplace well-being. This is magnified in individuals who possess a sense of calling in the workplace, as they are primarily driven by the belief that their work should impact society in some way (Bellah, et al., 2007), possibly explaining why respondents in this study placed such an emphasis on it.

6.8. Chapter summary and conclusions

This chapter began with a qualitative data validation through a self-examination of the researcher's experience and biases, followed by a detailed description of the respondents in this study. Subsequently, the coding cycles and their associated codes were elucidated, followed by a presentation of the themes found in this study. This chapter ends with a brief discussion of the themes that were found in this study and what they mean to work experience of Malaysian academics. The next chapter will discuss the findings of subsequent follow-up study that was conducted to explore the relationship between the work factors present in the Malaysian academic workplace and their relationship with job psychological meaningfulness and burnout.

Chapter 7: Investigating the relationship between workplace factors, job psychological meaningfulness, and burnout

7.1. Chapter Overview

This chapter details the follow-up study that was conducted after the initial qualitative study. The initial qualitative study (as examined in Chapter 6) explored the workplace factors of Malaysian academics. This chapter will examine the relationship between the reported workplace factors that were found in that study and job psychological meaningfulness as well as burnout. It begins with a brief description of the variables being studied and the instruments used to measure them. Then, a descriptive analysis is provided, followed by validity checks to ensure that the data was not biased and regression assumption tests to determine if the data was suitable for a regression analysis. This is followed by inferential analyses examining the relationships between the variables studied. Finally, a brief discussion of the findings is presented, followed by a summary of the key points of this chapter.

7.2. Variables analysed in this study and their corresponding instruments

As this study is a follow-up study in a sequential exploratory design, the variables in this study is derived from the findings of the previous qualitative study to determine if they are generalisable to the general population, a key characteristic of a sequential exploratory design (Creswell et al., 2003). This subsection analyses the variables that are analysed in this study, along with the corresponding instrument used to measure them. The details about the instruments used are explained in Chapter 5.

JCM Variables. As Chapter 9 will discuss, a qualitative analysis of the work experience of Malaysian academics shows that the variables of the JCM are important factors that influence how Malaysian academics view their job. As such, the five factors of the JCM will also be

measured in this study, using six subscales of the WDQ, which are the Autonomy, Task Identity, Task Significance, Skill Variety, Feedback From Others, and Feedback From Job subscales.

Perception towards work. One of the variables that was found to contribute to the work experience of Malaysian academics was their perception of the work they do as personally meaningful to them. Respondents found meaning in the impact that they felt their work had on the lives of others and how it contributed to a better sense of understanding of themselves. This perception of personally meaningful work was measured in this study using the Work and Meaning Inventory (WAMI).

Task variety. Another academic workplace variable found in the qualitative analysis is the degree to which respondents performed different tasks for their students. It was found that respondents drew meaning and satisfaction from being able to do different things in their academic careers for the benefit of both themselves and their students. This variable was measured using the Task Variety subscale of the WDQ.

Congruence with personal values. Another factor tested in this study that was found in the qualitative analysis is congruence with personal values. Respondents in the qualitative study mentioned how their personal values and beliefs that they held towards education shaped their work experience and what it meant to them. This variable is tested using the Index of Autonomous Functioning (IAF) authorship/self-congruence subscale.

Organisational support. Organisational support was found to be a significant contributing factor to the work experience of Malaysian academics. In their responses, academics frequently mentioned how organisational support was integral to them being more satisfied and willing to work. In this study, organisational support was measured using the Survey of Perceived Organisational Support 8-item questionnaire.

Social support. Respondents also mentioned social support as a key variable in the work experience of Malaysian academics. The presence of social support was found to help them cope with the demands and stresses of their work. This study measures social support using the WDQ Social Support subscale.

Burnout. Burnout was found to also be a key characteristic found in the Malaysian academic workplace during the qualitative analysis. Respondents often mentioned how their heavy workloads led to a sense of tiredness and exhaustion in their work. In this study, burnout is measured using the Copenhagen Burnout Inventory's Work-related subscale.

Job psychological meaningfulness. Several factors in the Malaysian academic workplace were found to contribute towards an increased sense of meaningfulness in the job. This sense of meaningfulness is measured in this study using the Job Psychological Meaningfulness Scale.

7.3. Descriptive analysis

Descriptive statistics for the measured dimensions of workplace factors for Malaysian academics is shown in Table 7.1. To determine normality, scores for all variables had to fall within the range of (< 2) for Skewness and (< 7) Kurtosis, as suggested by Kim (2013) for samples that are larger than 300 cases. Since the sample size for this study is 350, these parameters for normality were adopted. All variables were found to have a normal distribution curve based on these cut-off points, as there were no Skewness values that were (> 2) and no Kurtosis values that were (< 7).

The five variables of the JCM (Autonomy, TS, TI, SV, FFO and FFJ) were found to be significantly correlated with job psychological meaningfulness (JPM) indicating a possible linear relationship between the variables and JPM, which is key in a multiple regression analysis (Field,

2017). The five variables of the JCM were also found to have no high correlations ($r > .80$) with each other, indicating that the risk of multicollinearity is low. Additionally, the other variables (WAMI, SV, and IAF) that were hypothesised to be predictors of job psychological meaningfulness based on the findings of the qualitative analysis were also found to significantly correlated with JPM, indicating a possible linear relationship. These variables also did not correlate highly with each other ($r < .80$), indicating that multicollinearity is not likely to be an issue. Furthermore, burnout was also found to have a significant correlation with its hypothesised predictor variables (SPOS, WAMI, Autonomy, SS (perceived), SS (received), FFO, and FFJ), also indicating a possible linear relationship between the variables. All of these predictor variables were also found to have correlations of less than .80 with each other, indicating that multicollinearity is not likely to be an issue in the regression analysis.

Table 7.1
Descriptive and correlational statistics of workplace variables

Variable	M.	S.D.	Skew	K.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Burnout	40.52	20.37	.37	.10	-													
2. Job Psychological Meaningfulness	4.17	.63	-.89	2.69	-.29*	-												
3. Organisational Support (SPOS)	4.40	1.16	-.16	.04	-.35*	.25*	-											
4. Perception towards work (WAMI)	4.07	.54	-.43	.71	-.36*	.68*	.25*	-										
5. Congruence with personal values (IAF)	3.79	.64	-.77	1.72	-.21*	.38*	.08	.48*	-									
6. Autonomy	8.73	1.61	-.71	1.10	-.36*	.38*	.27*	.41*	.29*	-								
7. Task Significance	3.96	.65	-.79	2.07	-.16*	.52*	.21*	.57*	.33*	.41*	-							
8. Task Identity	3.80	.68	-.84	1.60	-.24*	.39*	.15*	.41*	.37*	.43*	.42*	-						
9. Feedback From Job	3.72	.69	-.84	.96	-.23*	.39*	.29*	.39*	.30*	.46*	.44*	.61*	-					
10. Feedback From Others	3.46	.78	-.68	.50	-.15*	.22*	.40*	.32*	.19*	.29*	.30*	.39*	.58*	-				
11. Skill Variety	4.18	.64	-1.01	2.68	.03	.36*	.05	.31*	.19*	.18*	.44*	.20*	.23*	.17*	-			

12. Task Variety	4.08	.66	-.84	1.73	.11*	.20*	.09	.17*	.07	.17*	.35*	.10*	.15*	.19*	.55*	-	
13. Perceived Social Support	4.07	.68	-.85	1.51	-.19*	.47*	.17*	.44*	.31*	.25*	.36*	.33*	.39*	.39*	.41*	.20*	-
14. Received Social Support	3.63	.66	-.68	1.60	-.21*	.28*	.38*	.35*	.24*	.33*	.29*	.23*	.37*	.50*	.32*	.09	.51*	-

Note: N= 350; * = p < .05; M = Mean; S.D. = Standard Deviation; K=Kurtosis

7.4. Validity and assumption checks

In order to ensure the validity of the findings, several statistical checks were conducted. Among them were the common method bias check, casewise diagnostics, as well as the various assumptions tests for a multiple regression analysis to ensure that the data obtained was suitable for a multiple regression.

7.4.1. Common method bias

Common method bias is defined as a bias that occurs due to the instruments used in the study, particularly when both independent and dependent variables are measured at the same time (Podsakoff et al., 2003). Common method bias affects the validity of a study's findings because the variance measured in the results may be attributable to the instrument used rather than reflective of any true variance from the participants themselves. Research suggests several methods to detect the possibility of common method bias, one of which is to use an exploratory factor analysis (Podsakoff et al., 2003). In this method, Podsakoff et al. (2003) suggests that all variables be loaded onto one factor to determine if it accounts for more than 50% of the variance in the data, which indicates the possibility of common method bias. This is also known as the Harman single-factor test (Podsakoff et al., 2003).

In this study, data for both the independent and dependent variables were collected from participants via the use of a single questionnaire, thus introducing the possibility of common method bias. As such, to test for the possibility of common method bias, a Harman one-factor test was conducted using SPSS where all items were loaded onto a single factor without rotation to determine if that single factor would account for more than 50% of the total variance in the data, signifying a common method bias (Podsakoff et al., 2003). One factor with an eigenvalue of 19.08 was extracted, which accounted for 28.24% of the variance in the data. As the variance

accounted for by that single factor was below the threshold of 50% suggested by Podsakoff et al. (2003), it was determined that common method bias does not pose a threat to the validity of the data. As such, no remedial actions were required.

7.4.2. Casewise Diagnostics

In a regression analysis, the presence of outliers can threaten the validity of the regression model itself (Muijs, 2004). An outlier has the potential to significantly affect the model as it exerts an undue amount of influence and biases the estimated regression coefficient (Field, 2017). Thus, prior to a regression analysis, research suggests the conducting of an a priori diagnosis of the data in order to determine if there are any cases that might inadvertently affect the overall validity of the model (Field, 2017). This is also referred to as casewise diagnostics – an analysis of every single case to determine if it falls within the normal parameters, and can be done via the SPSS programme (Muijs, 2004). Additionally, Cook's Distance (D) was also used to determine if any cases were outliers, as it is the most commonly used estimate in a least-squares regression analysis (Mendenhall, & Sincich, 1996). According to Cook and Weisberg (1982), any case with a Cook's D of more than one should warrant particular attention from the researcher, as that case represents an outlier that may bias the estimated regression coefficient.

Two casewise diagnostics analyses were conducted in this study, one for each dependent variable that was measured. For the dependent variable of burnout, casewise diagnostics highlighted 16 cases which had standardised residuals more than two standard deviations away from the predicted score, indicating that the CBI scores for those individuals were possibly too high or too low. However, as the number of cases was less than 10% of the total sample of 350 participants, it was not considered to be out of the ordinary (Muijs, 2004). Additionally, none of those cases were found to have a Cook's D value of more than one, which is the threshold

suggested by Cook and Weisberg (1982), indicating that none of them exerted undue influence on the overall model.

For the dependent variable of JPM, casewise diagnostics highlighted 13 cases out of the total sample of 350 participants that were found to have standardised residuals more than two standard deviations away from the predicted score, indicating possible outliers. However, the total number of possible outliers was once again below the 10% threshold suggested by Muijs (2004), so it was not considered to be a valid concern. One case (Case 54) was found to have a Cook's D of more than the cut-off value of one as suggested by Cook and Weisberg (1982), indicating that that case may adversely affect the estimated regression coefficient. However, an exploratory regression analysis excluding the single case found no significant changes to the regression coefficients compared to when the case was included in the model, indicating that Case 54 did not unduly bias the model to a point where it was statistically significant. Hence, all 350 cases were kept.

7.4.3. Regression Assumption Checks

Prior to conducting a multiple regression analysis, four principal assumptions must be tested in order to justify the use of a linear model of regression for inferential purposes: assumption of normality, assumption of homoscedasticity, assumption of independent errors, and the assumption of non-multicollinearity (Field, 2017). In this study, these four assumptions were tested using version 20 of the SPSS programme.

Assumption of normality. The assumption of normality is the assumption that the data set collected is representative of a normal distribution curve (Field, 2017). As shown in the descriptive statistics section earlier, the data seemed to fall under the normal parameters of skewness and kurtosis. However, a more statistically robust way to measure normality is the

Shapiro-Wilks test (Peat & Barton, 2008), which has been found to have better power than its contemporary Kolmogorov-Smirnov (K-S) test (Steinskog, Tjostheim, & Kvamsto, 2007). Normality tests run on all variables in this study revealed that the normality assumptions were not met for all variables except for perceived organisation support (Shapiro-Wilks = $p < .05$), contradicting the normality assumption suggested by the skewness and kurtosis values. However, according to Field (2017), it is primarily the residuals rather than the predictor variables that need to be normally distributed in a regression analysis. As such, the assumption of normally distributed errors was tested instead.

The standardised residual errors for the two dependent variables in this study which are burnout and JPM were tested for normality using the Shapiro-Wilks test. For the dependent variable of burnout, the assumption of normality was assumed, with Shapiro-Wilks = $p > .05$, while the assumption of normality was violated for the dependent variable of JPM, with Shapiro-Wilks = $p < .05$. Nonetheless, according to Pallant (2013), the violation of the normality assumption should not pose a problem for sample sizes that are large enough (> 30 or 40). Research suggests that the distribution of data for sample sizes consisting of hundreds of observations can be safely ignored (Altman & Bland, 1995), as the sampling distribution will tend to be normal in large samples that are more than 30 or 40 cases (Field, 2017). This implies that despite the violation of normality assumptions in this study, a parametric test can still be conducted (Elliot & Woodward, 2007).

Assumption of homoscedasticity. The assumption of homoscedasticity is an assumption of the constant variance of regression errors in the Ordinary Least Squares (OLS) regression model (Hayes & Cai, 2007). The assumption of homoscedasticity can be tested via a visual method, via an observation of a scatterplot of standardized residuals plotted against the

standardized predicted value (Field, 2017). An analysis of the scatterplot for both the dependent variables of JPM and CBI reveals a slight funnel-shaped pattern, indicating possible heteroscedasticity (Field, 2017) (refer to Appendix E1 and E2 for corresponding scatterplots). As a result, follow-up statistical test of heteroscedasticity using the Breusch-Pagan (B-P) method was conducted, which is a more robust method of detecting heteroscedasticity (Breusch & Pagan, 1979). The assumption of homoscedasticity was violated for both dependent variables, with B-P value = < .05. However, this result should be taken with caution, as the B-P test has been found to be particularly sensitive and indicates violations of homoscedasticity assumptions even for very small deviations (Lin, Lucas Jr., and Shmueli, 2013). Furthermore, the general linear model (GLM) has been found to be generally robust against violations of homoscedasticity (Field, 2017; Yan & Su, 2009; Nimon, 2012). According to Williams (2015), heteroscedasticity also does not usually have any effect on significance tests unless in the most severe of cases, hence OLS estimations can be generally used without the concern of serious distortion.

Assumption of non-multicollinearity. The assumption of non-multicollinearity is the assumption that the predictor variables in the regression model are not overly correlated with each other (Field, 2017). When two or more predictor variables are highly correlated, it is difficult to interpret the individual effects as well as the relative importance of each independent predictor, thus affecting the quality of the regression model (Wang, 1996). The assumption of non-multicollinearity is assessed via collinearity diagnostics and variance inflation factor (VIF). Acceptable VIF and tolerance levels are suggested to be set at below 10 and more than 0.10 respectively in order for the possibility of multicollinearity to be rejected (Field, 2017). In this study, the VIF and tolerance values for all variables fell within an acceptable range.

Assumption of independent errors. The assumption of independent errors is the assumption that the errors or residuals in a study are uncorrelated with each other (Field, 2017). Errors that are correlated with each other indicate a possibly misspecification of the model (Nau, 2017). The assumption of independent errors can be established via the Durbin-Watson statistic, with an acceptable suggested range of 1.5 to 2.5 (Vogt & Johnson, 2011). All regression models had Durbin-Watson statistics that fell within the acceptable range.

7.5. Inferential Statistics and Hypothesis Testing

7.5.1. Identification of control factors in regression

In addition to data for inferential statistics, several demographic variables that were believed to be relevant were also collected from participants, such as age, number of years of academic experience, highest educational qualification, employment status, employment position, salary, gender, marital status, and number of children. Previous research by Chirchir (2016) suggests that demographic variables such as gender, age, and work experience can play an important role in affecting the work satisfaction of teachers. Demographic variables such as education, marital status, salary level, and employment status have also been found to have significant relationships with job satisfaction in previous studies (Tabatabaei, Ghaneh, Mohaddes, & Khansari, 2013). A correlation analysis was conducted to determine if any of the control variables had significant relationships with the dependent variables studied in this research, in order for them to be included as control variables in the regression model.

Table 7.2.
Correlations between demographic variables and the dependent variables of JPM and Burnout

	Mean	**S.D.**	**1**	**2**	**3**	**4**	**5**	**6**
1. Age	36.94	8.60	-					
2. Type of institution	.39	.49	.14*	-				
3. Employment Status	.92	.49	.00	.07	-			
4. Employment Position (HOD)	.03	.17	.04	.14*	.05	-		
5. Burnout	40.52	20.37	-.16*	-.07	.24*	.11*	-	
6. JPM	4.17	.63	.06	.16*	-.12*	-.08	-.29*	-

Note: N = 350; * = $p < .05$

As Table 7.2 shows, the demographic factors of age, employment status, and employment position are significantly correlated with burnout, suggesting that these variables are possible control factors. Additionally, for the dependent variable of JPM, type of institution and employment status were found to be significantly correlated, suggesting that these two variables are control factors in the regression model pertaining to JPM. These respective variables were thus included in the regression model to control for their effects.

7.5.2. Assessing the level of burnout among Malaysian academics in comparison to average levels of burnout according to the PUMA study

The qualitative investigation into the work experience of Malaysian academics found exhaustion to be a significant factor of their work experience. In order to determine if the same experience of exhaustion is generalisable to the general population, data was analysed using a one-sample t-test comparing the burnout levels of Malaysian academics with the mean value of burnout as reported by other relevant studies. A one-sample t-test was chosen for this analysis as it offers a statistically robust method of determining if a sample mean is statistically different from a known population mean (Salkind, 2010).

To the best of the current knowledge of the literature, no mean burnout has been recorded for the Malaysian population. Thus, the mean for work-related burnout that was offered by Kristensen et al. (2005) was taken as the point of comparison to determine if the burnout levels of Malaysian academics was significantly higher than the mean for the general population. Additionally, mean burnout scores were also compared with the mean of work-related burnout reported by Milfont et al. (2007)'s study on New Zealand teachers which also utilised the CBI scale, and whose study also concluded high levels of burnout among the sample that they examined.

Table 7.3.
Comparison of work-related burnout means between the current study and Kristensen et al. (2005)'s reported values

	Current Study (M)	**Kristensen et al. (2005) (M)**	**Milfont et al. (2007) (M)**
Work-related burnout score	40.52	33.0*	41.5

Note: M = mean, * = difference is significant at a $p < .05$ level.

Results from the one-sample t-test found that the difference between work-related burnout scores of Malaysian academics in this study compared with the sample from Kristensen et al. (2005) was statistically significant ($t (349) = 6.90$, $p = < .001$). Respondents in this study reported higher mean burnout scores than the average burnout score reported by participants in the study by Kristensen et al. (2005), which itself consisted of samples obtained from multiple strata that were perceived to be exposed to high amounts of stress and burnout such as doctors, social workers, and prison wards. Additionally, results from the second one-sample t-test found that there were no statistical differences between the means reported in this study and that of Milfont et al. (2007), ($t (349) = -.89$, $p > .05$). The mean burnout scores for respondents in this study did not significantly differ from the high mean burnout scores reported by teachers in Milfont et al.'s (2007) study.

However, in order to determine whether these findings are significant in the overall larger scheme, it is imperative that the effect size is also calculated as it is better able to distinguish the magnitude of the difference between two means (Sullivan & Feinn, 2012). In order to determine effect size, Cohen's *d* was calculated, using the calculate function of the Microsoft Excel programme (Cohen, 1969). Cohen's formula of $d = t/\sqrt{N}$ was used, where *t* = the t-statistic of the one-sample t-test, and *N* = the sample of the current population. Calculation of Cohen's *d* yielded an effect size of 0.37, which represented a middle value between a small effect size (0.20) and a medium effect size (0.50) (Cohen, 1969). Considering that the difference in the mean between this study's burnout scores and that of Kristensen et al. (2005) is large enough that it can no longer be considered trivial (Sullivan & Fein, 2012), hypothesis 1a is accepted.

7.*5.3. Assessing the relationship between workplace factors and burnout*

The qualitative investigation into the work experience of Malaysian academics also found that certain workplace factors helped them to cope with the demands of their workplace, and were seen as resources that they could draw from to prevent exhaustion. These variables were perceived organisational support, the perception towards work, social support they experienced in their workplace, and the feedback or recognition that they were given. This study tests whether or not there exists a statistically significant relationship between these variables and the experience of burnout among the general Malaysian academic population.

In order to assess the relationship between the factors above, a hierarchical regression was used (Field, 2017). A hierarchical regression is a statistical method that is used to determine if the predictor variables have a significant predictive relationship with the dependent variable, and also allows for the inclusion of control factors in the regression model (Field, 2017). As this

regression analysis included control variables, the hierarchical regression represents the most appropriate method of analysis.

The variables of age, employment status, and employment position were included in the first model to control for their effects. In the subsequent model, the variables of organisational support, perception towards work, autonomy, social support, and feedback were inserted block-wise to test for their direct effects on work-related burnout.

Table 7.4.
Regression analysis for workplace factors on work-related burnout

	β	***t***	**F**	**R^2_{adj}**	**^R^2_{adj}**
Model 1			11.82**	.08	.08
Age	-.17*	-3.32*			
Employment Status (Full time)	.23*	4.57*			
Employment position	.09	1.79			
Model 2			14.39**	.28	.20
SPOS	-.26**	-5.00**			
WAMI	-.17**	-3.04**			
Autonomy	-.23**	-4.15**			
Perceived Social Support	.-.06	-1.03			
Received Social Support	.01	.23			
Feedback From Job	.02	.45			
Feedback From Others	.06	1.02			

Note: β = standardized coefficients; ^R^2adj = change in R^2adj in each model; N = 350; * = $p < .05$; Dependent variable: burnout

As Table 7.4 indicates, the control variables of age, employment status, and employment position account for 8% of the total variance of burnout. Age was found to be a significant negative predictor of burnout ($\beta = -.17$, $p < .05$), while employment status was a significant

negative predictor of burnout ($\beta = .23$, $p < .05$), indicating that older participants reported less burnout, and participants who were full-time members of academia was more prone to reporting burnout. Employment position however, was found to have a non-significant relationship with burnout levels.

The inclusion of workplace factors accounted for a further 20% of the variance of burnout. Perceived organisational support (SPOS) was found to have a negative predictive relationship with burnout, ($\beta = -.26$, $p < .05$), indicating that participants who perceived increased organisational support reported lower levels of burnout. Perception towards work (WAMI) was also found to have a negative relationship with burnout, ($\beta = -.17$, $p < .05$), indicative of the role that meaningful work has on helping individuals experience less burnout in the workplace. Furthermore, autonomy also had a negative relationship with burnout, ($\beta = -.23$, $p < .05$), indicating that the more autonomy an individual perceived in their workplace, the lower the levels of burnout they experienced.

However, both types of social support (self-oriented or others-oriented) were found to have no statistically significant relationship with burnout. Interestingly, despite the non-significant value, others-oriented social support displayed a positive trend, signifying that respondents seemed to find social support that stems from others to be a positive contributor to burnout rather than a buffer against it. Furthermore, both Feedback From Job (FFJ) and Feedback From Others (FFO) were found to have no significant relationship with burnout. Based on the results of the regression, SPOS is the strongest predictor of work-related burnout in the Malaysian academic workplace, followed by autonomy, and WAMI. Hypotheses 1b, 1c, and 1d is thus found to be supported, while no statistical support was found for Hypotheses 1e and 1f.

7.5.4. Assessing the relationship between the JCM's work characteristics and job psychological meaningfulness

With regards JPM, the initial qualitative investigation found that the JCM's work variables were a significant factor in their experience of academic work. As one of the aims of this research is to determine if the JCM is applicable to the Malaysian academic context, this study will assess whether the presence of the JCM's characteristics in the Malaysian academic workplace leads to an increase in JPM as postulated by Hackman and Oldham (1976). A hierarchical regression was used to test the relationship between the JCM's characteristics and JPM, as the regression model also consisted of demographic variables whose effects needed to be controlled for (Field, 2017).

The variables of type of institution and employment status were included in the first model to control for their effects. In the subsequent model, the JCM's characteristics of Autonomy, TI, TS, SV, FFJ and FFO were inserted concurrently to test for their direct effects on JPM.

Table 7.5.
Regression analysis for JCM factors on JPM

	β	***t***	**F**	**R^2_{adj}**	**^R^2_{adj}**
Model 1			8.33**	.04	.04
Type of Institution	.17*	3.26*			
Employment Status	-.14*	-2.69*			
Model 2			24.83**	.35	.31
Autonomy	.13**	2.69**			
Task Significance	.30**	5.51**			
Task Identity	.11*	1.98*			
Skill Variety	.15**	3.20**			
Feedback From Job	.09	1.43			
Feedback From Others	-.03	-.64			

Note: β = standardized coefficients; ^R^2adj = change in R^2adj in each model; N = 350; * = p < .05, ** = p < .01; Dependent variable: job psychological meaningfulness

As Table 7.5 demonstrates, the control variables of type of institution and employment status accounts for 4% of the total variance of job psychological meaningfulness. The type of institution was that academics worked in was found to be a significant predictor of JPM (β = .17, p < .05), while participants who reported full-time employment statuses reported significant negative relationships with JPM (β = -.14, p < .05).

The inclusion of the JCM factors accounted for a further 31% of the total variance of JPM. Autonomy was found to be a significant positive predictor of JPM, (β = .13, p < .01), indicating that participants who perceived autonomy in their workplace reported higher levels of JPM. TS was also found to positively predict JPM, (β = .30, p < .01), indicative of increased workplace JPM if participants viewed heir work-related tasks possessed some measure of significance. Furthermore, TI was found to also positively predict JPM, (β = .11, p < .05), indicating that being able to perceive the entirety of work was an important factor in experiencing JPM for Malaysian academics. Finally, SV was found to be a positive predictor of JPM, indicating that participants who experienced the opportunity to utilise multiple skills in their academic workplace found it to be more meaningful.

However, FFJ and FFO was both found to be non-significant predictors of JPM in the Malaysian academic workplace. FFJ was found to trend positively with JPM, although the significance of the relationship could not be statistically proven. Interestingly, though non-significant, the relationship between FFO and JPM was found to have a negative trend, indicating that for some participants, feedback obtained from others actually led to a slight but non-significant decrease in the amount of JPM they experienced in their workplace.

Based on these results, it would appear that of the JCM's characteristics, TS is the strongest predictor of JPM, followed by SV, Autonomy, and TI. Hypotheses 2a, 2b, 2c, and 2d were thus supported, while no support was found for Hypothesis 2e.

7.5.5. Assessing the relationship between workplace factors and job psychological meaningfulness

The qualitative investigation also found several other factors that contributed to experienced meaningfulness in the Malaysian academic workplace, such as the perception towards work (WAMI), task variety (TV), congruence with personal values (CPV), and social support. This study tests whether or not these variables are generalisable to the work experience of Malaysian academics. In order to test the relationships between these factors and the JPM, a hierarchical regression was conducted. The variables type of institution and employment status were included in the first model to control for their effects. Subsequently, the variables of WAMI, TV, CPV, and both types of social support (perceived and received) were inserted as a single block into the second model to test for their direct effects on JPM.

Table 7.6.
Regression analysis for perception towards work, task variety, congruence with personal values, and social support and job psychological meaningfulness

	β	***t***	**F**	**R^2_{adj}**	**^R^2_{adj}**
Model 1			8.33**	.04	.04
Type of Institution	.17*	3.26*			
Employment Status	-.14*	-2.69*			
Model 2			52.40**	.50	.46
WAMI	.55**	11.77**			
Task Variety	.06	1.72			
CPV	.04	.97			
Perceived Social Support	.20**	4.38**			

Received Social Support	-.02	-.64

Note: β = standardized coefficients; ^R^2adj = change in R^2adj in each model; N = 350; * = p < .05; ** = p < .01; Dependent variable = job psychological meaningfulness

As Table 7.6 shows, similar to previous findings, control factors only accounted for 4% of the total variance of JPM. However, upon inclusion of the other workplace factors, the model accounted for an additional 46% of the variance of JPM. WAMI was found to be a significant positive predictor of JPM (β = .55, p < .01), indicating that when participants viewed their work to be personally meaningful to them, they were more likely to experience increased JPM. Additionally, perceived social support was also found to be a significant predictor of JPM, (β = .20, p < .01), indicating that when participants perceived themselves as having the chance to build up social relationships in their workplace, they were also more likely to experience increased JPM.

However, the same result was not found for received social support (β = -.02, p > .05). Additionally, TV and CPV was also found to have no significant relationship with JPM, although results indicated a non-significant trending in the positive direction between the variables and JPM. Based on these results, of the workplace factor, WAMI is the strongest predictor of JPM, followed by perceived social support. Support was thus found for hypothesis 3a, and partial support was found for hypothesis 3d. However, there is no statistical support for hypotheses 3b and 3c.

7.6. Discussion of findings

This chapter seeks to investigate the relationship between the factors present in the Malaysian academic workplace, and their relationship with JPM and burnout as assessed by the instruments used in this study. Specifically, this study seeks to establish if burnout levels

reported in the qualitative investigation are as prevalent in the general Malaysian academic population, as well as the workplace factors that are related to it. Additionally, the qualitative investigation also revealed factors that were linked to increased JPM, and this study sought to test whether the same relationships between said factors and JPM could be found in the general population of Malaysian academics. Finally, this study also sought to establish if the factors of the JCM are prevalent in the Malaysian academic workplace as the initial qualitative investigation suggests, as well as their relationship with increased JPM as suggested by the postulations of Hackman and Oldham (1976), in order to determine if the JCM can be used as a suitable organisational framework for the Malaysian academic work context.

7.6.1. Burnout in Malaysian academia: a nation-wide phenomenon?

It was hypothesised that similar to the respondents in the qualitative study, the phenomenon of work-related burnout would be a common denominator reported by participants in this study. The results show that burnout scores were indeed higher than that of Kristensen et al. (2005), and a small to medium effect size of 0.37 indicated that the magnitude of the difference is significant enough to reasonably expect Malaysian academics to report higher levels of work-related burnout in general when compared to the average work-related burnout of individuals suggested by Kristensen et al. (2005) (Sullivan & Feinn, 2013).

Previous findings have indicated that Malaysian academics do face significant issues such as work overload (Arokisamy, Ismail, Ahmad, & Othman, 2011; Aslan, Shaukat, Mad Shah, & Mahfar, 2014), high stress levels (Ahsan, Abdullah, Yong, & Shah Alam, 2009; Nasurdin & O'Driscoll, 2011), and poor work-life balance (Mohd Noor, 2011). More than 20% of Malaysian academics even reported high levels of work-related stress as a result of high levels of job demand (Mukosolu, Ibrahim, Rampal, & Ibrahim, 2015). However, none of these studies

measured the psychological cost being paid by Malaysian academics when it came to dealing with these work-related issues. Although previous studies suggest clear links between excessive work demands and work-related burnout (Lawrenson & Mckinnon, 1982; Lackritz, 2004; Mabry, 2005), there has been limited or possibly even none that examined these relationships in a Malaysian academic sample.

The findings of this study with regards to the mean score of burnout for Malaysian academics are important for two reasons: (1) it is the first of its kind to actually measure the extent of burnout among Malaysian academics – offering a tangible, objective perspective into the current psychological health condition of Malaysian academics in a way that previous studies have not done (Idris, 2012; Mukosolu, et al., 2015) (2) the sample for this study represents Malaysian academics sampled from up to 70 different HEIs, both private and public, across all 15 states of Malaysia, who teach a variety of different subjects at various levels of higher education (as indicated by their demographic information), indicating that work-related burnout is an issue that transcends geographical and institutional boundaries and is a problem that is faced by Malaysian academics at all levels.

Although previous studies have highlighted work-related problems in the Malaysian higher academic workplace, these findings possibly offers one of the clearest, statistically significant evidence yet of an epidemic of burnout in the higher education workplace. Though the effect size of the mean difference in this study is small to medium, it is by no means trivial, as an effect size of 0.37 would indicate that the burnout score of the average Malaysian academic would be higher than 65% of the population's mean burnout scores (Coe, 2002). Nonetheless, despite the negative diagnosis this finding presents regarding the condition of the Malaysian

higher education workplace, other findings offer a glimpse of hope for a possible panacea to the problem of burnout.

7.6.2. Burnout resources: the role of HEI and a change of perception towards academic work

In addition to the high levels of burnout reported by Malaysian academics, the findings of this study also suggest that several workplace factors can help to mitigate the experience of burnout among Malaysian academics due to their negative predictive relationships with work-related burnout. In describing their work experience, respondents in the qualitative study mention the importance of several workplace factors such as autonomy, the perception towards work, feedback, and social support as important work resources that helped them to cope with their work demands.

The findings of this study suggests that perceived organisational support is indeed negatively related to burnout levels of Malaysian academics. This finding is similar to that of previous researches, where it was found that organisational support was a key mitigating factor to work-related burnout among teachers (Cunningham, 1983). According to previous literature, the lack of organisational support represented one of the most common reasons for teacher burnout (Burke & Greenglass, 1995; Sabagh et al., 2018). Numerous research points to the importance of organisational support and resources to academic work, where it was found to an increase in job satisfaction (Masum, Azad, & Beh, 2015), as well as a marked improvement in work-life balance (Kinman & Jones, 2008).

The negative relationship between autonomy and burnout levels suggests that it has a significant role in helping to reduce the incidence of burnout faced by Malaysian academics. The results indicate that Malaysian academics who experienced greater autonomy in their workplace were less likely to report high levels of burnout. Previous research on the academic workplace

supports the findings of this research, where teachers who perceived greater control over their work were found to be happier (Perie & Baker, 1997). Increased autonomy in the workplace has also been found to lead to an increase in engagement (Skaalvik & Skaalvik, 2014), which is often described as the antithesis of burnout in the workplace (Sabagh, Hall, & Saryoan, 2018).

The results of this study indicate that the two strongest predictors of lower burnout is perceived organisational support and autonomy, both of which happens to be under the purview and control of the Malaysian HEI. As such, the role of the Malaysian HEI is once again brought into sharp focus. These findings once again highlight the important role that Malaysian HEIs play in helping to alleviate the problem of burnout among their faculty staff. The results suggest that an increase in the level or visibility of organisational support coupled with an empowering of their faculty staff with greater levels of autonomy may go a long way in helping them to better cope with the work demands brought on by the modern Malaysian academic workplace (Makhbul & Khairuddin, 2013).

Nonetheless, not all of the factors that contribute towards lower levels of work-related burnout are related to the Malaysian HEI. As the findings also suggest, academics who perceive their work to be personally meaningful to them also reported lower levels of work-related burnout. This negative relationship is also supported by the findings of previous research, where Fouche et al. (2017) found that individuals who perceived their work to be personally meaningful to them reported lower levels of burnout and higher levels of work engagement. The perception one has towards work has been found to be heavily influenced by a sense of calling (Fouche et al., 2017), with previous research suggesting that academics who possessed a sense of calling in their workplace perceived their work to be inherently meaningful to them, and were less prone to burnout (Oates, Hall, & Anderson, 2005). As such, these findings suggest that a

change in perception and the instilling of a sense of calling among Malaysian academics may result in lower levels of burnout in the academic workplace, as the findings from the qualitative investigation also suggest.

The non-significant relationship between both types of feedback and burnout goes against the grain of literature, which consistently points towards the role that feedback and work recognition had on improving work outcomes and buffering against negative effects of work (Islam & Ismail, 2008; Lundberg, Godmundson, & Anderson, 2008). However, it is interesting to note that most studies measured only one type of feedback at a single point in time - social recognition (FFO) (Mathauer & Imhoff, 2006; Hviid, Smith, Frydendall, & Flyholm, 2012), or task-oriented feedback (FFJ) (Schunk, 1995; Ariely et al., 2008). This study on the other hand, measures both types of feedback simultaneously as distinctly different constructs, and while both types of feedback had negative relationships with burnout (i.e. respondents experienced less work-related burnout when they were given feedback), neither type was found to be significant on its own.

One possibility is that the separate measurements of both types of feedback resulted in a weaker relationship for both, and a combined scale measuring feedback in its entirety similar to previous studies would result in a significant relationship between feedback and burnout. Indeed, the results indicate that both FFO and FFJ had relationships that trended negatively with burnout, despite the non-significance of the relationships. Additionally, cultural factors may play an influencing role in affecting the relationship between feedback and burnout in this study. As De Luque and Sommer (2000) suggests, feedback in an Asian-collectivistic culture is a double-edged sword that may lead to an increase in stress, due to its inherent nuances such as power distance. Power distance is defined as the degree to which superiors are separated from their

subordinates with regards to the amount of influence and control that they possess in the workplace (Franke, Hofstede, & Bond, 1991). This can drastically affect the characteristic of feedback in the workplace, as power distance has been found to have a significant moderating effect on how feedback is perceived by both superiors and subordinates (Earley & Stubblebine, 1989; Ng, Koh, Ang, Kennedy, & Chan, 2011; Qian & Li, 2016). Employees in high power distance cultures may be less willing to approach their supervisors for feedback (Cleveland, Lim, & Murphy, 2007). As discussed by Steelman and Rutkowski (2003), supervisors in high power distance cultures typically do not consider themselves as equals to their subordinates, which can negatively affect the transmission of feedback. This results in employees of high power distance organisations to be less involved and attentive to feedback, and placing less importance on it and in some instances, avoiding it altogether (Madlock, 2012). Thus, workplace communication and feedback has been found to by typically more limited in high power distance organisations (Khatri, 2009), where individuals tend to seek out feedback only from their peers rather than their superiors or subordinates (Hwang & Francesco, 2010).

According to Franke et al. (1991) seminal research on power distances across cultures, Malaysia ranked top as the country with the highest power distance index. This comes as no surprise, as research often indicates that countries that are high in collectivism typically tend to be high in power distance (Schermerhorn & Bond, 1997; De Luque & Somner, 2000). As Franke et al. (1991) suggests, the Malaysian work culture is one that is very high on collectivism, which partially explains its high ranking on the power distance index. Furthermore, research also indicates a positive correlation between the ethnic diversity of a country and its power distance (Basabe & Ros, 2005), as countries with a larger multi-ethnic society typically utilise greater levels of authority and organisation in order to maintain order. Furthermore, it was also found

that developing countries also tended to rely more on power distance in their organisations, which also explains why Malaysia scores so high in the power distance index due to its status as both a multi-ethnic society and a developing country (Basabe & Ros, 2005).

In light of Malaysia's culture of high power distance, it is thus understandable that feedback was found to be a non-significant predictor of job psychological meaningfulness, as the significant power distance present between Malaysian academics and their superiors is likely to have negated the importance of feedback in their workplace, as suggested by previous literature (Madlock, 2012; Qian & Li, 2016).

Furthermore, the non-significance of social support is also inconsistent with the findings of past research, with Joiner and Bakalis (2006) suggesting that social support among co-workers is a critical factor in increasing academic work commitment and reducing work-related burnout. However, research suggests that the importance of social support in helping to alleviate burnout is subject to the cultural norms and values of the individuals themselves, with research by Morling, Uchida, and Frentrup (2015) suggesting that respondents from a European-American culture may view social support as helpful and positive, while respondents from an Asian context in contrast would only welcome social support in particular circumstances.

Taylor et al. (2004) also found that when it came to the relationship between social support and dealing with stress, distinct differences exists between participants from a European-American culture and participants from an Asian culture, with Asians less inclined to use social support for stress-coping compared to their Western counterparts. Furthermore, Asians have also been found to resist seeking social support as a resource for dealing with stress, and generally reported finding it less useful (Taylor et al., 2007). Considering that the Malaysian culture is predominantly Asian-collectivistic, it is possible that the same is true in a Malaysian context,

where a majority of participants in this study did not view social support as an integral resource in coping with burnout.

7.6.3. The ubiquity of the JCM's characteristics: towards a theoretical framework for Malaysian academic work

In addition to measuring the relationship between workplace factors and burnout, this study also examined the relationship between the workplace factors and JPM for Malaysian academics. According to the JCM, the presence of the five factors in the workplace contributes towards an increased sense of workplace meaningfulness (Hackman & Oldham, 1976). This study examined the direct relationships between the JCM's characteristics to determine if they truly predicted increased JPM levels among Malaysian academics, and found statistical support for four out of the five characteristics.

The most salient JCM variable in the regression model was the variable of TS. This finding is to be expected, as the JCM highlights TS, TI, and SV to be the three main contributors to the psychological state of meaningfulness in the workplace. The significant relationship between TS and JPM in the academic workplace is similar to the findings of Ariely et al. (2008), who found that participants who were able to perceive the significance of the task that they were engaged in found it more meaningful and were willing to work harder at it. Similarly, it can be seen that participants in this study who were able to perceive significance in what they did as academics also reported greater levels of JPM in their workplace. Ssesanga and Garrett's (2005) research on academics yields a similar trend, where they found that academics drew a significant amount of meaning and satisfaction from their work because they perceived their role as teachers to be significant. Similarly, Oshagbemi (1997) found that academics tended to view their responsibility of helping students learn as an inherently significant task which positively impacts

the lives of others, and experienced higher levels of meaningfulness in their workplace as a result.

According to the results, the second strongest JCM predictor of JPM is the work characteristic of SV. The ability to develop and utilise multiple competencies has been highlighted by research to be integral to the work experience (Parry, 2006; Martinez & Scott, 2014), and the findings of this study clearly demonstrate that the same applies in the Malaysian academic workplace. As research on the teaching profession often highlights, teaching is a multi-dimensional phenomenon which requires the development and simultaneous deployment of multiple skills such as relationship building and management, mastering of new technologies, and pioneering new research into their respective areas of interest (Lanier, 1997). The importance of SV and its contribution towards increased JPM is also supported by Tang's (2018) findings, where it was found that the acquisition and development of additional soft skills was an important aspect of the job for teachers in HEIs.

Furthermore, TI was found to be the third strongest predictor of JPM. Similar to Oshagbemi's (1997) study, participants who reported being able to perceive and be in control of their job from its conception to its end experienced higher levels of psychological meaningfulness in their workplace. For academics, this could come in the form of being able to observe the growth and development of their students throughout their course in university (Oshagbemi, 1997). The characteristic of TI is naturally ingrained in the nature of educational work, as the responsibility of teaching is the development and improvement of their students from a state of naivety (inception) to one of informed knowledge (completion). As such, it is thus unsurprising that TI is found to be a significant predictor of JPM in this study.

Lastly, the characteristic of autonomy was also found to be a significant predictor of JPM in this study, although magnitude of its relationship is comparatively lower than the three previous characteristic. This is to be expected, as the JCM's initial structure suggests that the work characteristic of autonomy contributes primarily to the psychological state of responsibility rather than meaningfulness (Hackman & Oldham, 1976). However, a review of multiple studies on the JCM found that there are no clear differential relationships between the job characteristics and the psychological states, suggesting that autonomy also contributes to increased meaningfulness in addition to responsibility (Fried & Ferris, 1987). This relationship is also found to be true in this study, where participants who experienced higher levels of autonomy in the workplace also reported increased levels of JPM. Additionally, May, Gilson, and Harter (2004) found that the inclusion of autonomy led to an enrichment of the work experience, which is positively correlated with JPM.

However, the results suggest that the job characteristic of feedback did not possess any significant relationship with JPM, despite previous research indicating that feedback could possibly account for some of the variance of meaningfulness (Fried & Ferris, 1987). According to Hackman and Oldham (1976), the primary contribution of the Feedback characteristic is towards the psychological state of knowledge rather than meaningfulness, and this study provides empirical support for their suggestion. In this study, both FFO and FFJ did not statistically predict any changes in JPM levels for Malaysian academics, although FFJ did demonstrate a trend towards a positive predictive relationship. FFO on the other hand, was found to have a negative relationship with JPM levels, although it was non-significant. This suggests that some participants in this study viewed receiving feedback from others as being a negative contributor to their experience of meaningfulness in their workplace.

Extant literature offers up a possible explanation for the non-significance of feedback in this particular context. As previously mentioned, the variable of feedback can be fickle dependent on the cultural context in which it is applied, with research suggesting that Asians differed significantly from their European-American counterparts (Molinsky, 2013). As suggested by Child and Warner (2003), the Asian concept of "loss of face" is inherently linked to the work characteristic of feedback, and if done wrongly, can lead to a decrease in overall work environment quality and motivation. This is also true in other Asian workplaces, as suggested by Thang et al. (2007). It is thus possible that within the Malaysian academic work context, FFO can be seen as a possible threat to the "face" of academics, which explains the negative nature of its relationship with JPM. Indeed, Birnbaum et al.'s (1986) application of the JCM to an Asian work context in Hong Kong also found that the characteristic of feedback was not a significant factor in determining workplace meaningfulness and predicting better work outcomes, demonstrating prior support for the relative non-importance of feedback to the Asian work context found in this study.

Nonetheless, despite the non-significance of feedback, the significant relationships between the other four characteristics and JPM offers empirical support for the JCM as a theoretical framework for Malaysian academics. Similar to Birnbaum et al.'s (1986) study, the JCM seems to be better applied to the Malaysian academic work context as a four-factor structure consisting of Autonomy, TI, TS, and SV. As previously discussed, literature regarding the applicability of the JCM to the academic workplace is somewhat limited (Barnabe & Burns, 1994; Houkes, Janssen, de Jonge, & Nijhuis, 2001). These findings contribute towards the literature regarding the JCM as a whole, and offers an updated perspective on its applicability to the modern academic workplace in an Asian context. It would seem from the results of this study

that the JCM is a viable theoretical framework that can be applied to Malaysian academic context, albeit with minor modifications to its factor-structure. The implications of this will be discussed further in Chapter 9.

7.6.4. Job psychological meaningfulness in Malaysian academia: the role of perception, social support, personal congruence, and task variety

In addition to the JCM's characteristics, several other variables were also tested in this study to determine their relationship with JPM. Of these other variables, the perception towards work was found to be the strongest positive predictor of JPM among Malaysian academics. This is in accordance with the findings of previous studies, which strongly supports the importance of encouraging workers to perceive meaning in their work as a way towards increased fulfilment and job satisfaction (Wrzesniewski, 2003; Steenkamp & Basson, 2013; Yeoman, 2013; Van Fossen & Vredenburgh, 2014). Research on academic work also found that educators who viewed their job as being personally meaningful and a calling in their lives experienced greater levels of JPM and lower levels of burnout (Trepanier et al., 2014; Castillo et al., 2017). The implications of this relationship will be discussed in greater detail in the subsequent chapter (Chapter 9).

Additionally, the partial significance of social support (SS) in predicting workplace meaningfulness suggests that construct of social support may differ from what the extant literature suggests. Social support has been consistently found to be a positive factor in the workplace that leads to improved work outcomes (Ling & Bhatti, 2014). Research by Hung (2014) also found significant statistical relationship between SS and JPM. However, in this study, only perceived SS was found to be significantly predictive of SS, while received SS was found to have no significant relationship. Perceived social support is the degree to which

participants perceived that SS was available to them in their workplace should they require it in the future – "I have the opportunity to develop close friendships in my job." Received social support on the other hand, is the social support that participants actually received in the workplace – "People I work with are friendly to me". In this study, there were clear differences with regards to the significance of perceived SS and received SS, where perceived SS was a significant predictor, while received SS was not. This indicates that there are significant differences between the influence of perceived SS and actual received SS in the Malaysian academic workplace, and suggests that when it comes to social support, improving perceptions may be more important than improving the reality. This will be discussed further in Chapter 9.

However, contrary to expectations, congruence with personal values was not a significant predictor of JPM, despite having a positive correlation. Literature on the challenges faced by Malaysian academia provides a possible explanation. Increasingly, academics in Malaysia being increasingly pushed to take up actions and job tasks that they might not agree with in order to meet organisational cost-cutting targets (Sohail, Rajadurai, & Rahman, 2003; Lim, 2010; Hong & Sengan, 2011), which may lead to an overall decrease in the levels of congruence between personal values and their work-related activities. Thus, a possible explanation for this could stem from the fact that a majority of these respondents have learned to cope with their additional duties despite their disagreement, and this non-significant relationship is simply the manifestation of their coping strategies.

Additionally, TV was also found to only have a marginally significant relationship with JPM. While not statistically significant at an alpha level of 0.5, the significance of the relationship was close enough to statistical significance ($p = .08$) to suggest that there exists a trend towards a positive direction. Some participants in this study may perceive that performing

more tasks in their workplace makes the experience of their job more meaningful overall. This is similar to the findings of past research, where it was found that where who were allowed to perform additional tasks which allowed them to utilize their abilities experienced greater job psychological meaningfulness (Parry, 2006; Berg, Wrzesniewski, and Dutton, 2010; Martinez & Scott, 2014). Nonetheless, the non-significance of the results in this study suggests that this positive relationship should be taken with caution.

7.7. Chapter summary and conclusions

The first part of this chapter examined the variables that were analysed in this study, followed by the descriptive statistics and validity checks to the data prior to the inferential analysis, which revealed the suitability of the data for a regression analysis. This was then followed by the inferential statistics, examining the relationships between the various factors in this study and the presentation of the relevant results. This chapter then ends with a brief discussion of the results in this study in relation to the Malaysian academic workplace. The next chapter will discuss the findings of the follow-up study examining the relationship between workplace factors and work engagement for Malaysian academics.

Chapter 8: Investigating the relationship between JCM, JPM, burnout, and work engagement

8.1. Chapter Overview

This chapter explains the follow-up study that was conducted after the quantitative investigation of the workplace factors of Malaysian academics (Chapter 7). Specifically, this chapter will analyse the relationship between the workplace factors found in that study and work engagement levels reported by Malaysian academics in order to determine if there is a predictive relationship. It begins with a brief descriptive analysis of the data. Validity and assumption checks are then detailed, followed by the presentation of the inferential statistics testing the relationship between the factors examined in this study. This chapter ends with a brief discussion of the findings and a summary of the key points of this chapter.

8.2. Descriptive analysis

Descriptive statistics for the variables measured in this study are shown in Table 8.1. According to Kim (2013), normality parameters for large sample sizes (> 300) can be defined with absolute Skewness scores of (< 2) and Kurtosis scores of (< 7). Based on these parameters, the data in this study was found to have a normal distribution. Additionally, all predictor variables in this study were found to be significantly correlated with the dependent variables (JPM and Work Engagement), indicating a possible linear relationship between the predictor and dependent variables, which is fundamental to Structural Equation Modeling (SEM) (Kline, 2015). Furthermore, none of the independent variables were highly correlated with each other ($r < 0.8$), indicative of a low risk of multicollinearity (Field, 2017).

Table 8.1
Descriptive and correlational statistics of workplace variables and engagement

Variable	M.	S.D.	Skew	K.	1	2	3	4	5	6	7	8	9
1. Autonomy	8.73	1.61	-.71	1.10	-								
2. Task Significance	3.96	.65	-.79	2.07	.41*	-							
3. Task Identity	3.80	.68	-.84	1.60	.43*	.42*	-						
4. Skill Variety	4.18	.64	-1.01	2.68	.18*	.44*	.20*	-					
5. Feedback From Job (FFJ)	3.72	.69	-.84	.96	.46*	.44*	.61*	.23*	-				
6. Feedback From Others (FFO)	3.46	.78	-.68	.50	.29*	.30*	.39*	.17*	.58*	-			
7. Burnout	40.52	20.37	.37	.10	-.36*	-.16*	-.24*	.03	-.23*	-.15*	-		
8. Job Psychological Meaningfulness (JPM)	4.17	.63	-.89	2.69	.38*	.52*	.39*	.36*	.39*	.22*	-.29*	-	
9. Work Engagement (WE)	5.29	1.02	-.73	.82	.38*	.47*	.30*	.27*	.33*	.29*	-.35*	.65*	-

Note: N= 350; * = $p < .05$; M = Mean; S.D. = Standard Deviation; K=Kurtosis

8.3. Validity and assumption checks

8.3.1. Common method bias

To test for common method bias, an exploratory factor analysis was conducted where all variables were loaded onto one factor to determine if that single factor accounts for more than 50% of the total variance in the data, which would be indicative of common method bias (Podsakoff et al., 2003). The results indicated that one factor accounting for 14.89% of the total variance in the data was extracted, which is below the 50% threshold as suggested by Podsakoff et al. (2003), indicating that common method bias did not pose a threat to the validity of the data.

8.3.2. Casewise Diagnostics

Casewise diagnostics was conducted in order to identify any outliers that may pose a threat to the validity of the structural equation model (Muijs, 2004). This was conducted using the casewise diagnostics function of the SPSS programme (Muijs, 2004). Additionally, Cook's distance (D) was also used to highlight any cases that were outliers (Mendenhall & Sincich, 1996). Any cases with a Cook's D of more than one was highlighted as a potential outlier that may bias the structural equation model, as suggested by Cook and Weisberg (1982).

The casewise diagnostics conducted found that none of the cases were potential outliers. Additionally, all cases had Cook's D values below one, indicating that none of the cases were potential outliers. Hence, all 350 cases were kept for inferential analysis.

8.4. Justification for the use of SEM in this study

This study utilised the Structural Equation Modeling (SEM) technique for inferential analysis of the data via the AMOS 22 statistical package. SEM is known as a second-generation data analysis technique which has been shown to be a better method of modelling the relationships between multiple independent and dependent constructs simultaneously compared

to first generation statistical techniques such as multiple regression (Gerbing and Anderson, 1988). Additionally, the SEM approach has also been found to be a more powerful statistical analysis compared to the standard regression (Baron & Kenny, 1986). Since the goal of this study is to examine the relationship between the JCM variables, JPM, burnout, and WE in a mediation analysis, the use of SEM is more appropriate as it allows the researcher to infer indirect and total effects without the use of ad hoc methods that are required in standard regression models (Sobel, 1982; MacKinnon & Luecken, 2008). Furthermore, the SEM method is also able to provide model fit information regarding the suitability of the hypothesised mediational model to the data (Bollen, 2012, in Morgan, 2013).

8.4.1. Assumptions of SEM

Assumption of normality. As indicated in the descriptive analysis, the data collected in this study seems to fall within the normal parameters with regards to skewness and kurtosis (Kim, 2013). Additional casewise diagnostics and Cook's distance further confirms that there are no outliers in the dataset that may potential bias the model. However, a Shapiro-Wilks test was conducted in order to test normality in a more robust manner (Peat & Barton, 2008). Results indicated that normality assumptions were violated for all of the variables (Shapiro-Wilks = $p < .05$). Nonetheless, the Maximum Likelihood Estimation (MLE) have been found to be robust against moderate departures from normality (Bollen, 1989; Diamantopoulos & Siguaw, 2000, Garson, 2012), thus the use of SEM was still justified despite the violation of the assumption of normality.

Assumption of non-multicollinearity. As previously discussed, the assumption of non-multicollinearity is the assumption that the predictor variables in the model are not overly correlated with each other, as it may make it difficult to interpret the individual effects and

relative importance of each independent variable (Wang, 1996). The assumption of non-multicollinearity was assessed via the variance inflation factor (VIF) and tolerance levels, which were set at below 10 and above 0.10 respectively (Field, 2017). In this study, the VIF and tolerance values for all variables fell within an acceptable range.

8.5. Inferential statistics and hypothesis testing

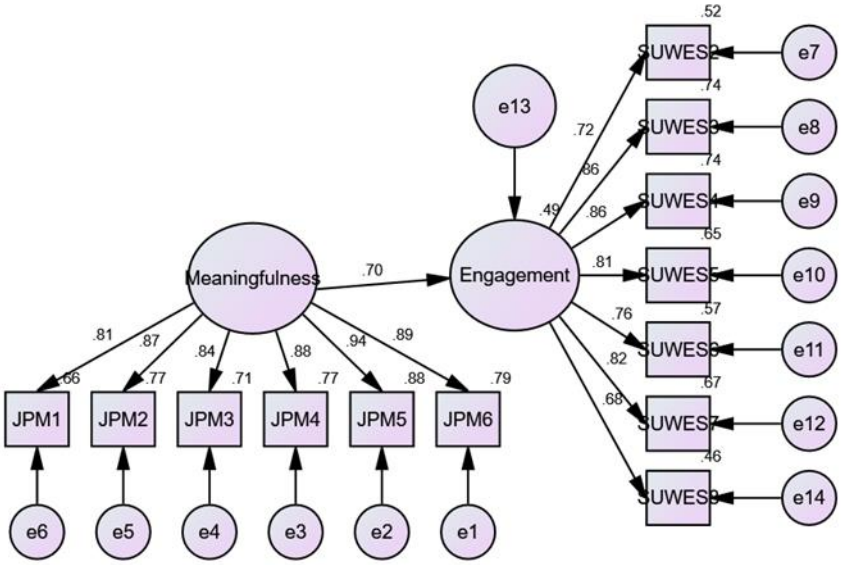
In the following figures depicting the structural equation model, circles represent latent variables and rectangles represent the measured variables as recorded by the questionnaire. Model fit for each model was assessed using the following three measures of fit as suggested by MacCallum, Browne, and Sugawara (1996) and Hu and Bentler (1999):

- Standardized root mean square residual (SRMR) values close to 0.08 or below
- Root mean square error of approximation (RMSEA) values which are equal to or > 0.10
- Comparative Fit Index (CFI) values which are equal to or > 0.95

8.5.1. Assessing the relationship between Job Psychological Meaningfulness and Work Engagement

A latent analysis using SEM was conducted in order to assess the relationship between JPM and WE. Figure 8.1 shows the structural equation model between both variables. The overall model fit was good, χ^2 (64) = 212.78, CFI = .96, RMSEA = .08, and SRMR = .03, which were within the parameters suggested by MacCallum, Browne, and Sugawara (1996) and Hu and Bentler (1999). No post-hoc modifications were necessary due to the acceptable model fit.

Figure 8.1. *Results for the structural equation model between JPM and WE*



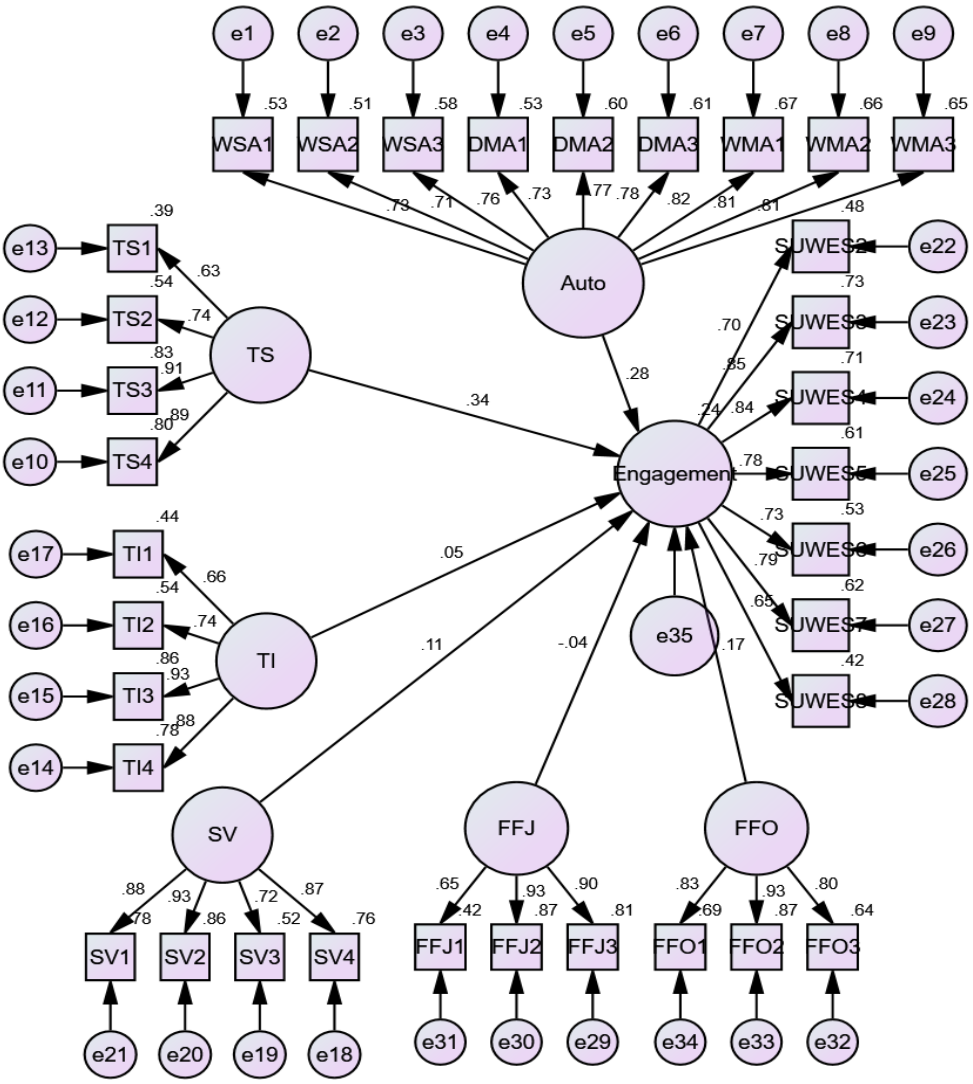
Note: N = 350; β standardized beta; alpha value = 0.05; e = error

As Figure 8.1 shows, there is a significant predictive relationship between JPM and WE (β = .70, $p < .001$), indicating that an increase in JPM levels will also predict a rise in WE levels for Malaysian academics. As the model indicates, the total amount of variance in WE accounted for by JPM (r^2) is 49%, indicating that JPM is possibly a significant predictor of WE. However, an r^2 of .49 is lower than the recommended r^2 of .60 suggested by Hair et al. (2014), indicating that other variables exist that are also significantly predictive of WE. Nonetheless, these results indicate that Hypothesis 4a can be supported.

8.5.2. Assessing Job Psychological Meaningfulness as a mediator between the JCM's characteristics and Work Engagement

Figure 8.2 shows the structural model that was constructed to test the direct relationship between the JCM and WE, as a mediation relationship requires that the variables first have a significant relationship with the outcome variable before comparing their relative effects once the mediator is included (Baron & Kenny, 1986). The overall model fit was found to be poor, χ^2 (521) = 1815.65, CFI = .85, RMSEA = .08, and SRMR = .22.

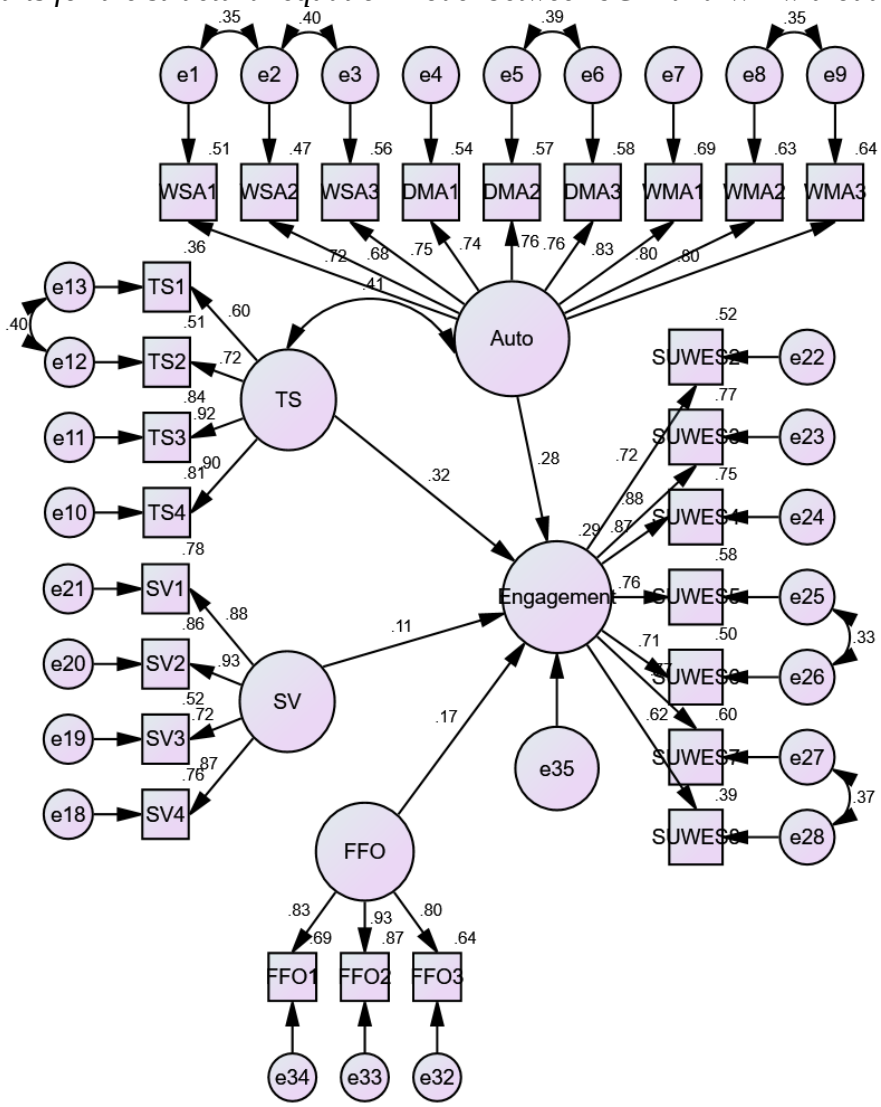
Figure 8.2. *Results for the structural equation model between JCM and WE*



Note: N = 350, β = standardized beta, alpha value = 0.05.

As Figure 8.2 shows, the variables of FFJ and TI were found to have relatively weak relationships with WE (β = -.04 and β = .05 respectively). Furthermore, these relationships were also found to be statistically non-significant (p > .05). Hence, these variables were subsequently dropped from the structural model in order to improve model fit as variables that are not significantly related to the dependent variable are unsuitable to be included in a mediation regression (Baron & Kenny, 1986). Figure 8.3 shows the structural model without the inclusion of FFJ and TI.

Figure 8.3. *Results for the structural equation model between JCM and WE without FFJ and TI*



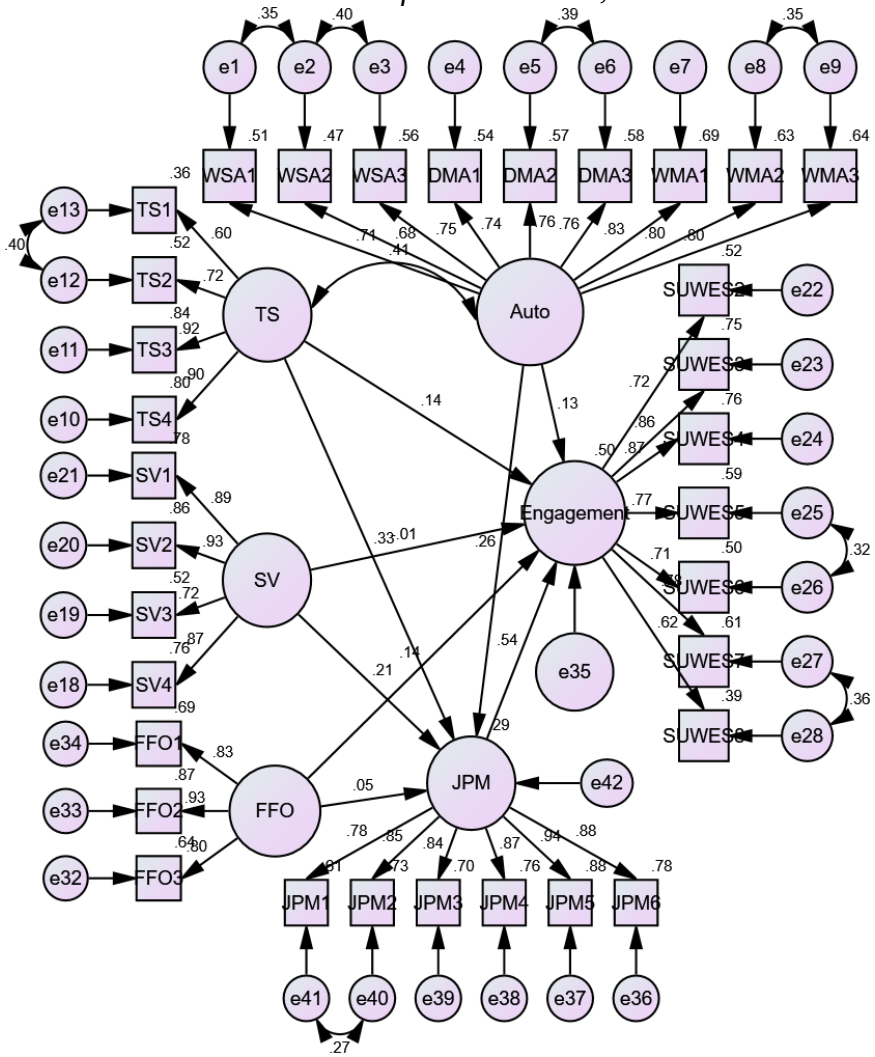
Note: N = 350, β = standardized beta, alpha value = 0.05.

As Figure 8.3 shows, the remaining variables of autonomy (β = .28, p < .05), TS (β = .32, p < .05), SV (β = .11, p < .05,) and FFO (β = .17, p < .05) all had significant relationships with WE. Furthermore, the model fit indices for the modified model structure was acceptable after post-hoc modifications, χ^2 (312) = 666.35, CFI = .95, RMSEA = .05, and SRMR = .13. Although the SRMR value was above the cut-off of > .08, acceptable CFI and RMSEA values are sufficient to evaluate the goodness-of-fit of a model (Hair et al. 2014). The model fit was thus deemed to be acceptable. Post-hoc modifications included covarying the error terms for some of

the items measuring autonomy, TS, and WE, as well as the covarying the factors of TS and Autonomy. The covariance of TS and autonomy is supported by research, with previous researches suggesting that some of the characteristics of the JCM are correlated with each other (Turner & Lawrence, 1965; Hackman and Oldham, 1976).

As the variables of autonomy, TS, SV, and FFO were found to be significantly correlated with WE, these variables were retained for the mediation model. The mediation model was then specified, with JPM as the mediating variable between the JCM characteristics of autonomy, TS, SV, and FFO and the dependent variable of WE. Figure 8.4 shows the constructed model.

Figure 8.4. *Mediation model between JCM factors and WE, with JPM as the mediator*



Note: N = 350, β = standardized beta, alpha value = 0.05.

The model fit indices for the mediated model had acceptable levels after slight post-hoc modifications, χ^2 (479) = 973.65, CFI = .95, RMSEA = .05, and SRMR = .12. Post-hoc modifications included covarying the error terms for two items on the JPM. In order to determine if there is mediation, one can compare the change in the magnitude of the direct effects before and after the inclusion of the mediating variable (Baron & Kenny, 1986). Table 8.2 shows the comparison between the direct effects of each JCM variable with WE before and after the mediating variable of JPM was included.

Table 8.2.
Comparison of direct effects before and after the inclusion of JPM as a mediating variable

Model	Autonomy	Task Significance	Skill Variety	Feedback From Others
Direct Effects (without JPM as mediator)	.28*	.32*	.11*	.17*
Direct Effects (after including JPM as mediator)	.13*	.14*	.01	.14*

Note: N = 350; * = $p < .05$; β = standardized beta; dependent variable = WE

As shown in Table 8.2, all of the variables had reduced direct effects with WE after the inclusion of JPM as a mediating variable. This is indicative of a mediating effect by JPM (Baron & Kenny, 1986). Furthermore, the direct effect of SV with WE was found to be no longer statistically significant after the inclusion of JPM as a mediating variable, suggesting that JPM fully mediates the relationship between SV and WE (Baron & Kenny, 1986). However, while an analysis of the direct effects using Baron and Kenny's (1986) approach may help to indicate if there is a mediating effect present in the model, it does not provide information on the subsequent significance or non-significance of the indirect relationship (Zhao, Lynch Jr., & Chen, 2010).

In order to test the significance of the indirect relationships, a user-defined estimand was used in the AMOS 22 programme with boostrapping to calculate the indirect effects between

each JCM variable and WE with JPM as the mediator (Gaskin, 2016). This estimand multiplies the direct effect of the independent variable and the mediator variable with the direct effects of the mediator variable and the dependent variable in order to obtain an unstandardized beta of the indirect effects between the predictor variable and the dependent variable (Gaskin, 2016). Bootstrapping was set at a threshold of 1000 cases, according to the suggestion of Cheung and Lau (2008). Table 8.3 shows the unstandardised betas for the indirect effects between the variables of the JCM and WE, as well as their respective significance values.

Table 8.3.
Indirect effects of JCM variables on WE

	Autonomy	Task Significance	Skill Variety	Feedback From Others
Indirect Effects	.16*	.19*	.15*	.03

Note: Note: N = 350; * = p < .05; dependent variable = WE

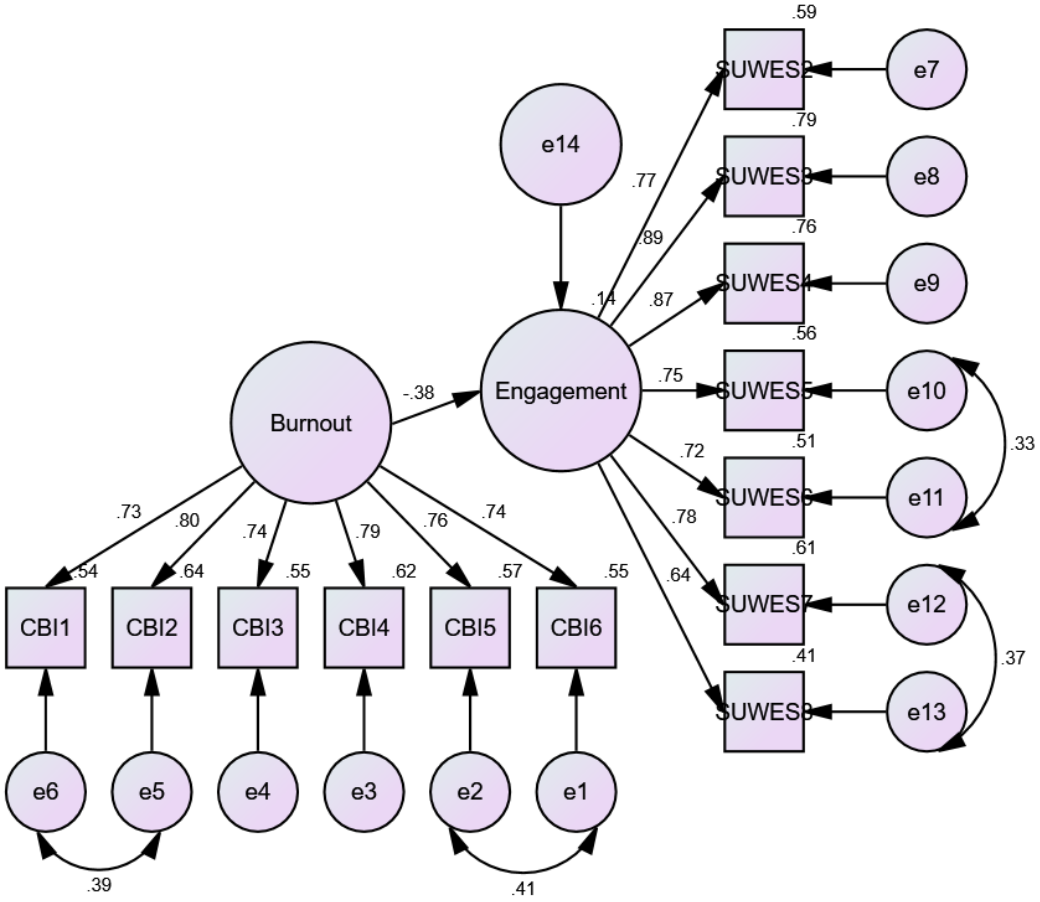
As Table 8.3 indicates, there are significant indirect effects between the JCM variables of autonomy (B = .17, p < .05), TS (B = .20, p < .05) and SV (B = .15, p < .05) and WE. However, the indirect effect of FFO on WE was found to be not significant, (B = .03, p > .05). Based on these results, it was concluded that JPM mediates the relationship between autonomy, TS, and SV with WE, but does not mediate the relationship between feedback and TI with WE. Hypothesis 5a, 5b, and 5d was accepted, but no statistical support was found for Hypothesis 5c and 5e.

8.5.3. Assessing the relationship between burnout and work engagement

A latent analysis using SEM was conducted in order to assess the relationship between burnout and WE. Figure 8.5 shows the structural equation model between both variables. The overall model fit was within acceptable parameters after post-hoc modifications, χ^2 (62) =

168.87, CFI = .96, RMSEA = .07, and SRMR = .06, which were within the parameters suggested by MacCallum, Browne, and Sugawara (1996) and Hu and Bentler (1999). Post-hoc modifications included covarying error terms between several of the items measuring burnout and several items measuring WE.

Figure 8.5. *Results for the structural equation model between burnout and WE*



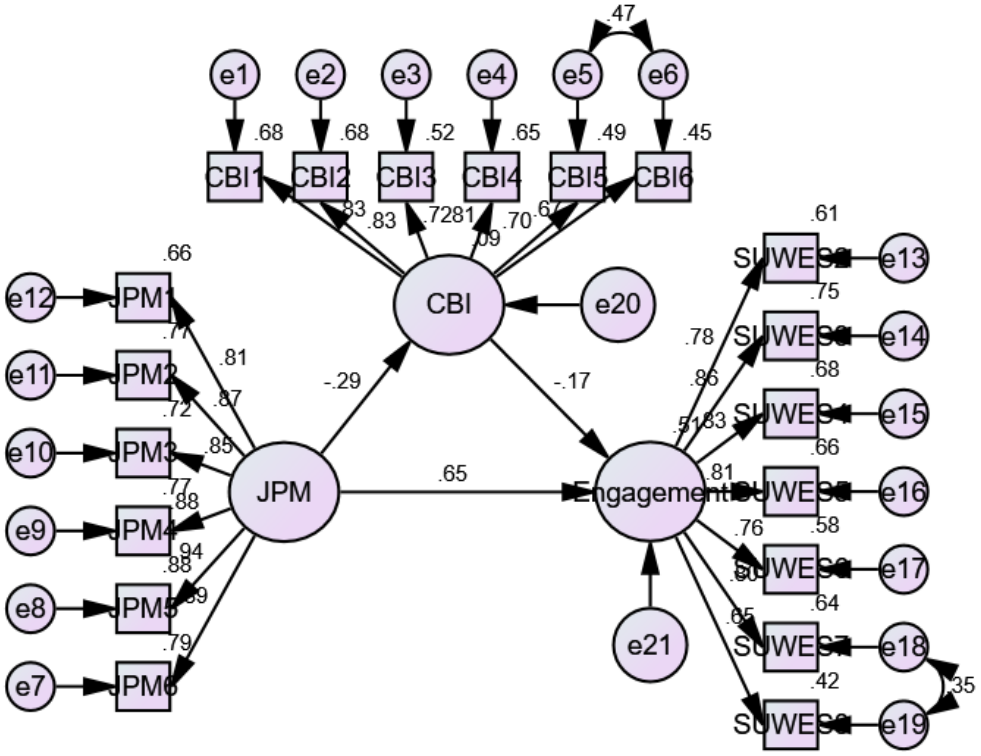
Note: N = 350, β = standardized beta, alpha value = 0.05.

As Figure 8.5 shows, there is a negative, statistically significant relationship between burnout and WE ($\beta = -.38$, $p < .05$) indicating that decrease in burnout levels will predicts a rise in WE levels for Malaysian academics. As the model indicates, the total amount of variance in WE accounted for by burnout (r^2) is 14%, which is considered to be a small amount of variance according to Hair et al. (2014), and indicating that other variables exist that are also significantly predictive of WE. Nonetheless, this result indicates that Hypothesis 4b can be supported.

8.5.4. Assessing Burnout as a mediator between job psychological meaningfulness and work engagement

The significant relationships found between both JPM and burnout with WE indicates that it is suitable to analyse these variables within a mediation analysis (Baron & Kenny, 1986). Figure 8.6 shows the mediation model that was specified, with burnout as a mediator between JPM and WE.

Figure 8.6. *Mediation model between JPM and WE, with burnout as the mediator*



Note: N = 350, β = standardized beta, alpha value = 0.05.

Model fit indices for the mediation model constructed was acceptable after post-hoc modifications, χ^2 (150) = 386.45, CFI = .95, RMSEA = .06, and SRMR = .06, which were within the suggested parameters (MacCallum, Browne, & Sugawara, 1996; Hu and Bentler, 1999). Posthoc modifications included the covarying of error terms of several items in the CBI and WE scales. Baron and Kenny's (1986) approach was first used to determine if there is a possibility of a mediation relationship between the variables in the study, which is to examine if there is a

difference in the direct effects between the predictor and dependent variables before and after the inclusion of the mediating variable. Table 8.4 shows the comparison of the direct effects.

Table 8.4.
Comparison of direct effects before and after the inclusion of burnout as a mediating variable

Model	JPM
Direct Effects (without burnout as a mediator)	.70*
Direct Effects (after including burnout as a mediator)	.65*

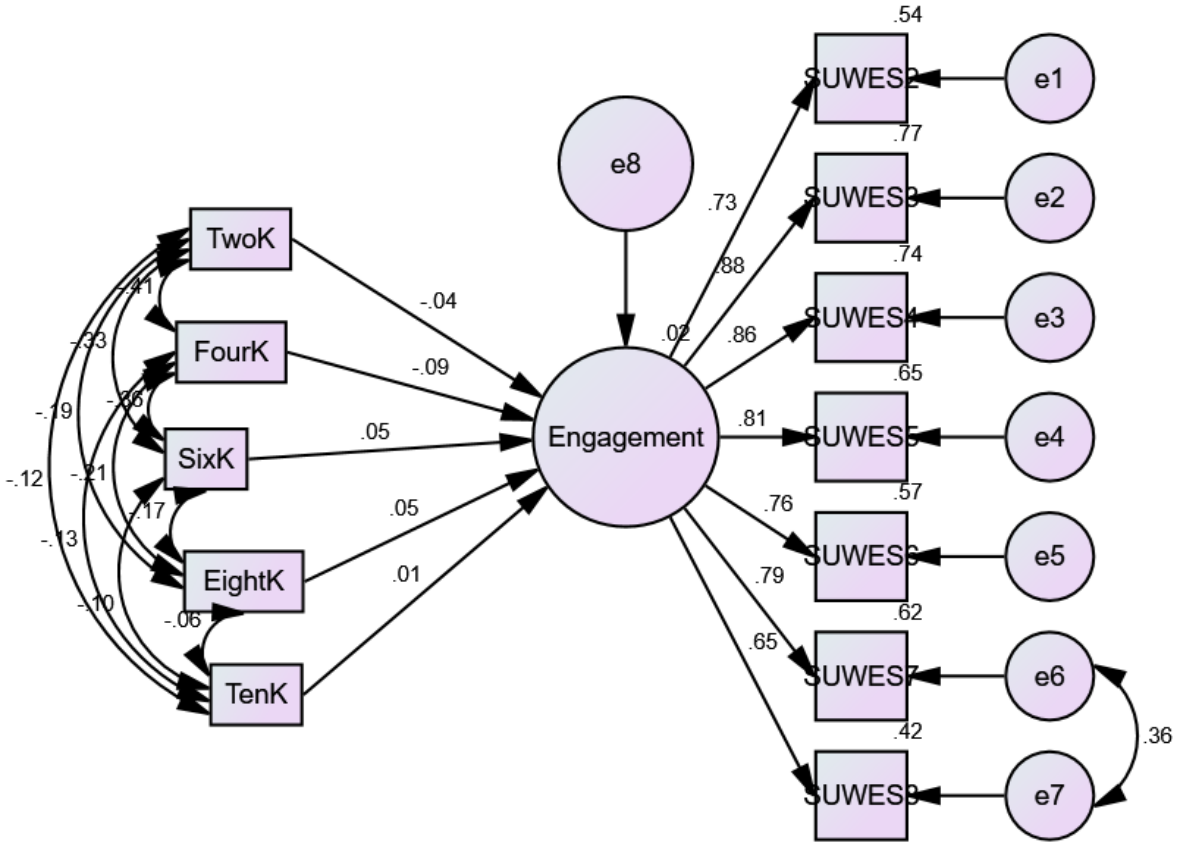
Note: N = 350; * = $p < .05$; β = standardized beta; dependent variable = WE

As shown in Table 8.4, JPM had a reduced direct effect on WE after the inclusion of burnout as a mediating factor, although the direct effect was still significant. This is indicative of a possible partial mediation (Baron & Kenny, 1986). In order to determine if the indirect effect was statistically significant, a user-defined estimand with boostrapping was utilised (Gaskin, 2016). Similar to the previous mediation model, bootstrapping was set at 1000 cases (Cheung & Lau, 2008). The analysis revealed a significant indirect effect, ($B = .08$, $p < .05$), indicating that burnout significantly mediates the relationship between JPM and WE. Hypothesis 4c was thus supported.

8.5.5. Assessing the relationship between salary levels and work engagement

The findings of the initial qualitative investigation into the work experience of Malaysian academics revealed that a majority of respondents did not view financial remuneration as a significant factor in influencing their work outcomes. In order to determine whether the general population of Malaysian academics held similar views towards financial remuneration in their workplace, an analysis of the relationship between salary levels and work engagement was conducted. Figure 8.7 shows the specified model analysing the various salary ranges and their relationship with WE.

Figure 8.7. *Results for the structural equation model between salary and WE*



Note: N = 350, β = standardized beta, alpha value = 0.05.

The model fit indices for the structural equation model in indicated an acceptable model fit, χ^2 (43) = 111.09, CFI = .96, RMSEA = .06, and SRMR = .03 (MacCallum, Browne, & Sugawara, 1996; Hu and Bentler, 1999). As can be seen in Figure 8.7, all five salary only accounted for 2% of the variance (r^2 = .02) in WE, indicating that salary did not account for a significant amount of the variance in WE (Hair et al., 2014). Table 8.5 shows the direct effects of all the individual salary ranges with WE.

Table 8.5.
Direct effects between salary ranges and WE

Salary Range	β	S.E.
RM2000 – RM4000	-.04	.19
RM4001 – RM6000	-.09	.19

RM6001 – RM8000	.05	.19
RM8001 – RM10000	.05	.23
RM10000+	.01	.30

Note: N = 350; * = $p < .05$; β = standardized beta, alpha value = 0.05.

As Table 8.5 indicates, none of the salary ranges had a significant direct effect on WE levels ($p > .05$). These results indicate that salary is not a significant predictor of WE among Malaysian academics. Hypothesis 4d was thus supported.

8.6. Discussion of findings

This chapter examines the relationship between the workplace factors and work engagement levels for Malaysian academics. Specifically, this chapter seeks to establish whether JPM would positively predict WE levels among Malaysian academics. Additionally, this chapter seeks to examine if JPM functions as a mediator between the factors of the JCM and improved work outcomes such as increased WE, in order to validate the JCM's postulations (Hackman & Oldham, 1976). Furthermore, as literature suggests a strong relationship between burnout and WE (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2006), this chapter seeks to examine whether the burnout reported by Malaysian academics significantly predicted WE levels, and whether or not burnout was a mediating factor between the experienced JPM of Malaysian academics and their levels of WE.

8.6.1. Job psychological meaningfulness: the key to work engagement?

Previous research examining the relationship between JPM and engagement have often found that an increase in JPM predicts an increase in WE levels for individuals (Steger et al., 2012; Ponton et al., 2012). This relationship has been found to be constant even across different workplaces (van Zyl et al., 2010), indicating that JPM is a key factor in influencing WE.

Research on the academic workplace have also found similar trends, suggesting that the same relationship applies in the academic sector (Rothmann & Hamukang'andu, 2013). Similarly, this study's findings also support the positive relationship between JPM and WE, and study offers statistical support for the generalisability of the relationship between JPM and WE to the general population of Malaysian academics.

In addition to offering a sense of generalisability of the relationship between JPM and WE, the results of this study offers added insights. For instance, the strength of the predictive relationship between JPM and WE found in this study is interesting to note. As previously mentioned, it was found that JPM accounted for close to 50% of the variance of WE. While this is below the 60% level suggested by Hair et al. (2014), it still represents a significant amount of WE variance accounted for by JPM, indicating that an increase in JPM levels among Malaysian academics can possibly go a long way towards increasing their work engagement. These results mirror those of Hirschi (2012), where it was found that meaningfulness accounted for a significant amount of the variance of work engagement levels among German educators and engineers. Additionally, the relatively high standardised beta weight of .70 offers an indication that the relationship between JPM and WE is one that is inherently meaningful beyond mere statistical significance, the implications of which will be discussed further in Chapter 9.

8.6.2. The role of JPM as a mediator between the JCM variables and WE

One of the aims of this research is to validate the JCM as a theoretical framework for the Malaysian academic workplace. According to the JCM, the five characteristics in the workplace leads to the development of the critical psychological state of meaningfulness, which results in an increase in work-related outcomes (Hackman & Oldham, 1976). Thus, the psychological state of meaningfulness serves as a mediator between the job characteristics and improved work

outcomes (Hackman & Oldham, 1976). The function of JPM as a mediator between work characteristics and WE has also been found by previous research (Hirschi, 2012). Having already established the relationship between the JCM's factors and JPM in the previous chapter, this study seeks to determine if JPM significantly mediates relationship between the JCM factors and WE, as postulated by the JCM (Hackman & Oldham, 1976).

The findings of this study partially validate the JCM model proposed by Hackman and Oldham (1976). As indicated by the results in this study, JPM was found to mediate the relationship between several of the JCM's factors. Specifically, the relationship between the factors of autonomy, TS, and SV with WE were found to be significantly mediated by JPM. However, no significant mediated relationship was found between the factors of TI and feedback. Using the Baron and Kenny (1986) approach to analysing mediation, it was found that JPM partially mediated the relationships for both autonomy and TS with WE, but fully mediated the relationship between SV and WE.

The partial mediation of JPM on the relationship between autonomy and WE in this study is supported by extant literature. While Hackman and Oldham (1976) suggests that autonomy affects WE through the development of the psychological state of meaningfulness, numerous research has documented direct relationships between autonomy and WE (Pelletier et al., 2002; Bidee, et al., 2013; Heidemeier & Wiese, 2014). As Tillot et al. (2013) and Trepanier et al. (2013) discovered, a lack of autonomy in the workplace led to a decrease in work engagement levels. Furthermore, Skaalvik and Skaalvik (2014) also found that autonomy significantly predicted engagement levels among educators, suggesting that autonomy has a robust, positive relationship with WE even without the inclusion of JPM as a mediator. Similarly, the findings of this study indicate that autonomy possessed significant direct and indirect relationships with WE,

suggesting that autonomy affected WE levels either directly or via the mediating variable of JPM. Consequently, it is theoretically possible that autonomy has an outsized influence in increasing WE for Malaysian academics, as an increase in autonomy can lead to an increase in WE either directly, or through the mediating factor of JPM. This will be discussed further in the subsequent chapter (Chapter 9).

The partially mediated relationship between TS, JPM, and WE is also supported by literature. As suggested by Schnell et al. (2013), TS is one of the strongest predictors of JPM, possibly superseding other personal and organisational variables. This is in accordance with the postulations of the JCM, which suggests that an increase in TS leads to the development of JPM, which in turn leads to increased work outcomes such as engagement (Hackman & Oldham, 1976), a relationship which has also been found to be robust (Steger et al., 2012; Michaelson et al., 2014). However, research also suggests strong direct links between TS and WE, with studies suggesting that an increase in TS leads to increased levels of job involvement and participation (Ariely et al., 2008; Crawford et al., 2010; Hu et al., 2015). This study's findings offers support for both perspectives; a partial mediation of the relationship between TS and WE suggests that JPM plays a role in influencing the relationship between TS and WE as suggested by Hackman and Oldham (1976), but also indicates that TS has a significant direct relationship with WE that is unaccounted for by the mediating variable of the JPM, in accordance with previous research (Ariely et al., 2008; Hu et al., 2015). Similar to the work characteristic of autonomy, this finding also suggests that the job characteristic of TS possibly plays a significant role in affecting WE for Malaysian academics, as it possesses a dual pathway towards increasing WE, either directly or through an indirect relationship via JPM. The implications of this will be discussed further in Chapter 9.

One result that is of particular interest in this study is the relationship between SV and WE. This is because the relationship between SV and WE was found to be significantly different from the relationships of the previous variables that were discussed. While autonomy and TS were found to have a partially mediated relationship with WE, the results in this study indicated that the relationship between SV and WE was fully mediated by JPM, as the inclusion of JPM into the model caused the direct relationship between SV and WE to be non-significant, an indicator of a full mediation (Baron and Kenny, 1986). An analysis of the theoretical postulations of the JCM offers a possible explanation for this relationship.

According to Hackman and Oldham (1976), the characteristic of SV in the workplace fulfils person's need for personal growth and development, as SV allows an individual to develop and utilise different skills in the workplace. This need for personal growth and development is referred to by Hackman and Oldham (1976) as Growth Needs Strength (GNS). According to the JCM, the fulfilment of GNS through the job characteristic of SV leads to an increase in experienced meaningfulness in the job (Hackman & Oldham, 1976). The relationship between increased SV through the fulfilment of GNS and an increase in JPM is also supported by research, where individuals who were given opportunities to develop a variety of skills and competencies reported increased levels of JPM (Akerlind, 2005; Parry, 2006). As indicated by research, an increase in JPM leads to an increase in WE (van Zyl et al., 2010; Rothmann & Hamukang'andu, 2013). Accordingly, SV can thus be seen in the literature to have an indirect relationship with WE through the mediating variable of JPM, similar to the findings of this study.

In this study, JPM was not a significant mediator between the factor of TI and WE. While the previous analysis found a significant positive relationship between TI and JPM, no

significant direct relationship was found between TI and WE, which indicates that a mediation analysis is unsuitable to be conducted (Baron & Kenny, 1986). While past research has indicated that an increase in TI leads to an increase in WE, this same relationship was not found in the population of this study. A possible reason for the non-significance could be due to the nature of academic work in Malaysia. As previously highlighted, faculty members in Malaysian HEIs are frequently pressured to perform multiple roles in the workplace as a result of cost-cutting strategies (Sohail et al., 2006) as well as to embrace new initiatives in their workplace in order for their HEIs to remain competitive across the ASEAN region (Hong & Songan, 2011). Furthermore, with the push for the Malaysian HE sector to be an international hub, Malaysian academics are increasingly forced to be familiarised with multiple different standards corresponding with the international degrees offered by their respective HEIs (Lim, 2010). This external pressure faced by members of Malaysian academia could possibly contribute to a sense of decreased TI in the workplace.

As highlighted by previous research, a key characteristic of TI is a sense of personal psychological ownership of one's job (Pierce et al., 2009). Being regularly pressured to take up multiple roles that may not be integral to their status as an academic may contribute to a reduced sense of psychological ownership in the workplace. Research by Pierce, Kostova, and Dirks (2001) supports this notion, where it was found that one of the key routes to the development of psychological ownership and TI is the willing investment of ones' self into ones' work. Malaysian academics may feel dissociated from TI in their workplace if they feel that a majority of their job tasks is thrust upon them due to external pressure rather than being something they are intrinsically motivated to perform and master (Sohail, et al. 2006; Hong and Songan, 2011).

It is thus possible that Malaysian academics do not draw much WE from TI simply due to the current nature of their job which is inherently low in TI.

The previous investigation into the relationship between feedback and JPM found no statistically significant relationship, indicating that a mediation relationship in this study's analysis was unlikely. The findings in this study provided confirmation in this regard. FFJ was found to have no significant relationship with WE, which automatically ruled it out of a mediation analysis according to the mediation approach suggested by Baron and Kenny (1986). Furthermore, while FFO did possess a significant relationship with WE, and the Baron and Kenny (1986) approach suggested a possible mediated relationship due a drop in the beta weight upon the inclusion of JPM, a further analysis using bootstrapping found the indirect effect to be non-significant.

Similar to the relationship between feedback and JPM discussed in the previous chapter, a possible explanation for the non-significant relationship between feedback and work engagement could be due to cultural nuances inherent in the perception of feedback (Sully De Luque & Sommer, 2000). As research suggests, in the Malaysian context, feedback in the Malaysian context is heavily influenced by the factor of power distance, which may negate its effectiveness and therefore its importance to the Malaysian academic workplace (Madlock, 2012; Qian & Li, 2016). Thus, similar to the non-significant relationship between feedback and JPM in the previous chapter, feedback was also found to have no statistical significant relationship with WE in this study. The implications of this finding will be discussed further in the subsequent discussion chapter.

Overall, the findings of this study suggests that while JPM plays a significant role as a mediator between some of the JCM's factors and WE levels of Malaysian academics, it does not

influence all of the variables equally as research on the JCM suggests (Hackman & Oldham, 1976; Fried & Ferris, 1987). As initially discovered by Birnbaum et al. (1986), it appears that the applicability of the JCM as a theoretical framework for the workplace is subject to the cultural norms within which it is applied, and the same is certainly true from the findings of this study. The applicability of the JCM to the Malaysian academic work context as a whole will be discussed further in the subsequent chapter.

8.6.3. Burnout and engagement: more than just polar opposites

Previous research on the relationship between burnout and engagement suggests two possible relationships – bipolar opposites (Gonzalez-Roma et al., 2006) or closely interrelated but distinct constructs (Schaufeli et al., 2002). The findings of this study suggests that burnout and engagement are two separate but closely interrelated constructs, in support of the perspective suggested by Schaufeli et al. (2002). Similar to previous research, this study found a significant negative relationship between burnout and engagement among Malaysian academics (Sabagh et al., 2018). However, the results of this study also indicates that engagement is predicted by job resources and characteristics such as autonomy, TS, and SV, similar to the findings of Schaufeli and Bakker (2004). This suggests that Malaysian academics perceived burnout and engagement as two separate, distinct constructs, as the variables that contribute to the experience of burnout and the variables that contribute to increased WE in the Malaysian academic workplace are significantly different from each other. Furthermore, the results indicated that burnout accounted for only 14% of the variance of work engagement among Malaysian academics in this sample, indicating that while burnout had a negative relationship with work engagement, it did not account for a majority of the variance in WE. Comparatively, the mediation model of this study indicated that autonomy, TS, SV and JPM jointly accounted for 50% of the variance in WE.

Jointly assessed, these findings offer clear evidence for Schaufeli and Bakker's (2004) suggestion of burnout and WE being separate constructs.

Extant literature on the relationship between burnout and engagement suggests that burnout is a possible mediator between work and personal characteristics and WE (Demerouti et al., 2010). Research by Hakanen, Bakker, and Schaufeli (2005) conducted on a sample of teachers found that burnout mediated the relationship between job resources and WE levels. Similarly, this study found that burnout was a significant mediator between JPM and WE for Malaysian academics. An increase in JPM was associated with a decrease in burnout, which further predicted an increase in WE levels. The significance of burnout as a mediator between JPM and WE highlights the danger of adopting an overly-simplistic view of job psychological meaningfulness and engagement as suggested by past research (Ponton et al., 2012; Rothmann & Hamukang'andu, 2013), particularly within the Malaysian academic sector. The findings of this study suggests that any discussion on the relationship between meaningfulness and engagement among Malaysian academics needs to also take into account the role of burnout within the relationship. Additionally, it also suggests that burnout possesses a dual relationship with work engagement – as a direct negative predictor of engagement, as well as mediator between JPM and WE. The potential significance of this dual relationship between burnout and WE is further emphasised when analysed within the current context of the high burnout levels suffered by Malaysian academics that was highlighted in the previous chapter, the implications of which will be discussed in the subsequent chapter.

8.6.4. When cash isn't king: the non-significance of money as a predictor of engagement

Lastly, this study also analysed the relationship between salary and work engagement levels among the Malaysian academic population. As reported in the findings of the initial

qualitative investigation, while respondents reported a slight dissatisfaction with the state of their financial remuneration, none of them highlighted it as a significant factor that affected their work outcomes. The sense of dissatisfaction with financial remuneration reported by respondents in the qualitative study is reflected in Morris, Yaacob, and Wood's (2004) study, where a sample of Malaysian academics also reported being dissatisfied with their level of pay. However, despite the reported dissatisfaction, research conducted on Malaysian academics have found that money is less of a significant predictor of work engagement and effort compared to other factors such as public service motivation (Ali, 2013). Thus, based on the findings of the initial qualitative research as well as past research, it was hypothesised that there would not be a significant relationship between salary and WE among the general population of Malaysian academics.

As shown in the results, the hypothesis between salary and WE was supported in this research, similar to the findings of Ali (2013). No significant relationship was found between how much a Malaysian academic was paid and their respective levels of work engagement. Furthermore, salary was found to account for only 2% of the variance of WE. However, it is important to note that this result does not in any way suggest that salary has no impact whatsoever on Malaysian academics, as past research has found a positive correlation between salary levels and job satisfaction among Malaysian academics (Mustapha, 2013; Mustapha & Zakaria, 2013). The non-significance of salary range on WE also by no means indicates that the state of financial remuneration for Malaysian academics is at an acceptable level.

Analysis of the studies published comparing the respective levels of financial remunerations of academics between Malaysia and other developed and semi-developed countries reveal the large room for improvement that the Malaysian academic sector has with regards to salary. A comparison of the average monthly salaries for academics found that

Malaysia ranked 11th out of 15 countries studied, lagging far behind developed countries such as Canada, US, Australia, Germany, UK, France, New Zealand, and Japan, and even losing out to semi-developed countries that would typically be considered peers such as South Africa and Saudi Arabia (Rumbley, Pacheco, & Altbach, 2008). Further analysis highlighting the disparity between Malaysia and other countries with regards to academic pay was provided by Falk's (2011) study, where the average financial wages of Malaysian academics was ranked the lowest among the seven Commonwealth countries of Australia, Canada, New Zealand, Singapore, South Africa, and the UK. The absolute gulf between what Malaysian academics were paid compared to their peers from these countries is perhaps best exemplified in the reported midpoint average salary levels, with Malaysia's salary midpoint being less than 10% of the second lowest ranking country (New Zealand), which only serves to highlight the dismal state of financial remuneration among Malaysian academics (Falk, 2011).

All of this makes the current finding of non-significance between salary levels and WE all the more intriguing. Despite the positive correlation between money and job satisfaction found by research (Mustapha, 2013; Mustapha & Zakaria, 2013), the dissatisfaction reported by Malaysian academics (Morris, Yaacob, & Wood, 2014), as well as the abject state of the wages (Falk, 2011), the current finding suggests that Malaysian academics are somehow able to look beyond the money in their experience of work engagement. The following chapter will examine the possible reasons for this phenomenon, and seek to present an argument for why, when it comes to engagement among Malaysian academics, cash is indeed not king.

8.7. Chapter summary and conclusions

The chapter began with a brief overview, followed by a descriptive analysis of the data analysed in this study. This was then followed by a short section explaining and justifying the

use of SEM in this study and clarifying the assumptions that are required for the use of SEM. Subsequently, the inferential statistics examining the relationships between the various factors in this study according to their respective hypotheses was presented, along with the relevant results. This chapter ends with a brief discussion of the results found in this study. The next chapter will present an integrated discussion which incorporates the results found in the three research chapters of this thesis, including the limitations of this research and the implications that may arise from the findings of this research.

Chapter 9: General discussion, implications, and directions for future research

9.1. Chapter Overview

This chapter presents a general discussion of the findings of the three studies discussed in the previous 3 chapters (Chapter 6, 7, and 8). This chapter also discusses the theoretical and practical implications arising from the findings of these studies vis a vis the overall objectives of thesis followed by a discussion of the limitations that could have affected the findings of the thesis. . Lastly, recommendations for future research are presented, followed by a summary of the key points of this chapter.

9.2. Reconceptualising academic work: a means to an end or an end in itself?

The results obtained in this study suggests a rethink of the perspectives that one has towards academic work; whether or not it is just a profession within which individuals earn or living, or whether it represents something far greater – a lifelong process of growth and development. The themes that emerged in the qualitative analysis suggests that the respondents did not view their work as a means to an end, but rather an end in itself. This can be seen in the respondents' frequent mentions of the sense of identity that academic work gave to them, in addition to a sense of peace and calling in their life as a result of their job. In other words, being an academic was not so much what they did as it was who they are; a way in which they could experience meaning and fulfil their life's purpose. As Hall and Chandler (2005) suggests, a sense of calling is characterised by an individual doing work out of a strong sense of inner direction, and this was certainly true of the respondents in this study. Additionally, the quantitative findings also suggest that this perception of academic work being more than just a source of income is prevalent even among the general Malaysian academic population, as the positive relationship between perception towards work and job psychological meaningfulness implies.

The view of academic work as a calling and vocation is supported by Schwehn (1992), who found that a majority of academics obtained a sense of vocation from two key concepts of the academic job: making knowledge, and transmitting it to others. The qualitative phase of the thesis highlights also highlights these same concepts – respondents in this study mentioned the joy that they experienced at gaining new knowledge was a main motivational characteristic of their job. Furthermore, respondents' ubiquitous accounts of their delight in encountering the "lightbulb" or "aha" moments from their students also supported the importance of knowledge transmission to others as a key characteristic of academic vocation.

In addition to a calling and mission, the results also indicate that academics viewed their career as a developmental process within which they could grow into their full potential – or a pathway towards self-actualisation (Maslow, 1943). As the qualitative investigation revealed, part of the perceived organisational support received by academics that was deemed important was type of training that they were provided with. The academics in this study placed a relatively high level of importance on the effectiveness of the organisational trainings given to them, especially when they perceived it to be useful to their development as an academic. However they also disliked it when it was perceived to simply be conducted in partial fulfilment of the organisation's obligations.

This view of work as process of self-development and improvement is not unique to the Malaysian academic population. Baldwin and Blackburn (1981) found a similar trend amongst U.S. based academics, where their profession as academics was viewed not just as a job, but as a process of continuous personal growth and development. Further support for academia being more than just a means to an end can be seen in the qualitative and quantitative findings regarding financial remuneration in the Malaysian academic workplace. As suggested by Hall

and Chandler (2005), a defining characteristics of a calling is an internal motivation that is not motivated by instrumental goal-seeking, and this was found to be true of respondents in this study. Nearly all of the respondents in the qualitative study acknowledged that their choice of career meant giving up more lucrative professions, yet none of the respondents were significantly affected by that notion, believing that the intrinsic rewards their job offered were a worthwhile trade-off for the money they were forgoing. The further quantitative investigation into the relationship between salary levels and work engagement also found no significant relationships for the general academic population. These responses reflect the findings of Cho and Perry (2011), who found that intrinsic factors were more effective than extrinsic rewards such as money, and further supports the weak correlation found between financial remuneration and work satisfaction (Judge et al., 2010).

Additionally, an analysis of the qualitative findings regarding turnover intentions further supports the notion that Malaysian academics viewed their work as an end in itself. The respondents reported relatively low turnover intentions, with most reporting no plans to leave academia in the foreseeable future. Some respondents even reported the desire to stay in academia for the rest of their lives, barring mandatory retirement. This can once again be linked to the view that respondents had towards academia – a sense of mission and a personal developmental process. Similar results were also obtained from a study on US academics, where respondents who perceived academia as their calling were far less likely to quit their jobs (Oates et al., 2005).

9.3. Rethinking job psychological meaningfulness in the Malaysian academic workplace: work characteristics, changing perceptions, and the interdependence between the academic and institution

The findings of this study also brings up the possibility that a rethink is required when it comes to job psychological meaningfulness in the Malaysian academic workplace. One of the aims of this research was to determine what constitutes the meaning of work for Malaysian academics, and the results obtained suggests that it is subject to factors that are both within the locus of control of the Malaysian academic, as well as external to their control, indicating an interdependence between worker and institution when it comes to the construction of what Malaysian academic work means.

This study also found that one of the main sources of work meaning that Malaysian academics draw from is the characteristics of their work. The qualitative findings suggest that work characteristics such as autonomy, the freedom to pursue additional initiatives, the importance of the tasks that they were given, as well as the ability to see the development of their students in their everyday work were significant factors that contributed to what work meant for the respondents. The findings from the quantitative phase offers further support, where statistically significant relationship were found between the JCM factors of autonomy, TS, TI, and SV in predicting JPM, suggesting that these work characteristics play a major role in determining the meaning of work for Malaysian academics in general. As previously discussed, these findings are similar to the findings of previous studies regarding factors that constitute meaning in the academic workplace (Oshagbemi, 1997; May et al., 2004; Parry 2006; Ariely et al., 2008).

What these findings suggest is that a large part of what constitutes meaning in the Malaysian academic workplace is situated outside of their control and in the hands of the organisations that they work for, as work characteristics such as how much autonomy one is given or whether one is allowed to pursue and develop additional skills and mastery in the workplace is mostly subjected to the control of the HEI (Azizan, Lim, & Loh, 2010). However, this study also found that the meaning of Malaysian academic work is also subject in part to the perceptions held by the academics themselves, with academics who perceived their work to be a calling or to consist of meaningful work tasks more likely to experience job psychological meaningfulness, similar to the findings of past research (Oates et al., 2005).

One finding that highlights the importance of perceptions held by academics pertains to the role of social support in the workplace. The initial qualitative findings suggested that social support was a significant contributing factor to the meaning of work for Malaysian academics. However, upon further analysis, it was found that it was the perception of social support rather than actual social support that was a significant predictor of JPM, a finding that is highlighted by previous research (Schwarzer & Leppin, 1991). This finding suggests that the reality of social support received in the workplace may not be as important as how individuals perceive it to be, a finding that is supported by previous research (Barrera Jr., 1986; Sarason et al., 1990). Research by Zimet, Dahlem, Zimet, and Farley (1988) found that high levels of perceived SS was enough to predict low levels of depression and work anxiety. Meanwhile, one particular research studying the effects of perceived SS and actual received SS among clergy members found that when it came to improving work outcomes, perceived SS had a more significant relationship compared to received SS (Eagle, Hybels, & Proeschold-Bell, 2018). Similarly, the findings of this study indicates that when it comes to increasing JPM levels among Malaysian academics

through SS, perception indeed trumps reality, and improving the perception of SS in the workplace among Malaysian academics can lead to greater improvements in JPM.

Additionally, the findings of this study also found that the perception towards work was one of the strongest predictors of JPM among Malaysian academics. The qualitative responses obtained from respondents indicated that a majority of them found meaning in being an academic because of their views towards work - "*I can't be in education and just do it as a job…it is people's lives."* The follow-up quantitative study found similar relationships between the perception towards work and increased levels of JPM among Malaysian academics, suggesting that the perception held towards their work is a significant factor in influencing what work means for Malaysian academics. The influence of perception towards work on the meaningfulness of one's work in academia is also supported by research (Oates et al., 2005).

These findings offer insights into the conceptualisation of academic work for Malaysian academics, and emphasises the importance of both work characteristics as well as the perception of Malaysian academics themselves. This suggests an inherent interdependence between both the academic and the organisation – both parties hold significant influence and have a significant role to play in determining what constitutes the meaning of work for Malaysian academics. This finding contributes to the current workplace literature, which heavily emphasises work characteristics as the panacea to psychological meaningfulness (Hackman & Oldham, 1976) by placing the locus of control partly back into the hands of the workers themselves.

9.4. Is the JCM a useful theoretical model for the Malaysian academic workplace?

The findings of this study suggests that the JCM is mostly a viable theory to conceptualise Malaysian academic work, albeit with a slight modification to its factor structure for a better fit to the Malaysian academic population. The qualitative analysis extracted several

themes that seemed to correspond with the factors of the JCM. Furthermore, the quantitative study empirically tested the factors of autonomy, TS, TI, and SV and found them to significantly predict JPM, echoing the postulations of the JCM (Hackman & Oldham, 1976). This suggests that the JCM is mostly applicable to the Malaysian academic setting despite it being initially designed for more corporate workplaces (Kopelman, 1985), which largely mirrors the findings of previous research that applied it to an educational setting (Barnabe & Burns, 1994; Houkes, et al., 2001).

However, the results indicated that certain modifications to the factor structure of the JCM was needed in order to properly apply the theory to the Malaysian academic population. The most salient difference between the suggested factor structure of the JCM as proposed by Hackman and Oldham (1976) and the structure adopted in this study is the dropping of feedback as a significant characteristic of the Malaysian academic workplace. The findings of this study are similar to those of Birnbaum et al. (1986), which also found a four-factor structure of the JCM without feedback to have the best model fit when applied to a sample recruited from Hong Kong. As both Malaysia and Hong Kong come from primarily Asian-collectivistic societies, the similar findings suggests a possible effect of culture in explaining why feedback was considered a nonsignificant factor of the JCM. The concept of feedback and how its perceived in an Asian-collectivistic work context is one that is full of nuance that may not be present in the primarily Western-individualistic cultural context within which the JCM was developed (Molinsky, 2013), with the power distance playing a significant role in the way feedback is perceived and accepted in Asian work communities (Madlock, 2012; Qian & Li, 2016). Thus, while the JCM was found to be mostly applicable to the Malaysian academic context, the findings suggests that certain

work characteristics such as feedback may be prone to cultural influences and thus have different effects on workplace meaningfulness.

Nonetheless, the establishment of a four-factor structure of the JCM represents an important step forward in the journey to better understand Malaysian academic work. Establishing the JCM as a viable theoretical framework for the Malaysian academic workplace is vital in the struggle to improve the future prospects of a sector that still finds itself struggling with legacy issues as a result of a complicated past (Mok, 2011; Else, 2016). This research began with the aim of providing a sound psychological model within which the disparate elements present in the Malaysian academic workplace can be analysed. It was hoped that the establishment of a viable theoretical framework can lead to a better understanding of the various variables that serve as work resources to Malaysian academics, as well as an understanding of what leads to job psychological meaningfulness and improved work outcomes. The finding of the JCM as a valid theoretical framework that can be applied to the academic workplace partially fulfils this aim. However, the findings of this research with regard to the non-significance of feedback as well as the saliency of other non-JCM related variables such as the perception of academics themselves suggests that there remains a way to go in being able to properly develop a model of work meaningfulness that fully encapsulates what it means to be a Malaysian academic. Nonetheless, at the very least, the findings of this research offers a starting point for research into the Malaysian academic work context.

9.5. Burnout in Malaysian academia: standing on the edge of the precipice

The prevalence of research documenting the struggles and high levels of stress experienced by Malaysian academics in their workplace as a result of excessive work demands (Yaacob & Wood, 2004; Arokisamy et al., 2011; Aslan et al. 2014) suggested that burnout would

undoubtedly be a significant factor in this study. The results obtained from the initial qualitative investigation supported the findings of previous researches with virtually all respondents making mention of their struggles stemming from work overload, and with exhaustion being one of the major themes of the study.

These findings were also supported by the subsequent quantitative studies where analysis of burnout levels of Malaysian academics recruited were found to be significantly higher compared to previous samples (e.g. Kristensen et al., 2005). These findings were similar to findings of past researches into the Malaysian academic sector (Ahsan et al., 2009; Mukosolu et al., 2015). These findings highlight an important an issue within the Malaysian academic community, one that will possibly become more severe over time as the field continues to grow in numbers and no intervention is taken to address it (UIS, 2016).

Perhaps the most significant finding with regards to burnout in this study is when it is taken in the context of its relationship with work engagement (WE). As previously discussed, burnout was found to have a negative relationship with WE, similar to the findings of past research (Schaufeli et al., 2002; Sabagh et al., 2018). However, in addition to its negative relationship with WE, this study also found that burnout was a significant mediator between JPM and WE for Malaysian academics. The phenomenon of burnout as a mediator between work factors and engagement is in itself a well-validated point in research (Hakanen et al., 2005; Demerouti et al., 2010); however, its role as a mediator of the relationship between JPM and WE suggests that burnout represents a more critical factor to the Malaysian academic sector than was initially assumed. This is because while it was understood from a review of the literature that burnout would likely be prevalent among Malaysian academics (Yaacob & Wood, 2004), and that it would negatively impact on their respective levels of WE (Schaufeli et al., 2002), the

findings suggesting that it is a significant mediator between JPM potentially introduces an entirely new dimension to the challenge currently faced by the Malaysian academic sector.

As indicated by the findings, burnout levels among Malaysian academics are already at a problematically high level. Although this in itself already represents a significant challenge faced by the sector, its potential to mediate the relationship between JPM and WE further exacerbates the problem, as any initiative to increase JPM levels among Malaysian academics in order to improve WE might possibly be handicapped by the high levels of burnout present mediating the direct relationship between the two variables. Therefore, any attempt to significantly improve work outcomes through the manipulation of work variables will have to first contend with the high levels of burnout if it is to make any tangible difference in the Malaysian academic workplace. These findings frames the high level of burnout currently experienced by Malaysian academics in a much more sobering perspective, and suggests that an effective and holistic solution to tackle the endemic problem of burnout among Malaysian academics is badly needed if the sector is to achieve its stated goals to be an international hub of education as set out in the Ministry of Higher Education (MOHE)'s Plan 2015-2025 (MOHE, 2015).

9.6. Crafting the engaged Malaysian academic

Despite the negative findings in relation to burnout levels of Malaysian academics, this thesis also offers several positive perspectives, particularly with regard to increasing WE levels for Malaysian academics. With increasing focus placed on the importance of engagement in the workplace (Demerouti & Cropanzano, as cited in Bakker & Leiter, 2010), the findings of this research offers insights into the work variables that may be critical in the crafting of a workplace that is conducive for work engagement. As the results of Chapter 8 demonstrate, while JPM was found to be a mediator between several job characteristics and WE levels in accordance with the

postulations of the JCM (Hackman & Oldham, 1976), direct effects were still found between some of the work characteristics and WE such as autonomy and TS., which was similar to the findings of previous research (Schnell et al., 2013; Skaalvik & Skaalvik, 2014).

The direct relationships that exist between autonomy and TS with WE in addition to its indirect effects when mediated by JPM indicates the importance of the two variables in the effort to improve the work outcomes of Malaysian academics. For instance, the dual-pathway relationship that exists between autonomy and WE makes it possible that a minor increase in autonomy can result in a greater increase in WE due to the synergistic nature of both pathways (direct and indirect) between autonomy and WE. Thus, HEIs can begin to design workplaces with a greater emphasis on autonomy for their academic faculty in order to significantly boost WE levels (Skaalvik & Skaalvik, 2014). Similarly, the existence of a dual-pathway relationship between TS and WE offers a way for HEIs to increase the engagement levels of their academic staff by encouraging greater TS in the workplace, which allows academics to better perceive the importance and impact that their work has on their immediate community as well as its wider surroundings.

Furthermore, while previous research has highlighted significant relationships between JPM and WE (van Zyl et al., 2010; Steger et al., 2012), the robust relationship (as highlighted by relatively high beta weights) found between JPM and WE suggests that JPM plays a very important role in crafting WE amongst Malaysian academics (Barnabe & Burns, 1994), and the integral role that Malaysian HEIs have in ensuring that the work environments provided to their faculty members incorporate work characteristics that will promote WE.

9.7. Re-examining work variables in a Malaysian academic context

In the course of measuring work variables in this research, it was found that some of the work variables suggested by extant literature is perceived differently by the Malaysian academic population sampled in this study. Of particular interest is the difference in perception with regards to what constitutes meaningful work, autonomy, and work engagement.

9.7.1. Malaysian academics' perception towards engagement and meaningful work

The results of the confirmatory factor analysis conducted on the UWES scale found a better model fit for a single-factor structure of work engagement instead of a three-factor structure suggested by Schaufeli et al. (2003). This finding is contrary to the findings of extant literature regarding WE, where empirical support was found for a three-factor structure of work engagement consisting of vigour, dedication, and absorption (Salanova et al., 2000). This suggests that Malaysian academics did not differentiate between the concepts of vigour, dedication, and absorption in their view of WE. An analysis of the individual factor loadings found that the items that were related to the dimension of dedication loaded highest on the factor of WE, while items that were related to absorption were found to have the lowest factor loadings, with one item dropped due to factor loadings that were too low. Similarly, one item linked to the dimension of vigour was found to have factor loadings that were too low, leading to it being dropped. Overall, these findings suggests the possibility that Malaysian academics viewed WE primarily from a standpoint of dedication towards their work rather than how absorbed they are or how much vigour they experience in their workplace.

One possible reason for the primacy of dedication over the other two dimensions of vigour and absorption in this study could be due to the nature of the dimensions themselves. A majority of the items testing the dimensions of absorption and vigour are affective in nature – "I

feel happy when I am working intensely" (Schaufeli et al., 2003), which may lead to differences in answers based on the cultural norms of the sample being studied. As Shimazu, Schaufeli, and Iwata (2010) discovered, cultural differences explain the difference in scores on the UWES between East-Asian collectivistic responses and Western-individualistic responses because of the increased tendency of East-Asian respondents to suppress positive affect as part of the societal norm of non-self enhancement. It is possible that the Malaysian respondents in this study, who belong to an Asian-collectivistic culture similar to that studied by Shimazu et al. (2010) similarly perceived WE primarily from the descriptive dimension of dedication rather than the affective dimensions of vigour and absorption.

Additionally, CFA conducted on the factor structure of the WAMI found support for a single-factor structure of meaningful work rather than three separate factors of Positive Meaning (PM), Meaning Making (MM), and Greater Good (GG) as suggested by Steger et al. (2012). PM is defined as the extent to which individuals are able to judge what they do in their work to be meaningful in general, MM is the extent to which individuals perceive specific ways in which their life's overall meaning benefits from meaningful work, whereas GG is the extent to which individuals perceived their work to be meaningful because of its impact on others. The results in this study indicated that the dimension of PM was the most salient of the three dimensions, and suggested that Malaysian academics tended to perceive meaningful work from the perspective of a unified overarching factor of how meaningful they judge their work to be in general (PM).

Existing literature regarding meaningful work offers no consensus on its definition (Weeks, 2017), suggesting that what makes up meaningful work is fluid and dependent on the population that is being studied. As Schwartz (1999) suggests, how people perceive work and meaning can be heavily influenced by the cultural values of their society. This offers a possible

explanation for why Malaysian academics perceived meaningful work from a single, unified perspective of what general meaning rather than a combination of three separate dimensions. There is substantial evidence in present research that suggests individuals from Eastern cultures tend to view the world from an interconnected and continuous perspective, while individuals from Western cultures were more prone to adopt a more analytical view of the world – focusing on independent objects and their attributes (Jandt, 2017). Asians have been found to focus on and emphasise interdependent dimensions, whereas individuals from a predominantly Western cultural background tended to be better at perceiving distinct, independent dimensions (Hedden, Ketay, Aron, Markus, & Gabrieli, 2008). These findings suggest the possibility that Malaysian academics perceive the different facets of PM, MM, and GG to be interconnected and continuous, forming a singular dimension of meaningful work due to a cultural tendency towards a holistic perspective, and were thus less able to adequately distinguish between the three facets suggested by Steger et al. (2012).

9.7.2. Autonomy in the Malaysian academic workplace

Previous research on workplace autonomy suggests that it consists of three underlying factors which are Work Method Autonomy (WMA), Work Criteria Autonomy (WCA), and Work Schedule Autonomy (WSA) (Breaugh, 1999; Morgeson & Humphrey, 2006). However, confirmatory factor analysis conducted on the autonomy scale found a single-factor structure of general autonomy, contrary to past research. As indicated in the findings in Chapter 5, the respective model fit indices for both the three-factor structure and the single-factor structure were roughly similar, however, the Akaike Information Criterion (AIC) value for the single-factor structure was lower compared to the three-factor structure, indicating a better model fit (Kenny, 2015). This suggests that Malaysian academics viewed workplace autonomy as a single-

factor construct of overall autonomy rather than as three different types of autonomy. A possible explanation for this result can be found in an analysis of the current workplace structure of Malaysian academia.

As highlighted by previous research, poor work-life balance is one of the main challenges faced by the sector (Mohd Noor, 2011), indicating that a majority of Malaysian academics are pressed for time in their work due to an increase in work demands. These time constraints possibly contribute to a lessening of WSA, as the academics struggle to complete their workload in time. Furthermore, research on Malaysian academics have also found that they are often required to play multiple roles in their workplace due to organisational pressure (Hong & Songan, 2011; Idris, 2011). Additionally, the academic sector in Malaysia consists of key performance index (KPI) scales often imposed on academics externally by the HEI in a bid to improve the university's standing and reputation such as yearly research publication quotas, which can be a source of additional stress to Malaysian academics, especially as they mostly do not have a say in the formulation of said KPIs (Azizan, Lim, & Loh, 2010). The pressure to perform multiple roles, coupled with a KPI system over which they have little to no control possibly contributes to a reduced sense of WCA for Malaysian academics, which is defined as the ability for workers to control or choose the criteria upon which their work is evaluated (Breaugh, 1999).

As such, it is thus unsurprising to find that the academics in this study viewed workplace autonomy as a single-factor structure, as WMA seems to be the only form of autonomy that academics can truly enjoy. An analysis of the qualitative investigation reveals support for this, where respondents frequently mentioned how they appreciated the autonomy that they had with

regards to redesigning their syllabus, deciding upon their own research interests, or completing their work from home, all of which are inherently related to WMA rather than WSA or WCA.

9.8 Implications of the study

9.8.1. Theoretical implications

Overall, this study makes several contributions to the field of Malaysian academia. One of the theoretical implications as a result of this study is a deepening of our current understanding of what constitutes the meaning of work for Malaysian academics. As the results in this study suggests, job characteristics and perceptions play a large role in determining the meaning of work for the Malaysian academics in this study. Specifically, it was found that Malaysian academics experienced meaning in their work when they had the autonomy to prosecute their work as they saw fit, when they were allowed to develop different competencies and utilise a variety of skills whilst doing so, and when they could identify with the task at hand and comprehend its significance both to themselves and to others. These job characteristics – also postulated in the JCM (Hackman & Oldham, 1976), should therefore serve as the foundational bedrock upon which the Malaysian academic work is designed. Additionally, this study also found the experience of meaning in the workplace to be intricately tied to the perception one has towards their work, and contributes to the existing literature of workplace meaning and well-being for Malaysian academics (Houkes et al, 2001; Oates et al., 2005) by establishing a model of meaningful work based on the interdependence between academic work characteristics and the perceptions held by academics themselves.

Additionally, this study also contributes to the current literature regarding the factor structure JCM as a theoretical framework for the workplace. Previous studies have consistently demonstrated the JCM to be an appropriate model for multiple fields of work and useful for

organisational research (Fried & Ferris, 1987). However, this study found that the factor structure of the JCM that best fits the Malaysian academic context is a four-factor structure without the characteristic of feedback, suggesting that the theoretical framework of the JCM is susceptible to changes depending on the cultural context, and may not necessarily apply similarly to culturally dissimilar work environments (Birnbaum et al., 1986). Specifically, the similarity between the findings of this study and the results found by Birnbaum et al. (1986) suggests that when applied in a workplace that is primarily Asian in culture, feedback may not be as significant a factor in determining job psychological meaningfulness.

Furthermore, this study contributes to the existing literature of the JCM by establishing its suitability for an academic workplace. While the JCM was initially designed for use primarily in the corporate sector (Hackman & Oldham, 1976; Kopelman, 1985), the findings of this study demonstrates that the JCM is also useful as a theoretical model for the Malaysian academic workplace as significant relationships was found between four of the five characteristics and JPM, which was suggested by Hackman and Oldham (1976). This represents a double validation of the JCM as a theoretical framework, as the finding suggest that it is a suitable theoretical framework both for an academic work sector, as well as one that is primarily Asian, especially considering that a majority of studies conducted on the JCM have been conducted primarily in corporate, predominantly Western cultural settings. This finding is useful for both the current stakeholders such as Malaysian HEIs as well as the Ministry of Higher Education and future researchers as it provides a psychological framework within which to analyse the work conditions of Malaysian academics and to design more effective and conducive academic workplaces. As the education sector in Malaysia continues to rapidly expand and grow (UIS, 2016), the need for psychologically valid, theoretically-driven workplace design initiatives will

only grow in importance in the near future. The JCM can thus provide the basis for theoretically-driven future initiatives targeted at studying and improving the Malaysian academic workplace as a whole.

This study also suggests the possibility for the establishment of an expanded theory of job psychological meaningfulness based on the general structure of the JCM. The significant relationships found between other workplace factors and the JCM suggests that the JCM in its current iteration is not sufficiently wide enough to encompass all the possible factors that lead to job psychological meaningfulness, despite its status as an already established workplace model (Hackman & Oldham, 1976; Fried & Ferris, 1987). For instance, the significance of social support and perception towards work was found to be significant predictors of JPM in this study in addition to the job characteristics postulated by the JCM (Hackman & Oldham, 1976). , indicating that the current five-factor structure of the JCM may adopt a perspective that is too narrow.

The findings regarding workplace variables suggests that both cultural and environmental contexts plays a role in the conceptualisation of the variables that influence work, and a failure to account for nuances that arise from either context may lead to biased results. With regards to the influence of the environmental context, the findings on autonomy suggests that its factor structure is heavily reliant on the nature of the job as well as the context within which the job is performed. While Breaugh (1999) and Morgeson and Humphrey (2006) both suggest that a three-factor structure of autonomy is ideal, the environmental context of Malaysian academia demonstrates that the factors of Work Criteria Autonomy (WCA) and Work Schedule Autonomy (WMA) may not have a significant effect or even be entirely relevant due to the demands and practices of the Malaysian academic workplace (Azizan, Lim, & Loh, 2010; Hong & Songan,

2011; Idris, 2011). This suggests that work autonomy as a construct is best studied in relation to the context within which the work is carried out, and that measuring all three facets of autonomy in a particular workplace without adequate consideration of whether some of its facets may be relevant can possible lead to a bias in results.

This study sheds some light on the current predicament of burnout faced by Malaysian academics. While past research has pointed to difficulties and challenges present in the Malaysian academic workplace due to workplace stress (Nasurdin & O'Driscoll, 2011; Makhbul & Khairuddin, 2013; Mukosolu et al., 2015), few if any research has sought to provide a diagnostic evaluation regarding the burnout levels of Malaysian academics prior to this research. The findings of this study provide empirical evidence that work-related burnout is indeed prevalent among Malaysian academics, and is possibly exacerbated by the rapid expansion of the Malaysian higher education sector without commensurate increases in work-related resources. The implications of these results are clear: urgent intervention is needed to address the problem of work-related exhaustion and burnout among Malaysian academics before it reaches a critical point where it is difficult to salvage.

Furthermore, the present study provides empirical evidence of the positive relationship between JPM and WE levels for Malaysian academics. This finding can prove to be fundamental to the improvement of the Malaysian academic sector as a whole, as past research suggests that more engaged workers typically leads to greater role performance (Bakker & Bal, 2010; Bakker et al., 2014), which translates to more successful organisations (Xanthopoulou, et al., 2009), ultimately leading to the elevation of the entire Malaysian higher education sector. Furthermore, the negative relationship between WE and burnout suggested by research (Sabagh et al., 2018) which was also found in this study offers some possible solutions to fixing the problem of

burnout present in the current environment via the increasing of JPM levels of Malaysian academics.

Finally, the findings regarding what constitutes meaningful work and work engagement has also been found to possibly be subject to cultural influences. While previous studies suggest that meaningful work consists of a three-dimension structure of PM, MM, and GG, this study found that Malaysian academics tended to view meaningful work from a broader perspective of what makes work meaningful in general. Similarly, this study found that the three-factor structure of WE suggested by Schaufeli and Bakker (2003) was not an appropriate fit for the Malaysian academic population. Conversely, confirmatory factor analysis found that a single-factor structure of WE was a better fit for the sample in this study, indicating that Malaysian academics also viewed work engagement from a largely broader perspective of general dedication to the job. Overall, these findings suggest that latent variables such as autonomy, meaningful work, or work engagement are fluid in nature, and do not necessarily possess fixed dimensions that are readily applicable across different cultural contexts. As such, any attempt to offer up a universal psychological definition of these work variables as suggested by previous research (see Breaugh, 1999; Schaufeli & Bakker, 2003; Steger et al., 2012) risks imposing a ethnocentrically-biased worldview on other populations that may differ from the researchers' culture. The psychometric evaluations conducted on the instruments used in this study contributes to the current knowledge regarding the workplace variables measured by these instruments by providing a cross-cultural analysis and validation of these work variables.

9.8.2. Practical implications

Aside from the theoretical implications discussed above, this study's findings also present several practical implications. The first practical implication as a result of this study pertains to

the radical rethink that is required from Malaysian HEIs with regards to the organisational support that they are providing to their academic staff. The findings of this study indicating that Malaysian academics viewed their professional identities as synonymous with their personal identities suggest that personal development initiatives offered by HEIs have a much greater influence on the satisfaction and well-being Malaysian academics. As established by previous research, academic work is unique in a sense that it functions both as a means towards earning an income and a lifelong personal development process (Baldwin & Blackburn, 1981). Malaysian HEIs need to rethink their approach towards staff development – going beyond merely ensuring that their staff have the capabilities to achieve organisational objectives or a fulfilment of organisational obligations, and working hand-in-hand with their academics to ensure that the development opportunities on offer are synchronous with the professional and personal identities that they aim to develop.

Furthermore, the findings indicating burnout as an endemic problem currently plaguing the Malaysian academic sector suggests that significant changes may be required to the structure of the Malaysian academic workplace, the policies that are put in place, and the organisational support that is made available to the academics. As previously indicated, the sector as a whole is still operating on an incredibly lean basis, with academics required to perform extra non-academic roles as a cost-cutting strategy (Sohail et al., 2006), which has contributed towards the exhaustion and burnout levels among Malaysian members of academia today. These findings suggest that burnout levels are approaching a critical point, and a continuing adoption of such a lean approach towards organisational structure may no longer be the right approach. As such, a change in organisational structure and management may be required in order to help alleviate the problem of burnout. Additionally, the negative relationship found between perceived

organisational support and burnout levels in this study similar to past research (Cunningham, 1983; Burke & Greenglass, 1995) reinforces the importance of organisational support in the academic workplace as a buffer against work-related burnout.

Thirdly, the applicability of a four-factor structure of the JCM similar to the findings of Birnbaum et al. (1986) provides HEIs with a starting point for redesigning their job tasks and work environments, ensuring that the factors of TI, TS, SV, and autonomy are integrated into the everyday job experience of their academic staff in order to increase JPM levels as suggested by Hackman and Oldham (1986), and by extension, their WE levels (Rothmann & Hamukang'andu, 2013). An analysis of the strengths of the relationships also provides hints as to which of the factors should be prioritized over the others, with TS found to be the most significant predictor of JPM. HEIs should therefore endeavour to ensure that the significance of the tasks that their academic staff take on should be made clear from the start, and reinforced periodically in order to encourage increased JPM. Furthermore, the non-significance of feedback suggests a possibility that current methods of work-related feedback measures may be insufficient or ineffective contributors towards the overall wellbeing of their academic staff, necessitating a re-think of the way in which HEIs provide feedback to their academic staff in order to improve work outcomes as well as to make the job more meaningful to them.

Fourthly, the findings suggest that it will be valuable for Malaysian HEIs to investigate the perceptions held by their academic staff towards their current work in order to determine if it positively contributes towards increased psychological meaningfulness. This study found significant relationships between the perceptions held by Malaysian academics and their reported JPM levels, indicating that what academics believe about their work and organisation is equally as important as the job characteristics that they encounter in their workplace. It would thus be

beneficial for organisations to both understand and shape the perceptions of their academic staff towards their work, particularly with regards to their perceptions of the meaningfulness of their work and social support, as indicated in the findings of this study. A practical method of shaping positive staff perception is the establishment of organisational mission statements or charter, which has been found to have significant influences on staff perception of their work and organisations (Analoui & Karami, 2002; Sidhu, 2003).

9.8.3. Methodological Implications

In order to test the mediation relationship between the various work variables such as the JCM, JPM, burnout, and engagement, a covariance-based structural equation modelling (CB-SEM) was used. One of the strengths of the CB-SEM is its flexibility in facilitating different types of theory testing, one of which is confirmatory theory testing (Henseler, 2010). As the relationship between the JCM's characteristics and JPM as well as the mediated relationship between the JCM's characteristics and improved work outcomes such as WE is already specified by Hackman and Oldham (1976), a CB-SEM proved to be a useful statistical tool with which to determine whether the specified model applied to the current sample used in this study. Furthermore, as previously discussed, the use of the CB-SEM method also allows for the inferring of indirect and total effects without having to employ ad hoc methods required in standard regression model (Sobel, 1982; MacKinnon, 2008), and also allows for a better assessment of model fit compared to first-generation methods (Bollen, 2012), which further improves the overall validity and reliability of the data.

Another strength of this research's methodology is the recruitment of both public and private members of Malaysian HEIs, which increases the generalisability of the findings and reduces the risk of the findings being over-representative of only one segment of Malaysian

academics. Furthermore, an analysis of the demographic information provided by participants recruited in the quantitative study reveals that respondents came from at least 36 unique HEIs (potentially up to 71 different HEIs if branch campuses are considered organisationally distinct from each other) situated across all 15 states of Malaysia, which further improves the generalisability of the findings obtained in this study due to the demographic extent of the study's sample.

A further implication arising from the methods used in this study is with regards to the recruitment of participants in the study, particularly regarding the recruitment of female participants as interviewees. It was noted throughout the qualitative phase that a majority of the rich and thick descriptions originated from the transcripts of female respondents, whereas their male counterparts were more prone to provide answers which were less descriptive in nature. As noted by previous researches analysing gender differences in self-responses, women tend to disclose more information compared to men (Jourard & Lasakow, 1958). Indeed, a meta-analysis of more than 200 studies analysing gender differences found that women tended to disclose slightly more information than men (Dindia & Allen, 1992), and this study further confirms this trend. The recruitment of more females in the qualitative study thus represents a methodological strength, one which future phenomenological or narrative studies should take note of.

9.9. Limitations of study

Although the findings of this study offer some interesting insights and furthers the current understanding of the Malaysian academic sector, several limitations exist which should be noted. Firstly, the sample used in the qualitative investigation that shaped and provided the foundation for the subsequent quantitative studies was comprised entirely of respondents recruited from four private HEIs situated in the Klang Valley of Selangor, Malaysia. It is thus possible that the lived

experiences of the respondents may not be equivalent to the lived experiences of their counterparts serving in HEIs based in other states, or even in public HEIs. Nonetheless, the researcher opines that the bias, if any, was minimal at best as the subsequent quantitative study which recruited respondents from both public and private HEIs across Malaysia found results that were similar in nature to the results found in the qualitative investigation.

With regards to the sample used in this study, it is also prudent to note that amongst all the respondents recruited for the quantitative studies of this research, none of them identified as having attained the rank of professors in their respective HEIs, indicating that a potentially significant cohort of Malaysian academics went unrepresented in this study, which may contribute to a bias of the results. Nonetheless, it is hoped that the presence of demographically-similar respondents such as associate professors and heads of departments would provide some semblance of balance to the overall data, although the researcher acknowledges that it may not be an entirely accurate or representative replacement for the missing cohort of professors in this study.

A final point regarding the limitation posed by the sample in this study is with regards to the sampling technique used. An ideal sampling strategy to ensure a non-biased sample would be to utilise a random sampling strategy without replacement. However, due to resource constraints, this study utilised a mixture of convenience and snowball sampling, using both hardcopy and online distributions of the questionnaires in order to maximise the reach of this study. Nonetheless, it must be noted that the demographic information collected from this study found that respondents in this study came from all 15 states of Malaysia, suggesting that the fear of a severely unrepresentative sample is unfounded.

With regards to the instruments used in the quantitative phase of the study, it is prudent to note that burnout was measured using only one of the scales of the Copenhagen Burnout Inventory (Kristensen et al., 2005), which was the work-related burnout. This was influenced by the findings of the qualitative study, where respondents mostly mentioned burnout in relation to their work rather than their students as a source of burnout. However, upon reflection, the researcher believes that a more comprehensive perspective of burnout could have been obtained by also employing the client-related burnout scale to measure the burnout levels of Malaysian academics, particularly as research has suggested that the client-related scale can also be applied to students when used in a teaching context (Kristensen et al., 2005).

Lastly, a limitation of this research is its conceptualisation of improved work outcomes through the measurement of work engagement levels. While research suggests that WE is one of the key factors of work outcomes that is increasingly gaining traction (Gonzalez-Roma et al., 2006), it is but one of many different kinds of work outcomes. Furthermore, the subjectivity present in the measuring of WE through self-report measures also represents a weakness in this study, which future research should improve upon, possibly by introducing objective measures of work outcomes such as student grades or amount of yearly publications for academics.

9.10. Suggestions for future research

This study analysed the relationship between JPM levels and WE among Malaysian academics. However, as previously mentioned, there is more than one method of measuring work outcomes besides WE. As such, future research could look into analysing the relationships between the JCM, JPM, and work outcomes such as turnover intentions or objective measures of productivity, in order to determine if the JCM's factors can lead to an increase in those outcomes

as well, which will serve to further bolster the JCM as a viable framework for the Malaysian academic sector.

Furthermore, while this study reinforces the finding that there are no direct effects between salary levels and work engagement (Ali, 2013), previous research does point to significant relationships between salary levels and work performance for educators (Woessmann, 2010). Future research could thus endeavour to discover whether the relationship between salary and work performance exists for Malaysian academics, or whether the non-significance between salary and WE found in this study is also indicative of a non-significant relationship between salary and work performance in general for Malaysian academics.

In order to address the limitations of this study, future research into Malaysian academics should take extra precaution to ensure that all demographics of the Malaysian academic population is represented, particularly with regards to professors, which were not represented in the sample of this study. Additionally, future research could also look into establishing a national database of Malaysian academics to facilitate future research into the sector, as such a database will allow for a simple random sampling technique to be used which will serve to increase the validity and generalisability of future research into Malaysian academia. Furthermore, in the course of recruiting participants for the qualitative study, there were challenges with regards to obtaining permission for the recruitment of staff members from the management of some private HEIs. It was later discovered that permission was declined due to the management's fears of staff unrest should sensitive details such as a remuneration and work challenges be made public to other staff members. It is thus recommended that further studies pre-emptively address this issue by both engaging the management levels as active stakeholders in the study, perhaps by presenting them with a needs-based organisational analysis report stemming from the data

collected in this study that can be used for organisational improvements, hence giving the management of HEIs a compelling reason to participate in this type of research. Alternatively, approaching Malaysian academics on an individual level rather than attempting to recruit them via their organisations can also prove to be a viable method, one that this study eventually utilised.

Additionally, it is suggested that future research studying the burnout levels among Malaysian academics utilise all three of the Copenhagen Burnout Inventory subscales of personal burnout, work-related burnout, and client-related burnout (Kristensen et al., 2005). While this study found that burnout levels were high among Malaysian academics, it only measured work-related burnout. As suggested by Kristensen et al. (2005), the client-related burnout scale can be used in substitution for others such as students (for educators) or patients (for healthcare professionals). As such, future research should consider utilising all three scales of burnout in order to obtain a more holistic perspective of the burnout experienced by Malaysian academics.

With the establishment of the importance of the JCM's four characteristics of TI, TS, SV, and autonomy with JPM in this research, it is hoped that future research can further build on these findings, using it as a theoretical platform to develop strategies to better integrate the JCM's characteristics into the Malaysian academic workplace. For instance, future research could perhaps look into the possible development of a new method of measuring KPI for Malaysian academics that can provide them with a greater sense of TI and autonomy, as the current KPI standards has been found to impose work objectives that are set without their control or consent (Azizan, Lim, & Loh, 2010), and forces them to take up extra tasks that they may not entirely identify with (Hong & Songan, 2011; Idris, 2011).

The non-significance of feedback as a job characteristic in this study mirrors that of Birnbaum et al. (1986), and suggests that the factor of feedback may not be entirely applicable in an Asian workplace. Future research can further contribute to the literature on the JCM in other Asian workplaces in order to determine if feedback is truly not a significant factor as suggested by Birnbaum et al. (1986) and this study. Furthermore, the presence of non-JCM variables as significant predictors of JPM in this study suggests that the JCM in its current form does not wholly encompass the factors that lead to psychological meaningfulness in the Malaysian academic workplace. Future research could look into possibly expanding the JCM to also include non-work characteristic factors such as individual perceptions towards work, and social support, which have been found to be significant factors in this study.

9.11. Conclusions

The Malaysian academic sector is and will remain a critical component in the development of this country, both from an economic standpoint in terms of revenue generation and from a human capital development standpoint, producing new leaders that will take the country forward. It is thus imperative that those who serve in this sector is best provided for, so that they too can provide their best in educating the future leaders of Malaysia. This thesis highlighted how meaning plays a big role in the respective jobs and careers of Malaysian academics, and what are the factors from which they derive said meaning from. Furthermore, this research has also highlighted the prevalence of burnout among the Malaysian academic population, and its relationship between work meaning, work characteristics and work engagement levels.

Additionally, this thesis has also shown how the JCM is a viable theoretical framework that can be applied in order to build a work environment that is more conducive for job

psychological meaning and work engagement for Malaysian academics. Contributions to the literature regarding the JCM is also offered, with the highlighting of the significance of perception and the non-significance of feedback as a job characteristic, suggesting that the JCM should be re-evaluated and possibly expanded to incorporate the variables found in this study.

In conclusion, this thesis has answered all of the research questions initially posed at the beginning of this research, and its contributions to the literature regarding Malaysian academia has been presented. It is hoped that this thesis has provided several insights regarding the Malaysian academic workplace, and has laid the foundation for future studies and interventions to be conducted to improve the Malaysian academic workplace as a whole, and elevate the sector as a result.

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Appendices

Appendix A1: Participant Information and Consent Form for Study 1

PARTICIPANT INFORMATION

Division of Organisational and Applied Psychology

Project Title: A Qualitative Exploratory study on the essence of work for members of academia

Researcher: Victor Goh Weng Yew *Email:* kspx4vgw@nottingham.edu.my

Supervisor : Dr. Hazel Melanie Ramos *Email:* Hazel-Melanie.Ramos@nottingham.edu.my

Ethics Approval Reference Number: N/A

This is an invitation to take part in a research study to qualitatively explore the work experience of members of academia, specifically individuals who are members of the teaching staff of private higher education institutions in Malaysia. This research seeks to explore in detail the work place experiences of members of academia, including but not limited to their attitudes and beliefs towards their work, as well as their motivations challenges faced in the course of their work.

Your participation is voluntary, and you may change your mind about being involved, or decline to answer a particular question or (for interview studies) stop the recording at any time, and without giving a reason. You are free to withdraw at any point before or during the study. For anonymous questionnaires, once you have finished the questionnaire and submitted your answers it is not possible to withdraw the data.

What is the project about?

This project seeks to qualitatively explore the lived experience of members of academia in hopes of gaining a greater understanding of the workplace dynamics. The objective of this research is to be able to pinpoint important factors that are pertinent to the workplace experience of members of academia, along with how these factors interact to form the essence of the work for said members.

Who is being asked to take part, and why?

Participants that will be recruited for this research are required to be members of academia and higher education institutions that have had a minimum of 2 years working experience in this field. This is to ensure that participants who are recruited will have adequate first-hand experience of their work and workplace in order to provide substantial and noteworthy responses.

What will I be asked to do?

Should you decide to take part in this study, you will be required to participate in a one-on-one semi-structured interview lasting a minimum of 45 minutes to a maximum of 1.5 hours. This duration is to ensure an adequate amount of time for participants to fully answer in detail the questions asked of them. You will be asked a series of questions which will include aspects of your work such as challenges, motivations, attitudes, and beliefs held towards work. You are under no obligation whatsoever to reveal information that you may deem sensitive, nor will your non-participation in this research have any official ramifications pertaining to you in your workplace.

Will the research be of any personal benefit to me?

While this research may not benefit you directly, it is hoped that the results obtained from this research will be able to paint a more accurate picture of the essence of work for members of academia, with the resulting data being used to develop an effective theoretical foundation upon which workplace policies pertaining to members of academia can be created that will ultimately lead to an improvement in the overall work experience for members of academia in the future.

What will happen to the information I provide?

As your confidentiality is deemed of the utmost importance to the researcher, any information that may personally identify you, whether by name and/or demographic will be removed from the final report and written transcripts of the audio recordings to ensure anonymity. Pseudonyms and/or name initials will be used in place of your names and demographic data provided where necessary during the transcription process. Only the researcher and an approved transcriber with no links to you in any capacity will be authorized to transcribe the data from the audio recordings. All audio recordings will then be uploaded onto a password protected database hosted on the personal Google Drive account of the researcher which is accessible only to him. Only the researcher and his immediate supervisor will have access to the audio recordings and transcripts, and all related data obtained from the interview will be archived in a secured storage facility for a duration of a period of at least 7 years after the end of the project in line with the University's policies, and ultimately destroyed in accordance with the Data Protection Act (2010). As the final report will require excerpts from the interviews as research evidence, the researcher would like to be able to directly quote portions of what you may mention during the course of the interview in the report or publication. As previously mentioned, pseudonyms and/or initials will be used to ensure that your anonymity is protected. However, should you wish to not be quoted directly in the report, please do not hesitate to tell the researcher.

What will you do with the data?

The data of obtained from this research will be used to determine the essence of work for members of academia, consisting of the most important themes as discovered from the transcribing and coding of the data obtained through the interview. These themes will then be used as the theoretical underpinnings of a future study which will seek to further explore the workplace dynamics of members of academia.

If you have any questions or concerns, please don't hesitate to ask. We can be contacted before and after your participation at the above address.

THANK YOU FOR YOUR PARTICIPATION

If you have any queries or complaints about this study, please contact the student's supervisor in the first instance. If this does not resolve the query to your satisfaction, please write to the Administrator to the Faculty of Arts and Social Sciences Research Ethics Committee who will pass your query to the Chair of the Committee

PARTICIPANT CONSENT

Division of Organisational and Applied Psychology

Project Title: A Qualitative Exploratory study on the essence of work for members of academia

Researcher: Victor Goh Weng Yew ***Email:*** kspx4vgw@nottingham.edu.my

Supervisor Dr. Hazel Ramos ***Email:*** Hazel-Melanie.Ramos@nottingham.edu.my

Ethics Approval Reference Number: N/A

- Have you read and understood the Participant Information? YES/NO
- I agree to take part in an interview that will be audio-recorded. YES/NO
- Do you know how to contact the researcher if you have questions about this study? YES/NO
- Do you understand that you are free to withdraw from the study without giving a reason? YES/NO
- Do you understand that once you have been interviewed it may not be technically possible to withdraw your data unless requested within **three days after the day of the interview**? YES/NO
- Do you give permission for your data from this study to be shared with other researchers in the future provided that your anonymity is protected? YES/NO
- Do you understand that non-identifiable data from this study might be used in academic research reports or publications? YES/NO

Signature of the Participant ……. Date: …….
Name (in block capitals) ……..[for paper-based questionnaires only] This consent form will be detached from the completed questionnaire and stored separately. Your answers will not be identifiable.

Appendix A2: Participant Information and Consent Form for Studies 2 and 3

PARTICIPANT INFORMATION

Division of Organisational and Applied Psychology

Project Title: A quantitative study on the meaning of work for members of academia and its effect on work engagement

Researcher: Victor Goh Weng Yew *Email:* kspx4vgw@nottingham.edu.my

Supervisor: Dr. Hazel Melanie Ramos *Email:* Hazel-Melanie.Ramos@nottingham.edu.my

Ethics Approval Reference Number: FASS2017-0009/DOAP/VGWY016534

This is an invitation to take part in a research study to quantitatively confirm the factors at play in the work experience of members of academia, specifically individuals who are members of the teaching staff of private higher education institutions in Malaysia. This research seeks to obtain quantitative evidence of the presence of the five themes - as discovered in the earlier phase of this research, specifically Experienced Work Exhaustion, Influence of Organization, Academics as Vocation, Teaching as a Self-Actualizer, and Energizing Academics- in the academic workplace via the administration of a set of questionnaires measuring the factors/themes mentioned.

Your participation is voluntary, and you may change your mind about being involved and withdraw from the data collection process without giving a reason. You are free to withdraw at any point before or during the study. For anonymous questionnaires, once you have finished the questionnaire and submitted your answers it is not possible to withdraw the data.

What is the project about?

This project seeks to determine if the workplace themes discovered in the previous study on the essence of work for Malaysian academics can be generalized to the general population of Malaysian academics, and their role in affecting workplace outcomes. The objective of this study is to be able to statistically confirm the presence and roles that the discovered themes plays in the academic workplace, as well as the role, if any, that they play on the level of work engagement.

Who is being asked to take part, and why?

Participants that will be recruited for this research are required to be members of academia and higher education institutions that have had a minimum of 2 years working experience in this field. This is to ensure that participants who are recruited will have adequate first-hand experience of their work and workplace in order to provide substantial and noteworthy responses.

What will I be asked to do?

Should you decide to take part in this study, you will be required to complete a set of seven (7) questionnaires pertaining to certain aspects of your work experience (such as the level of perceived autonomy or organisational support), along with one (1) demographic information sheet pertaining to information relevant to your work experience (such as years of academic service and job position/title) within a time limit of 30 to 45 mins. You are under no obligation to reveal information that you may deem sensitive or personally identifying, nor will your non-participation in this research result in any negative consequences for you.

Will the research be of any personal benefit to me?

While this research may not benefit you directly, it is hoped that the results obtained from this research will be able to paint a more accurate picture of the essence of work for members of academia, with the resulting data being used to develop an effective theoretical foundation upon which workplace policies pertaining to members of academia can be created that will ultimately lead to an improvement in the overall work experience for members of academia in the future.

What will happen to the information I provide?

All information provided by you in this research will be treated with utmost confidentiality, with no personally-identifying information being requested or obtained. Only the researcher and his immediate supervisor will have access to the information collected, and all related data obtained from the questionnaires will be archived in a secured storage facility for a duration of a period of at least 7 years after the end of the project in line with the University's policies, and ultimately destroyed in accordance with the Data Protection Act (2010).

What will you do with the data?

The data of obtained from this research will be analyzed to discover if the variables and their relationships with each other are statistically significant. These data and relationships will then be presented and published in numerical form and used to inform future studies focusing on the field of Malaysian academics.

If you have any questions or concerns, please don't hesitate to ask. We can be contacted before and after your participation at the above address.

THANK YOU FOR YOUR PARTICIPATION

If you have any queries or complaints about this study, please contact the student's supervisor in the first instance. If this does not resolve the query to your satisfaction, please write to the Administrator to the Faculty of Arts and Social Sciences Research Ethics Committee who will pass your query to the Chair of the Committee

PARTICIPANT CONSENT

Division of Organisational and Applied Psychology

Project Title: A Quantitative Study on the meaning of work for members of academia and its effect on work engagement

Researcher: Victor Goh Weng Yew ***Email:*** kspx4vgw@nottingham.edu.my

Supervisor Dr. Hazel Ramos ***Email:*** Hazel-Melanie.Ramos@nottingham.edu.my

Ethics Approval Reference Number: …. *[to be inserted following ethical review]*

- Have you read and understood the Participant Information? YES/NO
- I agree to fully complete all items in the set of questionnaires provided. YES/NO
- Do you know how to contact the researcher if you have questions about this study? YES/NO
- Do you understand that you are free to withdraw from the study without giving a reason? YES/NO
- Do you understand that for anonymous questionnaire studies, once you have completed the study and submitted your questionnaire, the data **cannot** be withdrawn? YES/NO
- Do you give permission for your data from this study to be shared with other researchers in the future provided that your anonymity is protected? YES/NO
- Do you understand that non-identifiable data from this study might be used in academic research reports or publications? YES/NO

Signature of the Participant ……. Date: …….

Name (in block capitals) ……..…..

[for paper-based questionnaires only] This consent form will be detached from the completed questionnaire and stored separately. Your answers will not be identifiable.

Appendix B1: Research Ethics Approval Letter for Study 1

Victor Goh Weng Yew
Divisional of Organisational and Applied Psychology
Faculty of Arts and Social Sciences
The University of Nottingham Malaysia Campus

The University of Nottingham
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www.nottingham.edu.my

8 April 2016

Dear Victor,

FASS Research Ethics Committee Review

Thank you for submitting your proposal on ***"A Qualitative Exploratory study on the essence of work for members of academia"***. This proposal has now been reviewed by the FASS Research Ethics Committee to the extent that it is described in your submission.

I am happy to tell you that the Committee has found no problems with your proposal and able to give approval.

If there are any significant changes or developments in the methods, treatment of data or debriefing of participants, then you are obliged to seek further ethical approval for these changes.

We would remind all researchers of their ethical responsibilities to research participants. If you have any concerns whatsoever during the conduct of your research then you should consult those Codes of Practice relevant to your discipline and contact the FASS Research Ethics Committee.

Independently of the Committee procedures, there are also responsibilities for staff and student safety during projects. Some information can be found in the Safety Office pages of the University web site. Particularly relevant may be:

Section 6 of the *Safety Handbook*, which deal with working away from the University, http://www.nottingham.ac.uk/safety/handbook/general-precautions.aspx
Specific safety guidance on:
Fieldwork http://www.nottingham.ac.uk/safety/documents/fieldwork-policy.pdf
Lone working http://www.nottingham.ac.uk/safety/documents/lone-working.pdf
Overseas travel/work http://www.nottingham.ac.uk/safety/documents/overseas-travel.pdf
Risk management http://www.nottingham.ac.uk/safety/policies-and-guidance/guides-and-support.aspx

Responsibility for compliance with the University/National Data Protection Policy and Guidance also lies with the principal investigator or project supervisor.

The FASS Research Ethics Committee approval does not alter, replace or remove those responsibilities, nor does it certify that they have been met.

Sincerely,

Yeoh Ken Kyid

Dr Yeoh Ken Kyid
On behalf of the FASS Research Ethics Committee

The University of Nottingham
in Malaysia Sdn Bhd (473520-K)

MSC-Status
Company

Appendix B2: Research Ethics Approval Letter for Study 2 and 3

FASS2017-0009/DOAP/VGWY016534

Victor Goh Weng Yew
Division of Organisational and Applied Psychology
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Fax +6(03) 8924 8019
www.nottingham.edu.my

13 June 2017

Dear Victor,

FASS Research Ethics Committee Review

Thank you for submitting your proposal on ***"A Quantitative Study on the Meaning of Work for Members of Academia and Its Effect on Work Engagement"*** This proposal has now been reviewed by the FASS Research Ethics Committee to the extent that it is described in your submission.

I am happy to tell you that the Committee has found no problems with your proposal and able to give approval.

If there are any significant changes or developments in the methods, treatment of data or debriefing of participants, then you are obliged to seek further ethical approval for these changes.

We would remind all researchers of their ethical responsibilities to research participants. If you have any concerns whatsoever during the conduct of your research then you should consult those Codes of Practice relevant to your discipline and contact the FASS Research Ethics Committee.

Independently of the Committee procedures, there are also responsibilities for staff and student safety during projects. Some information can be found in the Safety Office pages of the University web site. Particularly relevant may be:

Section 6 of the *Safety Handbook*, which deal with working away from the University,
http://www.nottingham.ac.uk/safety/handbook/general-precautions.aspx
Specific safety guidance on:
Fieldwork http://www.nottingham.ac.uk/safety/documents/fieldwork-policy.pdf
Lone working http://www.nottingham.ac.uk/safety/documents/lone-working.pdf
Overseas travel/work http://www.nottingham.ac.uk/safety/documents/overseas-travel.pdf
Risk management http://www.nottingham.ac.uk/safety/policies-and-guidance/guides-and-support.aspx

Responsibility for compliance with the University/National Data Protection Policy and Guidance also lies with the principal investigator or project supervisor.

The FASS Research Ethics Committee approval does not alter, replace or remove those responsibilities, nor does it certify that they have been met.

Sincerely

Yeoh Ken Kyid

Dr Yeoh Ken Kyid
On behalf of the FASS Research Ethics Committee

The University of Nottingham
in Malaysia Sdn Bhd (473520-K)

MSC-Status Company

Appendix C

Excerpt 4.1. Sample units of general meaning

Some of them would be…I think they go hand in hand, so the job roles that have been given to me has been "Look, you have to teach this material, you have to try and ensure that the students understand what you're trying to convey…" but the way you go about doing that, the process, and the kinds of creative steps that you take to actually enhance or facilitate this process, I think they give us…they give me anyway, some kind of freedom on how to go about doing it. So I try certain methods which work pretty well, other methods that don't work pretty well then I scrap those, so not everything is formalized…there are certain things which I take some creative liberties to do…so like running a debate in class…so no one tells you that you must run a debate in class to facilitate discussions but I think it's a great way to learn so that's not a "formal" way of teaching but I think it's a creative and still very helpful way of teaching.

Table 4.2. Themes, sub-themes, and sample quotes

Theme	Sub-theme	Sample Quote
1. Experienced Work Exhaustion	1.1. Non-enjoyment of administrative duties	*"All the other administrative crap that goes with it…Of course I hate it."* – A. *"Administrative work? The one I hate most…marking, data entry, and then reports…"* – E.N.
	1.2. Non-academic multitasking	*"Sometimes I feel that invigilation is a sheer waste of time…I feel that getting academics to waste that three hours is not very beneficial..."* – C.
	1.3. Lack of Time/Overwork	*"Some of us have three days to mark 200 exam scripts, and it's very hard not to make mistakes in that kind of time pressure but you still have to try anyway."* – E.
2. Influence of Organization	2.1. Work Conditions	*"It's a hygiene factor…if there could be evidence that those things were thought about and taken care of then it will feel like a much more caring organization."* –E.
	2.2. Tailored Organisational Support	*"Okay…many staff…have learned that because their feedback is not taken into consideration, they end up not dealing with the problems…because the lack or the perceived lack of support is…constantly present, then the staff would many times just let the problems persist."* – C.Y.
	3.1. Autonomy and Trust	*"He gives a lot of freedom for me on how I want to run my classes, control my students, as long as it's in line with a certain direction or policy of the college."* – A.C.

3. Academic Work Resources		
	3.2. Social Support	"*Working environment, of course I have colleagues who are very supportive….who I would say I feel that if you are willing to reach out to them reaching out to you and accept that invitation, it can be a good environment to work in.*" S.
	3.3. Appreciation and Recognition	"*Recognizes my strengths and my weaknesses, so when he gives me something to do…he's keeping in mind that "This is what S can do", which makes me feel like he knows who I am. I'm not just one head in the…you know…*" – S.
	3.4. Perception of impactful work	"*I guess it [education] gives meaning to my life…all these things would appeal to my identity…and give me significance and meaning in life.*" – E.N.
	3.5. Skill and Task Variety	"*I think I need to take it beyond that if they're gonna actually benefit from the modules… and if there's any way I can try and ensure that every point they are getting access to quality information, then I feel like I'm doing right by them in some kind of way…*" – E.
4. Teaching as a Self-Actualizer	4.1. Personal Meaning and Fulfillment	"*I'm at peace that I know this is where I'm supposed to be*" – A.C. "*When you are teaching something and then the "lightbulb" goes off…that shows me what I'm doing is along the right path you know? … It reinstates what I'm doing, that I'm doing something right…*" – M.
	4.2. Personal Development and Growth	"*I sincerely believe, especially more so in an education institute…we should be experts in human growth potential, capacity building, even among our staff…*" – Y.
5. Academics as Vocation	5.1. Personal Values and Beliefs	"*I think for me it was more a matter of my calling in life.*" – A.W.
	5.2. Turnover Intention	"*No! Not at all! No retirement!...I enjoy every moment that I'm lecturing.*" – M. "*I want to (stay in academia for the foreseeable future…I want to. But obviously eventually it will depend on opportunities.*" – E.
	5.3. Role of Money	"*Although extra money would be nice….*laughs* but if I had to choose between the two…well if I was going to choose between the two I wouldn't be in education, to put it that way.*" – E. "*No well I didn't look at the money right, so yeah… I enjoy it. For me that's all it was.*" – M.

Appendix D1

Participant Demographic Information Form

Academic Field/Major:

Age:

Number of years of academic experience:_____ years

Number of years in your organization (tenure): _____ years

Name of organization **(optional)**: _____

Employment Status: **Part-time / Permanent**

Position (choose the most appropriate):

a) Junior Lecturer
b) Senior Lecturer
c) Assistant Professor
d) Associate Professor
e) Professor
f) Head of Department/Dean

Salary (choose one):

a) RM2000-RM4000
b) RM4001-RM6000
c) RM6001-RM8000
d) RM8001-RM10000
e) RM10000+

Gender: **Male / Female**

Marital Status: **Single / Married / Separated**

Children: _____

Appendix D2

Survey of Perceived Organisational Support

Listed below and on the next several pages are statements that represent possible opinions that YOU may have about working at your organization. Please indicate the degree of your agreement or disagreement with each statement by filling in the circle on your answer sheet that best represents your point of view about your organization. Please choose from the following answers:

0	1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

1. The organization values my contribution to its well-being. _____

2. The organization fails to appreciate any extra effort from me. _____

3. The organization would ignore any complaint from me. _____

4. The organization really cares about my well-being. _____

5. Even if I did the best job possible, the organization would fail to notice. _____

6. The organization cares about my general satisfaction at work. _____

7. The organization shows very little concern for me. _____

8. The organization takes pride in my accomplishments at work. _____

Appendix D3

Copenhagen Burnout Inventory

Work-related Burnout

1. Is your work emotionally exhausting?

1	2	3	4	5
To a very Low degree	To a low degree	Somewhat	To a high degree	To a very High degree

2. Do you feel burnt out because of your work?

1	2	3	4	5
To a very Low degree	To a low degree	Somewhat	To a high degree	To a very High degree

3. Does your work frustrate you?

1	2	3	4	5
To a very Low degree	To a low degree	Somewhat	To a high degree	To a very High degree

4. Do you feel worn out at the end of the working day?

1	2	3	4	5
Never/ Almost Never	Seldom	Sometimes	Often	Always

5. Are you exhausted in the morning at the thought of another day at work?

1	2	3	4	5
Never/ Almost Never	Seldom	Sometimes	Often	Always

6. Do you feel that every working hour is tiring for you?

1	2	3	4	5
Never/ Almost Never	Seldom	Sometimes	Often	Always

7. Do you have enough energy for family and friends during leisure time?

1	2	3	4	5
Never/ Almost Never	Seldom	Sometimes	Often	Always

Appendix D4

Work and Meaning Inventory (WAMI)

The Work and Meaning Inventory. Work can mean a lot of different things to different people. The following items ask about how you see the role of work in your own life. Please honestly indicate how true each statement is for you.

	Absolutely Untrue	*Mostly Untrue*	*Neither True Nor Untrue*	*Mostly True*	*Absolutely True*
1. I have found a meaningful career	1	2	3	4	5
2. I view my work as contributing to my personal growth.	1	2	3	4	5
3. My work really makes no difference to the world.	1	2	3	4	5
4. I understand how my work contributes to my life's meaning.	1	2	3	4	5
5. I have a good sense of what makes my job meaningful.	1	2	3	4	5
6. I know my work makes a positive difference in the world.	1	2	3	4	5
7. My work helps me better understand myself.	1	2	3	4	5
8. I have discovered work that has a satisfying purpose.	1	2	3	4	5
9. My work helps me make sense of the world around me.	1	2	3	4	5
10. The work I do serves a greater purpose.	1	2	3	4	5

Appendix D5

Index of Autonomous Functioning Scale

This scale measures the level of autonomous functioning that you perceive (how much you feel you are in control of your actions). Please answer the following questions **in relation to your actions and decisions in your workplace**.

Authorship/Self-Congruence

1. My decisions represent my most important values and feelings.

1	2	3	4	5
Not at all true	A bit true	Somewhat true	Mostly True	Completely True

2. I strongly identify with the things that I do.

1	2	3	4	5
Not at all true	A bit true	Somewhat true	Mostly True	Completely True

3. My actions are completely congruent*[1] with who I really am.

1	2	3	4	5
Not at all true	A bit true	Somewhat true	Mostly True	Completely True

4. My whole self stands behind the important decisions I make.

1	2	3	4	5
Not at all true	A bit true	Somewhat true	Mostly True	Completely True

5. My decisions are steadily informed*[2] by things I want or care about.

1	2	3	4	5
Not at all true	A bit true	Somewhat true	Mostly True	Completely True

*[1] Congruent = ‘in agreement with’
*[2] Steadily informed = ‘influenced by’

Appendix D6

Work Design Questionnaire

The following questionnaires will measure certain aspects of your workplace. Please respond as honestly and accurately as possible.

Specific Instructions and Response Scale

1= Strongly Disagree
2= Disagree
3= Neither Agree nor Disagree
4= Agree
5= Strongly Agree

Work Scheduling Autonomy

1. This job allows me to make my own decisions about how to schedule my work.

1 2 3 4 5

2. The job allows me to decide on the order in which things are done on the job.

1 2 3 4 5

3. The job allows me to plan how I do my work.

1 2 3 4 5

Decision-Making Autonomy

1. The job gives me a chance to use my personal initiative or judgement in carrying out the work.

1 2 3 4 5

2. The job allows me to make a lot of decisions on my own.

1 2 3 4 5

3. The job provides me with significant autonomy in making decisions.

1 2 3 4 5

Work Methods Autonomy

1. The job allows me to make decisions about what methods I use to complete my work.

1 2 3 4 5

2. The job gives me considerable opportunity for independence and freedom in how I do the work.

1 2 3 4 5

3. The job allows me to decide on my own how to go about doing my work.

1 2 3 4 5

Task Variety

1. The job involves a great deal of task variety.

1 **2** **3** **4** **5**

2. The job involves doing a number of different things.

1 **2** **3** **4** **5**

3. The job requires the performance of a wide range of tasks.

1 **2** **3** **4** **5**

4. The job involves performing a variety of tasks.

1 **2** **3** **4** **5**

Task Significance

1. The results of my work are likely to significantly affect the lives of other people.

1 **2** **3** **4** **5**

2. The job itself is very significant and important in the broader scheme of things.

1 **2** **3** **4** **5**

3. The job has a large impact on people outside the organization.

1 **2** **3** **4** **5**

4. The work performed on the job has a significant impact on people outside the organization.

1 **2** **3** **4** **5**

Task Identity

1. The job involves completing a piece of work that has an obvious beginning and end.

1 **2** **3** **4** **5**

2. The job is arranged so that I can do an entire piece of work from beginning to end.

1 **2** **3** **4** **5**

3. The job provides me the chance to completely finish the pieces of work I begin.

1 **2** **3** **4** **5**

4. The job allows me to complete work I start.

1 **2** **3** **4** **5**

Feedback from Job

1. The work activities themselves provide direct and clear information about the effectiveness (e.g. quality and quantity) of my job performance.

1 **2** **3** **4** **5**

2. The job itself provides feedback on my performance.

1 **2** **3** **4** **5**

3. The job itself provides me with information about my performance.
1 2 3 4 5

Skill Variety
1. The job requires a variety of skills.
1 2 3 4 5

2. The job requires me to utilize a variety of different skills in order to complete the work.
1 2 3 4 5

3. The job requires me to use a number of complex or high-level skills.
1 2 3 4 5

4. The job requires the use of a number of skills.
1 2 3 4 5

Social Support
1. I have the opportunity to develop close friendships in my job.
1 2 3 4 5

2. I have the chance in my job to get to know other people.
1 2 3 4 5

3. I have the opportunity to meet with others in my work.
1 2 3 4 5

4. My supervisor is concerned about the welfare of the people that work for him/her.
1 2 3 4 5

5. People I work with take a personal interest in me.
1 2 3 4 5

6. People I work with are friendly.
1 2 3 4 5

Feedback From Others
1. I receive a great deal of information from my manager and coworkers about my job performance.
1 2 3 4 5

2. Other people in the organization (managers and coworkers) provide information about the effectiveness (e.g. quality and quantity) of my job performance.
1 2 3 4 5

3. I receive feedback on my performance from others in my organization (manager/coworkers).
1 2 3 4 5

Appendix D7

Job Psychological Meaningfulness Scale

This scale measures how meaningful one perceives their work and work related activities to be. Please answer each question as honestly as possible.

Specific Instructions and Response Scale

1= Strongly Disagree
2= Disagree
3= Neither Agree nor Disagree
4= Agree
5= Strongly Agree

1. The work I do on this job is very important to me.
1 2 3 4 5

2. My job activities are personally meaningful to me.
1 2 3 4 5

3. The work I do on this job is worthwhile.
1 2 3 4 5

4. My job activities are significant to me.
1 2 3 4 5

5. The work I do on this job is meaningful to me.
1 2 3 4 5

6. I feel that the work I do on my job is valuable.
1 2 3 4 5

Appendix D8

Shortened Utrecht Work Engagement Scale

The following statements are about **how you feel at work**. Please read each statement carefully and choose the most appropriate answer. If you've never experienced it, choose '0'. If you have, indicate how often you feel it by choosing the number (1 – 6) that **best describes how often you feel this way.**

	Almost Never	Rarely	Sometimes	Often	Very Often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

1. At my work, I feel bursting with energy.
0 1 2 3 4 5 6

2. At my job, I feel strong and vigorous.
0 1 2 3 4 5 6

3. I am enthusiastic about my job.
0 1 2 3 4 5 6

4. My job inspires me.
0 1 2 3 4 5 6

5. When I get up in the morning, I feel like going to work.
0 1 2 3 4 5 6

6. I feel happy when I am working intensely.
0 1 2 3 4 5 6

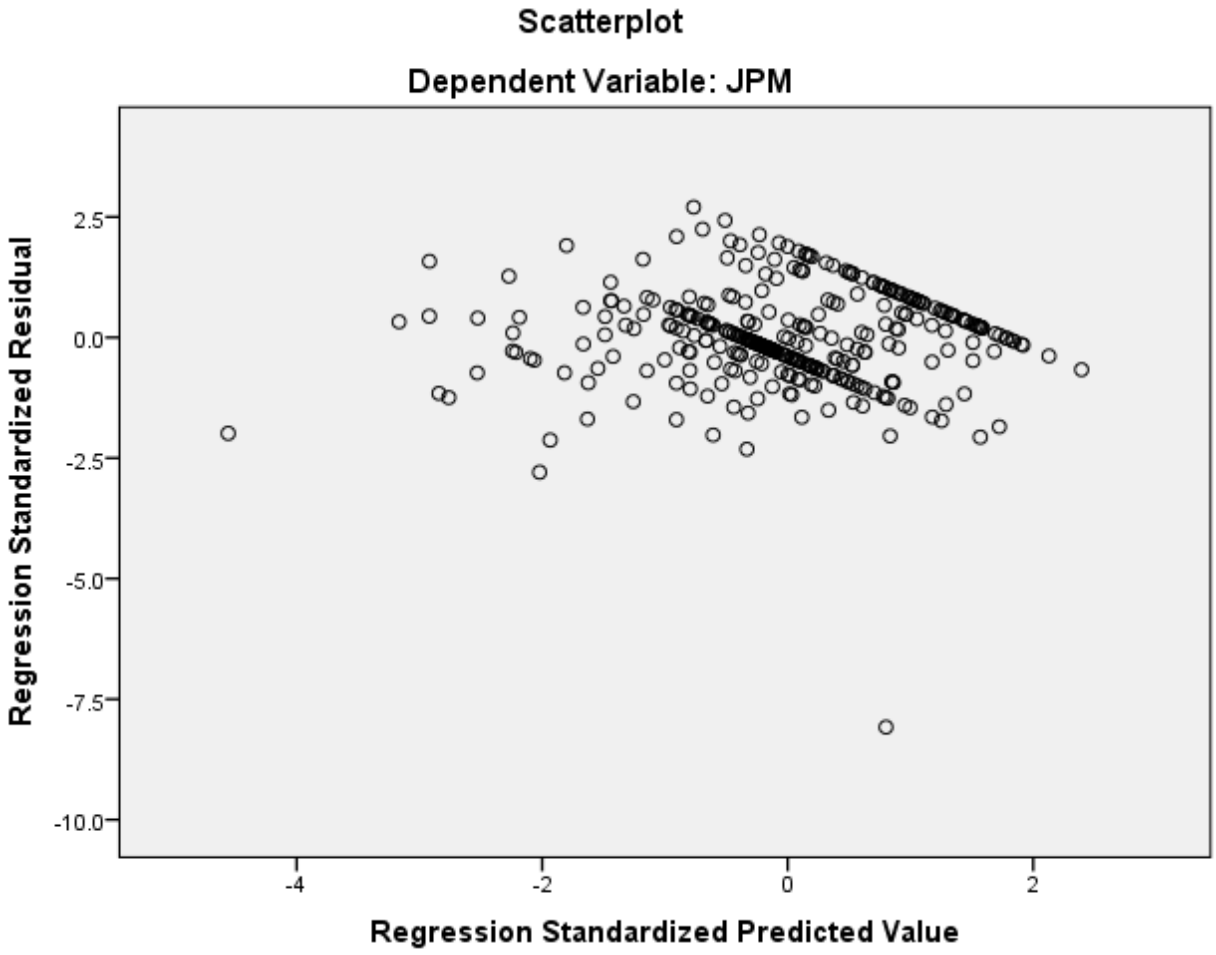
7. I am proud on the work that I do.
0 1 2 3 4 5 6

8. I am immersed in my work.
0 1 2 3 4 5 6

9. I get carried away when I'm working.
0 1 2 3 4 5 6

Appendix E1

Figure 6.1. Homoscedasticity scatterplot for JPM



Appendix E2

Figure 6.2. Homoscedasticity scatterplot for CBI

