

Predicting Staff's Job Satisfaction: The Role of University's Policies, Key Focus Areas, and Organisational Values

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Abstract: The role of universities in the nation's growth and development is considered vital since universities and HEIs are academic institutions that emerged as the key source of education, research, and innovation, as well as for social and economic development. In achieving the university's vision and mission, several pertinent elements were identified and these include the university's policies and the key focus areas (KFAs) for its strategic planning. These two elements along with the organisational values, both at the university and individual levels, were predicted to have strong linkages with the effectiveness of the university's vision and mission. In this study, we examined the understanding of staff towards the university's policies, KFAs, and also organisational values. Secondly, we also investigated whether the university's policies, KFAs and organisational values have some influence on staff satisfaction. A total of 740 staff - both administrative, academic administrators, and academics - provided their standpoints on their understanding of the university's policies, KFAs, and organisational values. The findings revealed that a majority of the staff has a clear understanding of the elements being studied. It was also found that organisational values were perceived as predictors of staff satisfaction.

Keywords: University's policies, key focus areas, organisational values, staff satisfaction, higher education, Malaysia

1. Introduction

Through the effective academic system of educational institutions, future and aspiring staff and their workforce leaders are groomed and nurtured (Masum, Azad & Beh, 2015; Azman, Sirat & Shamsuddin, 2013). The role of universities in the development of national growth is considered vital

since universities and HEIs are academic institutions meant for the key source of research, innovation, and economic and social development (Etzkowitz, Dzisah, Ranga & Zhou, 2007). In this sense, Malaysian universities and HEIs, regardless of their public or private status, have multi-faceted functions to establish Malaysia as an educational hub within the Asian region by the year 2020 (Ministry of Higher Education, 2011; Ahmad & Buchannan, 2016). In addition, it has significant roles in enhancing the standing, quality, and ranking of local HEIs (Mustafa Kamil, Hashim & Abdul Hamid, 2016; Azman, Sirat & Shamsuddin, 2013). In 2007, the Ministry of Higher Education launched the seven broad-based strategic thrusts of the strategic plan, as follows: (1) widening access and enhancing equity, (2) improving the quality of teaching and learning, (3) enhancing research and innovation, (4) strengthening institutions of higher education, (5) intensifying internationalisation, (6) enculturation of lifelong learning and (7) reinforcing the higher education ministry's delivery system.

In achieving the university's vision and mission, several elements were identified as having strong linkages that predict the effectiveness of the HEIs' and universities' vision, mission and also the satisfaction of their staff (Yu & Wang, 2018; Mohd Noor, Mohd Amir & Maelah, 2017). Firstly, the culture of universities and HEIs was a significant element in bonding the beliefs and values occurring within an organisation through both verbal and non-verbal approaches (Yu & Wang, 2018). Theoretically, in corporate terms, DNA refers to the vision, value, and purpose of a goal that belongs to an organisation that shapes the members' behaviours and attitudes (Bartell, 2003). The DNA needs to include structure, decision-making, motivation, and information (Flamholtz, Randle, 2011; Haynes, 2012). In universities and HEIs, DNA plays a significant role as the 'heart' of the institution which translates into such elements as policies, objectives, actions, projects, and activities that officially define the university and which should be understood by its staff (Tierney, 1988) and improve their commitment (Yiing & Ahmad, 2009).

In essence, researchers (Huo & Randall, 1998; Farooqui & Nagendra, 2014; Thomas, 2013) also believed that institutional and personal or staff values were of great importance within the context of an institution when their values matched the institutional values through the concept of the Person-Organisation matching process, or P-O since they led to job satisfaction and improvements in staff performance. Thirdly came the university's strategic planning or the key focus areas (KFA), which were implemented based on the seven strategic thrusts introduced by the Ministry of Higher Education. These comprised the university's facilities, such as infrastructure, ICT, community involvement, and industrial networking, which were seen to be crucial in influencing the satisfaction of the staff serving within the university (Azman, Sirat, & Shamsudin, 2013; Wartenberg et al., 2023).

Even though it was being said that the institutional culture and values, the staff values, and, lastly, the university's strategic planning have many implications for staff satisfaction, the association between the university's internal elements remained uncharted by local researchers. Nevertheless, staff satisfaction also provides essential feedback on how the university staff or HEI feels acknowledged as members of the university. To previous researchers (Masum, Azad & Beh, 2015; Yu & Wang, 2018; Azman *et al.*, 2013), staff satisfaction also influenced and predicted a higher level of staff commitment to the university. Thus, staff satisfaction has been widely accepted by previous researchers to identify the extent to which academics provide their approval to their universities (Emily & Seok, 2011; Bakotic, 2013; Khan et al., 2021).

However, in addressing the gap, it is still unclear whether facets of institutional policies, such as their values, culture, or KFA, have some implication for HEI staff satisfaction since most previous studies highlighted the level of satisfaction among academics and non-academics without examining whether the HEI's leadership might have some bearing on the results. Even though it was understood that the institutional culture and values, the staff values, and, lastly, the university's strategic planning have many implications for staff satisfaction, the association between the university's internal elements remained unknown. In addition, previous studies on HE staff satisfaction did not address the perspectives of the non-academic staff even though they are also professionals that determine the smooth operation of the university, such as human resources, financial management, facilities, and information technology (Khan et al., 2021; Smerek & Peterson, 2007; Tavárez de Henríquez & Domínguez Valerio, 2023; Volkwein & Parmley, 2000).

Concerning the study's gap, the purpose of this quantitative study is to empirically examine whether the staff (academic, academic administrators, and non-academic) of the university feel satisfied with the services provided by the management and leadership which translated from their research and DNA culture, the university's key focus areas and their institutional and staff values. Thus, this study tries to examine which of the university's institutional elements could predict the university staff's satisfaction based on three questions posed; (1) Do the staff feel satisfied with the services of the management or leadership, (2) Does the KFA act as a significant predictor of staff satisfaction, and (3) Are there any differences between staff in terms of staff satisfaction using the multi-group analyses based on their gender and job categories?

1.1. Theoretical framework

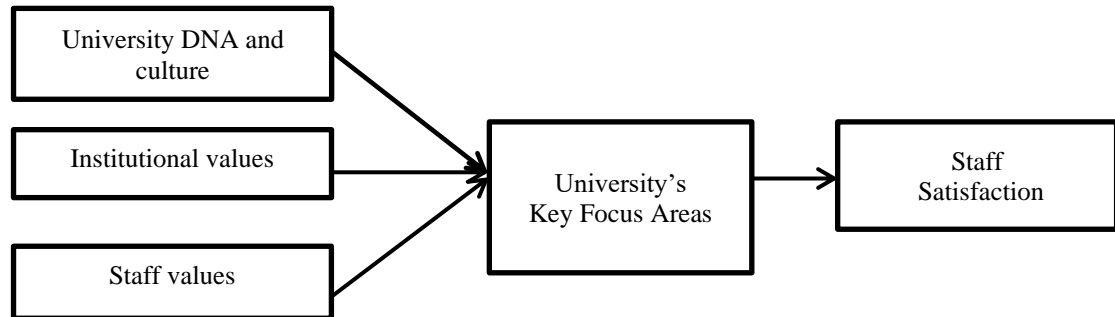
In measuring academics' job satisfaction, various theories and models related to staffs' job satisfaction were examined before deciding on the theoretical underpinnings for staff job satisfaction. In this study, we employed Hagedorn's duality theory of job satisfaction, which is highly relevant when measuring job satisfaction. Hagedorn (2000) classified an academician's job satisfaction into triggers and mediators through her work. Mediators include motivators (achievements, recognition, working situation, responsibility, advancement salary, and institutional resources) and hygiene (intrinsic and extrinsic rewards associated with one's work), academic' demographics (gender, ethnicity, academic discipline and institutional types) and their environmental situations (collegial relationships, the quality of student relationships, administration and institutional climate and culture). In contrast, triggers are described as events originating from the working and non-working situations that affect academics' job satisfaction, such as promotion (change in rank and tenure; change in life stage; change related to family circumstances), moving or transfer to a new institution, and starting a family. Within the literature on academics' job satisfaction, the duality model was extensively employed by previous researchers in academia such as Smerek and Peterson (2007) at a public research university, Bently *et al.* (2013) in measuring academics' job satisfaction at Australian universities, and Marquina and Rebello (2013) with Argentinean academics.

Secondly, this study also examined whether the staff's values are being matched with the public research university values to provide interactions that later result in staff job satisfaction. In this sense, personal values are defined as an individual's preferences toward certain behaviours or attitudes. To study the staff's values, we used the interaction theory of Lewin (1951), which indicated that job satisfaction will increase when staff values are matched or aligned with elements such as the preferences, culture, and climate of the institutional preferences. Therefore, matched values between the individual preferences for certain behaviours and attitudes with the institutional practices can later lead to positive feedback such as organisational commitment, job satisfaction or job performance (Panahi, Moezzi, Preece & Zakaria, 2016).

Theoretically, we erected a proposed research model based on a hypothetical model that incorporates a clear understanding of this study's three independent variables: The university's DNA, the institution's values and, lastly, the staff's values. Figure 1, below, shows the proposed research model.

Fig. 1:

The research conceptual model



2. Literature Review

2.1 Explaining university staff job satisfaction

Theoretically, scholars believe that there is no absolute definition of job satisfaction (Emily & Seok, 2011). However, most researchers indicate that job satisfaction is defined as a person's feeling or affective reaction toward their job (O'Leary et al., 2019; Spector, 1997; Weiss & Cropanzano, 1996). Earlier, Locke (1976) defined job satisfaction as an emotional state related to the positive or negative appraisal of an individual's job experiences. In addition, Daud (2010) states that the concept of job satisfaction has been defined as a self-reported positive emotional state resulting from the appraisal of one's job or job experiences. Thus, results from studies of the elements of job satisfaction prove that those who are satisfied or happy with their job will be highly motivated and committed, productive, and also likely to remain with their organisations. On the other hand, when employees are unsatisfied or uncommitted, their performance will be at a lower level (Ostroff, 1992) which also leads to substantial dissatisfaction, stress and frustration that could result in emotional, physical and behavioural problems in an organization (Grieshaber, Parker, & Deering, 1995; Khan & Iqbal, 2020).

Admittedly, previous studies related to higher education institutions' or universities' staff job satisfaction focused on academics' job satisfaction, such as studies by Emily and Seok (2011) with Singapore's public tertiary institutions, Chuang and Mei Tai (2014) with academics from Taiwanese universities and Machado-Taylor, White and Gouveia (2014) on the satisfaction of Portuguese academics, and Janib et al. (2021) on academics in research universities in Malaysia. There is still little attention or a limited body of work that examines or measures administrative staff satisfaction within the context of public universities or higher education institutions in Malaysia. However, studies related to non-academic or administrative staff job satisfaction in other higher education contexts were being investigated as early as the year 2000. For example, Smerek and Peterson (2007) studied the job satisfaction of non-academic staff at a public university. The study was implemented using Herzberg's duality theory of motivators and the impact of hygiene factors arising from their personal and job characteristics (Herzberg *et al.* 1959). Findings revealed that the work itself is the strongest predictor of job satisfaction after controlling for both personal and job characteristics. In the year 2000, Volkwein and Parmley surveyed 1,191 administrators ranging from presidents, vice presidents, and directors to their assistants from 120 public and private institutions. Findings revealed that administrators' satisfaction related to their working conditions and with individuals with whom they frequently communicated.

Additionally, through the feedback from 486 administrative staff from three public and three private universities in Kenya, Kipkebut (2010) investigated administrative staff job satisfaction and organisational commitment. Findings revealed that employees from private universities were more

committed to their universities and satisfied with their jobs than employees from public universities. Statistically, employees' demographics, professional commitment, role overload, supervisory support, job security, promotion opportunities, distributive justice, and participation in decision-making were significant predictors of job satisfaction among employees in Kenyan universities. From the Asian perspective, Jung and Cheol Shin (2015) conducted a study exploring a Korean research university's administrative staff job competency and job satisfaction. From the regression analysis, administrative staff demographics, inner motivation, the work environments, and the nature of their work - specifically the clarity of tasks - were predictors of their job satisfaction. In addition, the interpersonal skills of administrative staff have some effect on their job satisfaction.

2.2 Linkages between a university's culture and staff job satisfaction

Theoretically, there are various definitions of organisational culture. Pettigrew (1979) described organisational culture as a cognitive system that explains how members within the organisational context think, behave, and finally make decisions. In addition, Pettigrew (1979) also believes that culture is made up of collections of fundamental beliefs and meanings, which later provide meaning to an organisation. According to Tsai (2011), organisational culture is defined as the beliefs and values that have occurred within an organisation for a long time. He also defined staff beliefs related to the anticipated value of their work, which later influences their attitudes and behaviour. Earlier, Trevino and Nelson (1999) believed that organisational culture stressed the concept of shared beliefs and values, which bonded the organisation's people and later influenced staff behaviours and attitudes.

Research has shown that a university's culture has a strong influence on staff job satisfaction (August & Waltman, 2004; Chang & Lee, 2007; Mansoor & Tayib, 2010; Saleem et al., 2022). In fact, a change within the institutional culture has strong effects on staff job satisfaction (Wartenberg et al., 2023). In determining the association, studies prove that there is a strong relationship between organisational or educational culture and staff satisfaction regardless of whether they are academic or administrative staff. For instance, Sabri, Ilyas, and Amjad (2011) conducted a study with 347 Pakistani teachers in both public and private sector higher education institutions, which indicates that an educational institution's culture has a positive and significant relationship with its teachers' job satisfaction. In Taiwan, Tsai (2011) conducted a cross-sectional study with 200 hospital nurses in two hospitals in Central Taiwan to examine whether nurses' job satisfaction was influenced by their managers' leadership behaviours and their organisational culture. Findings revealed that the organisational culture was significantly and positively correlated with nurses' job satisfaction. Earlier, in 2004, August and Waltman found that one of the best predictors of academics' overall satisfaction was the departmental climate as well as positive, good-quality relationships between the academics and their students.

2.3 Relationship of organisational and staff values with satisfaction

According to Hofstede (1990), values consist of feeling good, happy, sad, rational, and/or abnormal. In the case of job satisfaction, a person will be feeling happy if their values fit the values being emphasised by their organisation, which later impacts on the employee's job satisfaction (Panahi *et al.*, 2016). On the other hand, conflict between personal or staff values and organisational or institutional values will create disappointment and dissatisfaction (Thomas, 2013). According to Duffy (2010), an individual's values are defined as characteristics that are insisted upon by any individual and which are also important to enhance his or her work satisfaction. Within the context of institutional values, Schein (2011) defined values that are emphasised by the institutional context as characteristics that represent the organisation in terms of features, actions, and behaviours that guide institutional procedures and rules. According to Panahi *et al.* (2016), institutional values are characteristics that differentiate the organisation from other institutions. According to Lunenburg (2011), institutional culture has a strong relationship and ability to influence institutional performance, job satisfaction, and even problem-solving. Panahi *et al.*

(2016) also indicated that organisational and staff values can be demonstrated as significant predictors of job satisfaction among Malaysian construction stakeholders.

3. Methodology

3.1. Research context

The study was undertaken at a university that has about 18,000 students and describes itself as having an excellent reputation for teaching, research, and innovation with its strong industry links. This study, which was conducted in this university, is based on initiatives to examine whether the institutional policies have implications for staff satisfaction regardless of their position: administrative, academic, and the university's administrators. The reason for selecting this university is based on a statement that a study or a case study within one institution can provide a better understanding of institutional reality and practice. This approach captures the characteristics of the university's culture, mission, financial and administrative structure, student body, and funding sources, as well as its characteristics or features (Bensimom *et al.*, 2004; Jisun & Jung, 2015).

To meet the perpetual challenges and demands of its stakeholders, the support of its internal community - namely its academic staff, the administrators, professionals, and implementers group (or PPP) - is vital. Indeed, for a university to have a positive transformation, "good management must reflect institutional culture, local and national circumstances and many other contextual factors" (Taylor, 2006). This includes beliefs, values, and practices that serve as guidance. Embracing the concepts of consensus, inclusiveness, and engagement is viewed as a potential means of nurturing a noble value system to maintain the DNA of the University as its "soul" to be respected, referred to, and relevant throughout the challenging years to come.

3.2. Participants

In this study, a total of 740 administrative and academic administrators and academic staff representing the whole university were asked to provide their responses to the 125 items. In terms of staff gender, 319 staff were male, and 421 were female from various faculties, departments, and centres of excellence. Of the 740 university staff that participated in this study, 82 staff (10.8%) were academic administrators, 333 staff (44.6%) were academic staff, and another 325 staff (43.6%) held administrative posts.

Demographically, a total of 268 staff (36.2 %) have been working at the university for less than five years, followed by 230 staff (31%) who have been working at the university between five to ten years. Next, 101 staff members (13.5 %) have been on the university's staff between 16 and 20 years, followed by 46 staff (6.2%) for about 21 to 25 years. 32 staff (4.3%) have been working at the same university between 26 to 30 years, and only 63 (8.5%) have more than 30 years of service with the university.

3.3. Instrumentations

In this study, a total of 125 items were employed in examining the constructs drawn and adapted from the university's policy, vision, and mission. These were later constructed into items. Items were developed by researchers who were attached within the office of the chancellery. Later, items were checked by several professors who worked with the university's strategic office. All items were constructed in the Malay Language. However, researchers decided to provide an English translation based on the assumption that there are international staff that will be selected as respondents for this study. The measures for quantitative data were based on the adapted items, using a five-point Likert scale, ranging from 1 for "strongly not important" to 5 for "strongly important". This five-point scale was used for the following reasons: (a) It is a common rating scale among social science researchers, (b) it provides an equal opportunity for respondents to provide both positive and negative feedback (Sachdev & Verma,

2004; Dillman *et al.*, 2009; Pearse, 2011) (c) in using a survey to measure satisfaction, it is preferable to use a five- or seven-point scale to obtain much higher mean than using a much higher scale (Dawes, 2008).

The university's DNA: In measuring the research university's DNA, we used 26 items consisting of nine constructs which are: clear objectives (10 items), strategic thinking (2 items), work culture and high achievers (2 items), the new academia (2 items), global thinking (2 items), excellence (2 items), learning, efficiency and integrity (2 items), consultative and inclusive (2 items) and healthy and sustainable lifestyles (2 items).

The KFA: As for the research university's KFA, 45 items were constructed and modified comprising seven constructs labelled as: teaching and learning excellence (9 items), research innovation and commercialisation excellence (6 items), sustainable campus, infrastructure, ICT, community involvement and industrial networking (11 items), total campus experience (6 items), high impact delivery (5 items), financial sustainability (4 items) and global reputation (3 items).

The institutional and staff values: Overall, 28 items were employed in examining the research university's institutional values, comprising two major constructs. A total of 14 items were used to investigate the staff values, and another 14 items were employed in measuring the university's embedded values.

Satisfaction: To measure staff satisfaction, 24 items were constructed, which consisted of three major elements: knowledge (2 items), the management process (15 items), and lastly, escalation elements (6 items).

Content validity: Since the items were self-developed, the researchers decided to conduct a content validity check to ensure the contents were understood. To do this, 10 questionnaires were checked by the research university's strategic management officers, who were professors. The professors were purposely selected and asked to respond to the items on the questionnaire. The reason for selecting this particular group for this special task was because they were more engaged in and well-versed in the depth and breadth of the research university's KFA, culture, and values and have experience with a series of studies related to the university's performance. Next, 30 questionnaires were distributed to academics, administrative staff, and academic administrators. All questionnaires were returned. The results of the reliability analysis of the pilot data ensured the reliability of the items in the questionnaire.

4. Results

4.1. Reliability and correlational matrix.

The University's KFA: All 45 items in the university's KFA were examined through common reliability analysis using the *Cronbach Alpha* value. The overall value for 45 items in the university's KFA was measured at 0.954, which can be considered to be an acceptable value (Nunnally, 1978; Musah *et al.*, 2014). Through the seven elements of the university's KFA, all the reliability analysis values were listed: teaching and learning excellence ($\alpha = 0.80$); research innovation and commercialisation excellence ($\alpha = 0.91$); (c) sustainable campus, infrastructure, ICT, community involvement and industrial networking ($\alpha = 0.74$); (d) total campus experiences ($\alpha = 0.71$); (e) high delivery impact ($\alpha = 0.87$); (f) financial sustainability ($\alpha = 0.91$) and (g) global reputation ($\alpha = 0.90$). As for the values, the institutional values ($\alpha = 0.932$) and staff values ($\alpha = 0.831$) were calculated. For the university's research DNA and culture, the overall *Cronbach's alpha* value was reported at 0.916. Lastly, for staff satisfaction, the overall *Cronbach's alpha* value was 0.883. These values met the criteria for a reliable instrument as suggested by Nunnally (1978). Additionally, the correlation coefficients between variables and factors were measured through the correlational matrix table shown in Table 1. Based on the correlation coefficient values, all constructs were positively correlated at a significance level of $p < 0.05$.

Table 1:

Correlational matrix - reliability, means, and standard deviations.

	Constructs	Alpha	Mean	SD	I	II	III	IV
I	KFA	0.954	3.95	0.61	1			
II	DNA	0.916	4.02	0.57	.590**	1		
III	Institutional values	0.881	3.95	0.68	.618**	.569**	1	
IV	Satisfaction	0.883	3.85	0.53	.524**	.491**	.573**	1
V	Staff values	0.831	4.32	0.61	.651**	.757**	.651**	.561**

The correlation coefficient is statistically significant at * $p < .05$; ** $p < .01$.

4.2. Staff satisfaction

The study of staff satisfaction showed the extent to which staff were satisfied with the services provided by the university. Based on these mean scores, the academics were more satisfied with the services provided by the university compared to the two other groups, namely the administrative staff and the academic administrators. Surprisingly, the academic administrators were least satisfied with the service provided by the university based on the descriptive data, particularly with late decisions that they received because of the strict procedures of the university ($M = 3.35$) and their need to refer to many staff when solving problems ($M = 3.36$). On the other hand, they were satisfied when their problems were overcome within a short period ($M = 4.26$), and the service was able to reduce cost overlaps ($M = 4.27$). As for the academics, they believe that there is bureaucracy within the services and the administration of the university with which they were dissatisfied ($M = 3.27$) and found it quite difficult to launch any appeal or complaint ($M = 3.77$). Lastly, the administrative staff also gave similar feedback to the academics when they believed there is bureaucracy being practiced by the university ($M = 3.32$), that most of the staff were not trained to solve problems ($M = 3.40$), and that actions were delayed due to the lack of staff ($M = 3.45$).

Table 2.

Mean scores and standard deviations of university staff satisfaction

Items		Academic administrators		Academics staff		Administrative staff	
		Mean	SD	Mean	SD	Mean	SD
KP1	Well informed officers	3.66	0.87	4.01	0.77	3.95	0.83
KP2	Not referring to others	4.22	0.69	4.12	0.72	4.05	0.73
KP3	Capable of solving problems	3.76	0.71	4.03	0.74	3.95	0.76
KP4	Not training staff to solve problems	3.58	0.67	3.94	0.80	3.81	0.79
KP5	Didn't receive a late decision due to strict procedure	3.35	0.90	3.82	0.84	3.78	0.87
KP6	Well informed SOP	3.43	0.95	3.84	0.87	3.80	0.81
KP7	Information notices are well understand	3.68	0.83	3.95	0.77	4.02	0.83
KP8	Notifications were through various channels	4.20	0.75	4.20	0.70	4.04	0.78
KP9	Forms are understandable and easy to answer	3.92	0.77	4.12	0.68	3.95	0.78
KP10	Easy to appeal and protest	3.41	0.87	3.77	0.83	3.70	0.85
KP11	Service through the 'phone helps	4.08	0.76	4.08	0.68	3.93	0.76
KP12	Convenient waiting area	3.87	0.49	4.04	0.72	3.86	0.85
KP15	A few staff manage various tasks	3.00	0.55	3.63	0.95	3.44	0.95
KP16	Solving problems isn't through various staff	3.36	0.93	3.48	0.91	3.40	0.91

Items	Academic administrators		Academics staff		Administrative staff	
	Mean	SD	Mean	SD	Mean	SD
KP17 Actions are not delayed even with the absence of staff	3.56	0.56	3.54	0.93	3.45	0.97
KP18 Alternatives are provided for resolving deferred action	3.50	0.79	3.78	0.74	3.76	0.76
KP19 Not feel tired when dealing with staff	3.72	0.79	3.80	0.72	3.80	0.77
KP20 Not delaying services due to not enough staff	3.85	0.54	3.78	0.74	3.59	0.76
KP21 Bureaucracy was shortened	3.16	0.84	3.27	0.97	3.32	0.98
KP22 A short time when dealing	4.26	0.83	4.02	0.77	3.82	0.80
KP23 Reducing overlapping costs	4.27	0.82	4.15	0.68	3.94	0.75
KP24 Management costs are saved	3.98	0.75	4.01	0.76	3.86	0.79
Overall mean scores	3.54		3.70		3.61	

4.3. The university's DNA and culture

A total of 740 responses were received representing in examining the DNA of the university. Table 2 shows the comparison of mean scores for each group of respondents (academic administrators, the academics, and the administrative staff). Based on their overall mean scores, there are low differences based on the three categories of jobs at the research university. However, the administrative staff have a lower understanding of the university's DNA compared to the other two groups (the academics and the academic administrators). Table 3 shows that the academic administrators believed that the research university practises the ethics element well ($M=4.53$) with their staff. As for academics and administrative staff, their ratio (academics, $M=4.34$; administrative; $M=4.33$) were improved by the university's leadership. Within the DNA's elements, academic administrators believed the element of entrepreneurship ($M=3.57$) was not clearly understood and the administrative staff and academics have chosen the element of 'various expertise' (academics, $M=3.53$; administrative, $M=3.57$) as the least understandable element. Based on the descriptive results, it was assumed that all administrative, academic administrators and academic staff truly understood the university's DNA. Comparison between all DNA items shows that the focus emphasises work ('lean, efficient, integrity' and 'global reputation'), while the lowest emphasis is on 'balance score card' and 'strategic planning'.

Table 3.

Mean scores and standard deviations for university's DNA elements.

Items	Academic administrators		Academics staff		Administrative staff	
	Mean	SD	Mean	SD	Mean	SD
DNA1 Green environments	4.00	0.90	3.79	0.81	3.66	0.84
DNA2 Conducive environments	3.85	0.87	3.63	0.85	3.63	0.86
DNA3 Various expertise	4.00	0.72	3.53	0.82	3.57	0.79
DNA4 Sharing information	3.65	0.90	3.57	0.77	3.49	0.80
DNA5 Ethics	4.53	0.69	3.90	0.71	3.68	0.82
DNA6 Cost-effectiveness	4.27	0.98	4.29	0.76	4.04	0.87
DNA7 Endowment	4.12	0.84	4.15	0.80	3.96	0.75
DNA8 Differences	4.07	0.91	4.24	0.77	4.08	0.81
DNA9 Internationalisation	4.47	0.71	3.94	0.89	3.85	0.85
DNA10 External collaboration	3.92	0.88	3.97	0.77	3.84	0.77
DNA11 High impact creativity	3.88	0.87	3.96	0.76	3.87	0.74
DNA12 Entrepreneurship	3.57	0.96	3.82	0.80	3.73	0.77
DNA13 Global reputation	4.16	0.70	4.22	0.75	4.06	0.78

Items		Academic administrators		Academics staff		Administrative staff	
		Mean	SD	Mean	SD	Mean	SD
DNA14	Balance scorecard	3.96	0.87	4.15	0.77	4.00	0.77
DNA15	Strategic planning	3.97	0.88	4.07	0.74	3.98	0.53
DNA16	30% self-employment	3.95	0.77	4.16	0.76	4.05	0.76
DNA17	80% employment	4.41	0.75	4.20	0.75	4.03	0.74
DNA18	Top 50 best in QS	4.22	0.76	4.28	0.73	4.16	0.77
DNA19	6 star rating on SETARA	4.40	0.72	4.17	0.77	4.04	0.83
DNA20	Research university status	3.96	0.81	4.06	0.79	3.98	0.79
DNA21	PhD holders	4.15	0.73	4.29	0.83	4.13	0.77
DNA22	Administrative with academics ratio	4.35	0.69	4.34	0.75	4.33	0.83
DNA23	Students with an academic ratio	4.13	0.89	4.22	0.78	4.09	0.77
DNA24	Postgraduate focus	4.25	0.87	4.18	0.78	4.11	0.77
DNA25	Student enrolments	4.21	0.93	4.27	0.80	4.11	0.82
Overall Mean Scores		4.09		4.05		3.93	

4.4. The institutional and staff values

Table 4 below depicts the staff values and their perceptions of institutional values. Table 4 illustrates the feedback provided by three samples, the academics perceived themselves with much higher mean scores in terms of institutional and staff values compared to the mean values by the academic administrators and the administrative staff. Comparatively, the administrative staff perceived themselves with higher mean scores within their institutional values than the academic administrators. On the contrary, the academic administrators perceived themselves to have much higher mean scores within their self-value.

Table 4:

Mean scores and standard deviations of values- staff values

Items		Academic administrators		Academics staff		Administrative staff	
		Mean	SD	Mean	SD	Mean	SD
ND2	Empathy	4.13	0.82	4.12	0.67	4.03	0.76
ND4	Honest	4.28	0.81	4.46	0.61	4.35	0.75
ND5	Having initiative	4.25	0.58	4.40	0.62	4.23	0.73
ND6	Bravery	4.27	0.74	4.28	0.66	4.09	0.77
ND7	Optimistic	4.28	0.76	4.32	0.63	4.17	0.75
ND8	Persevering	4.30	0.64	4.39	0.63	4.17	0.77
ND9	Respectful	4.30	0.80	4.50	0.58	4.32	0.72
ND10	Responsibility	4.33	0.77	4.47	0.60	4.28	0.76
ND11	Trustworthy	4.45	0.67	4.55	0.59	4.38	0.75
ND12	Hope	4.18	0.76	4.33	0.64	4.17	0.76
ND13	Justice	4.22	0.71	4.38	0.60	4.16	0.78
ND14	Loving	4.21	0.85	4.39	0.62	4.18	0.75
Overall mean scores		4.26		4.38		4.21	
<i>Institutional values</i>							
NS2	Empathy	3.86	0.82	3.98	0.73	3.92	0.78
NS3	Loyalty	3.93	0.89	4.19	0.70	4.05	0.76

Items	Academic administrators		Academics staff		Administrative staff	
	Mean	SD	Mean	SD	Mean	SD
NS4 Honest	3.98	0.92	4.27	0.70	4.16	0.80
NS5 Having initiative	4.05	0.74	4.24	0.70	4.11	0.77
NS6 Bravery	3.90	0.89	4.13	0.74	4.02	0.78
NS7 Optimistic	3.92	0.93	4.13	0.71	4.09	0.76
NS8 Persevering	3.96	0.83	4.20	0.69	4.16	0.77
NS10 Responsibility	4.06	0.94	4.41	0.89	4.25	0.75
NS11 Trustworthy	4.21	0.77	4.32	0.70	4.09	0.75
NS12 Hope	4.05	0.93	4.20	0.68	4.16	0.74
NS13 Justice	4.15	0.82	4.26	0.71	4.05	0.79
NS14 Loving	4.03	0.98	4.17	0.75	4.04	0.78
Overall mean scores	4.00		4.20		4.09	

4.5. The university's KFA

Based on three major perceptions of the university's KFA, the academics have a much higher perception of the implementations of the university's KFA (M= 4.02) compared to the academic administrators (M= 3.96) and administrative staff (M=3.93). Overall, all three groups gave high mean scores to all seven constructs that represented the university's KFA. However, based on their mean scores, the academic administrators were least satisfied with the element of 'global reputation' (M=3.96) while the administrative staff and the academics were least satisfied with 'the total campus experience' (academics; M= 3.94; administrative; M=3.91). In terms of high mean scores, academics perceived 'financial sustainability' (M= 4.11) as the main element within the KFA whilst the administrative staff and academic administrators perceived 'Sustainable campus, infrastructure, ICT, community involvement and industrial networking' (M= 4.02).

Table 5.

Mean scores and standard deviations of the university's KFA

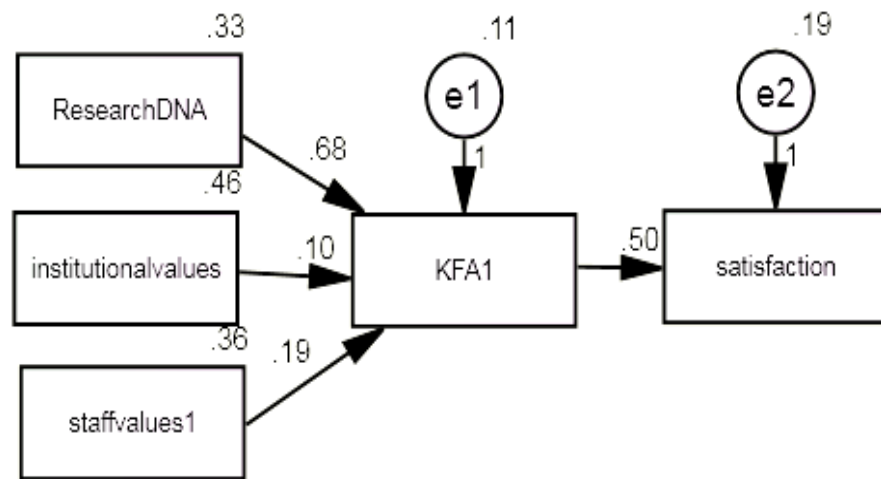
Constructs	Academic administrators		Academics staff		Administrative staff	
	Mean	SD	Mean	SD	Mean	SD
C1. Teaching and learning excellence	3.96	0.63	3.97	0.76	3.88	0.66
C2. Research, innovation and commercialisation excellence	3.97	0.73	3.97	0.69	3.94	0.73
C3. Sustainable campus, infrastructure, ICT, community involvement and industrial networking	4.00	0.65	4.10	0.62	4.02	0.69
C4. Total campus experience	3.98	0.72	3.94	0.66	3.91	0.78
C5. High impact delivery	3.98	0.70	4.07	0.65	3.94	0.71
C6. Financial sustainability	3.88	0.80	4.11	0.70	3.94	0.73
C7. Global reputation	3.95	0.66	3.98	0.71	3.89	0.75
Overall mean scores	3.96		4.02		3.93	

4.6. The structural model

In evaluating whether the research DNA, institutional, and self-values predicted the university's KFA and hence staff satisfaction, we decided to establish the structural model using the AMOS software and maximum-likelihood estimation procedures with the covariance matrix as the input of the analysis. Thus, the fit statistics were also inspected. In this case, the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) were recommended by Hu and Bentler (1999). At the same time, the chi-square statistic for the degrees of freedom (χ^2/df) was also checked to ensure an acceptable fit for the structural model. Using the structural model, we examined a model with three variables (DNA research culture, institutional values, and staff values) with the university's KFA as the mediator and, lastly, the implications for staff satisfaction. In Figure 2, the structural model explained all three variables with the university's KFA as a mediator. This later predicted staff satisfaction. The strongest significant predictor for the university's KFA was the research DNA and culture ($\beta = .68$) followed by staff values ($\beta = .19$) and the institutional values ($\beta = .10$) while the university's KFA predicted ($\beta = .50$) and explained 19% of the variance in staff satisfaction. The final model reported a satisfactory fit to the data [χ^2 (N = 740) = 47.169, $p < .001$, $\chi^2/df = 47.169$, RMSEA = .052, IFI = .980, NFI = .979; IFI = .980].

Fig. 2:

The direct effects model of research DNA and staff personal values.



4.7. Multi-group analysis

In the final phase of analysis, we examined the hypothetical model using multi-group analyses based on staff satisfaction, gender, and job categories. Based on the results from Table 6, it was indicated that male university staff has a much higher level of predictions or direct effects from 'KFA1, research DNA, and culture' and finally on the 'staff-values1' towards their satisfaction compared to the female staff. This indicated that female ($\beta = .37$) staff have much higher direct effect values based on their self-values compared to their male counterparts ($\beta = .25$). The fit statistics for the model are [χ^2 (N= 740) = 92.442; $df = 5$; $\chi^2/df = 18.488$; RMSEA = .10; NFI = 0.98; RFI = 0.79; IFI = 0.98; CFI = 0.981].

Table 6 also indicates the results of comparing multi-groups based on the three staff job categories. In examining the direct effects of 'KFA1', the academic staff ($\beta = .70$) have a higher level of regression weighting value from their 'Research DNA and culture' compared to the academic administrators ($\beta =$

.56) and the administrative staff ($\beta = .59$). On the contrary, in examining the ‘institutional-values’ to ‘KFA1’, the academic administrators ($\beta = .26$) have higher values of regression weights compared to the other two groups; the academics ($\beta = .10$) and the administrative staff ($\beta = .03$). In predicting the staff satisfaction, it was noted that administrative staff ($\beta = .33$) have much higher regression weights compared to the academics ($\beta = .32$) and academic administrators ($\beta = .26$) within the ‘KFA1’ to ‘satisfaction’. The fit statistics for the model are [χ^2 (N= 740) 92.442; $df = 5$; $\chi^2/df = 18.488$; RMSEA = .10; NFI = 0.98; RFI=0.79; IFI=0.98].

Table 6.

Parameter estimation for multi-group analysis (regression weights) – staff gender

	Unstandardised Estimation						Standardised Estimation	
	Estimate		SE		<i>p-value</i>		Estimation	
	Male	Female	Male	Female	Male	Female	Male	Female
Research DNA → KFA1	.62	.71	.04	.03	. ***	. ***	.57	.69
Institutional-values → KFA1	.14	.07	.04	.03	.001	.001	.15	.09
Staff-values1 → KFA1	.22	.15	.05	.04	. ***	. ***	.23	.14
KFA → Satisfaction	.35	.26	.07	.06	. ***	. ***	.41	.29
Fit statistics: $\chi^2 = 92.442$; $df = 5$; $\chi^2/df = 18.488$; RMSEA = .10; NFI = 0.98; RFI = 0.79; IFI = 0.98; CFI = 0.981								

Table 7

Parameter estimation for multi-group analysis (regression weights) – staff job categories

	Unstandardised Estimation									Standardised Estimation		
	Estimate			SE			<i>p-value</i>			Estimation		
	AA	AC	AD	AA	AC	AD	AA	AC	AD	AA	AC	AD
Research DNA → KFA1	.64	.73	.63	.09	.03	.04	.00	. **	. **	.56	.70	.59
Institutional-values → KFA1	.22	.09	.03	.07	.03	.04	.00	.01	.46	.26	.10	.03
Staff-values1 → KFA1	.10	.14	.30	.08	.05	.05	.19	. **	. **	.11	.12	.32
KFA → Satisfaction	.19	.27	.31	.09	.07	.07	.05	. **	. **	.26	.32	.33.
Fit statistics: $\chi^2 = 92.442$; $df = 5$; $\chi^2/df = 18.488$; RMSEA = .10; NFI = 0.98; RFI = 0.79; IFI = 0.98; CFI = 0.981.												
Note: AA = Academic administrators; AC = Academic staff; AD = Administrative staff.												

5. Discussion

Based on the responses of 740 academic administrators, and administrative and academic staff, surprisingly, most staff indicated that they felt satisfied with the services provided by the university's leadership and management. All 24 items were scored highly based on the high mean scores achieved. With the high level of staff satisfaction, it is believed that the university staff have positive emotions toward their university, which has positive implications for their productivity (Chuang & Mei Tai, 2014). Even though staff perceived that they were highly satisfied with the services provided by the university's leadership, they also highlighted that they were quite dissatisfied with some issues and problems related to delaying work due to the absence, or lack, of staff to solve various tasks and problems.

Through the structural model, it is hypothesised that the university's KFA acted as a significant predictor of staff satisfaction while the university's research culture was indicated as the strongest predictor of the university's KFA compared to two other variables, namely the university's values and the staff values. At the same time, the structural model was also being confirmed using the direct effects of the research DNA culture and the staff personal values. The SEM analysis revealed that the staff values were better predictors of staff satisfaction compared to the research DNA culture which represented the university's culture. Further, we examined the model using multi-group analysis based on two main elements within the research university context. Firstly, based on the staff gender, the male staff of the research university had a much higher level of predictions or direct effects towards their satisfaction compared to their female counterparts. However, the female staff perceived their overall staff values to be higher than the male staff, which was a strong prediction of female staff satisfaction.

Results were indicated differently based on the direct effects from three parameters: 'the research DNA and culture', 'institutional values' and 'staff values'. In predicting the 'KFA', the academic staff have much higher direct effects compared to the academic administrators and the administrative staff. This result shows that the academic staff believed that the research culture and DNA, as practised by the research university, contributed to their satisfaction with working within the research university. On the other hand, in predicting from the 'institutional values', the academic administrators perceived better values on the regression weights which indicated that they had a much better understanding of their university, faculties or centre's values compared to the academics and non-academics. When analysing the staff satisfaction employing the 'KFA' as the mediator, the administrative staff have much higher direct effects on their staff satisfaction. Comparatively, when the research culture was examined as a parameter to predict satisfaction, the academic administrators believed that the research culture and the DNA contributed the least to their satisfaction. Finally, the administrative staff believed that staff values have direct effects on their satisfaction compared to the other two parameters, 'the research DNA' and 'institutional values'.

5.1. Implications of the Study

First, based on the descriptive data of the DNA, the academic administrators reported through their feedback that they were unclear on the concept of entrepreneurship as emphasised by the university. Thus, to overcome this lack of clarity the university's leadership is advised to provide clearer explanations to all academic administrators through a campaign involving a series of talks, and a briefing on entrepreneurship, since the academic administrators are key individuals in the process of instilling the entrepreneurship skills to all future graduates of the research university. Through these continual efforts, it is hoped the university's staff, especially the academic administrators, will have a clear understanding of the concept of entrepreneurship since they have to help the university's other staff understand the concept. Another important element highlighted by the academics and administrative staff is the element of recognition of the diversity of areas of expertise required by the university's staff. To them, obtaining recognition of their expertise was an unclear element; therefore, more explanations should be given to them about obtaining recognition of their expertise. Overall, based on the findings of the university's DNA, the administrative

staff was noted as the group that was most unclear on the university's DNA due to some aspects of the DNA not relating to their tasks or job routines.

In the second element being examined, which related to the institutional and staff values, the staff stressed the low level of empathy values, which pointed out that most people within the university seem to lack sympathetic values. Surprisingly, the element of empathy was selected by all clusters within the university, which pointed to the need for empathy to be emphasised. Thus, it is suggested that the leadership of the university should enhance or highlight the importance of empathy and sympathetic values within the university context to both staff and students. The university's leadership should be the 'role model' for students and staff of the university in the process of instilling and practicing values.

Third, the staff of the university highlighted the issue of work delays in completing their work or tasks due to the shortage of staff. In addition, a major issue pointed out by the academic administrators was that late decisions were received due to the strict procedures of the university and issues were solved after discussion with a few staff. In fact, the element of solving issues by involving various staff was also being stressed by academics and administrative staff. Thus, this issue should be considered seriously by the university's leadership since the findings reflected the competencies of the administrative staff of the university since there is a lack of distributed leadership for tasks being undertaken by the management of the university. Thus, it is suggested that the university's leadership should, as a priority, create a continuous assessment procedure for the staff of the university to ensure that their competencies meet the official standards and that the staff employed can complete their tasks through a multi-tasking approach. In addition, it is strongly suggested that more staff should be employed to provide much faster completion of tasks within the allotted timeframe.

Fourth, there was a lack of clarity about the concept of teaching and learning excellence as perceived by the staff. Therefore, it is suggested that the university's teaching centre should propose a framework of teaching excellence that should be employed by all staff of the university, especially novice academics who have the least experience in teaching in higher education or universities. At the same time, the teaching excellence centre should be able to conduct or initiate efforts to enhance teaching excellence in this research university through various approaches such as: creating a mentoring system for novice academics to develop their teaching with guidance from their seniors. Secondly, 'scholars of teaching', sharing knowledge and advancing knowledge of teaching and learning in ways that can be peer-reviewed (Skelton, 2005) should be initiated by the centre of teaching excellence. Thirdly, researchers pointed to the connections between teaching and technology changes as the use of technology is considered a significant innovation in teaching and learning in the HE context (Skelton, 2005; Devlin & Samarawickrema, 2010). The use of technology can create a different learning environment for students and prepare them for the challenges of "super-complexity" (Barnett, 2000).

6. Conclusion

Ultimately, the study provides clear findings related to staff satisfaction with the university's policy, KFA, and institutional and staff values, which are assumed to be able to predict the satisfaction of the staff regardless of their administrative or academic roles. From these findings, it is clear that the staff of the studied university truly understand the elements studied that are related to the university's policy, KFA, and the values that are emphasised by the university. Lastly, staff also believed that values, regardless of the university context or their values, might have some implications for their satisfaction.

7. Co-Authors Contribution

The authors affirmed that there is no conflict of interest in this article. The first, second, and fifth co-authors were responsible for the theoretical and conceptual framework of the study, data, and data collection. The fourth co-author was responsible for proofreading and editing the manuscript, and the fifth and sixth co-authors were responsible for the data analysis.

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