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The Effect of Organisational Culture on Students' Cognitive, Skill-Based, and Affective Learning Outcomes in Higher Education in Saudi Arabia

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Abstrac

The current study aimed to analyze the effect of organizational culture on students cognitive, skill-based and affective learning outcomes in Saudi higher education institutions. It has been conducted a quantitative research methodology by distributing questionnaires which contained 95 items to faculty members at two Saudi higher education institutions. 496 responses were further analysed using the SPSS (V23) and PLS-SEM. Results indicated that organisational culture has a direct and significant positive effect on students' cognitive, skill-based, and affective learning outcomes in the context of Saudi higher education. The present study has a potential to reflect positively on the Ministry of Education, academic leaders, as well as support the higher education institutions.

Keywords: Organisational Culture, Cognitive Learning Outcomes, Skill-based Learning Outcomes, Affective Learning Outcomes, Saudi Higher Education

El efecto de la cultura organizacional en los resultados de aprendizaje cognitivo, basado en habilidades y afectivo de los estudiantes en la educación superior en Arabia Saudita

Resumen

El presente estudio tuvo como objetivo analizar el efecto de la cultura organizacional en los resultados de aprendizaje cognitivo, basado en habilidades y afectivos de los estudiantes en las instituciones de educación superior sauditas. Se ha llevado a cabo una metodología de investigación cuantitativa mediante la distribución de cuestionarios que contenían 95 ítems para miembros de la facultad en dos instituciones de educación superior sauditas. Se analizaron más de 496 respuestas utilizando el SPSS (V23) y el PLS-SEM. Los resultados indicaron que la cultura organizacional tiene un efecto positivo directo y significativo en los resultados de aprendizaje cognitivo, basado en habilidades y afectivos de los estudiantes en el contexto de la educación superior saudita. El presente estudio tiene el potencial de reflejar positivamente en el Ministerio de Educación, los líderes académicos, así como apoyar a las instituciones de educación superior.

Palabras clave: cultura organizacional, resultados de aprendizaje cognitivo, resultados de aprendizaje basados en habilidades, resultados de aprendizaje afectivo, educación superior saudita

INTRODUCTION

Any organisation has its own unique culture that has an impact on the development and the outcomes of the organisation itself. This situation refers to the notion of organisational culture (OC) that provides leaders in the organisation with different techniques to understand and interpret the events in the organization (Sheikhalizadeh & Piralaiy, 2017). OC has been attributed with several concepts and definitions; generally, it is defined as a set of values, norms, principles, beliefs, and rules that exist among the individuals in an organisation (Barbars, 2015; Di Stefano & Scrima, 2016; Pietersen, 2017). These characteristics can influence individuals' attitudes, feelings, behaviours, and decisions. OC is a crucial element in any organisations that can exert an influence on the individuals and have an impact on its outcomes (Imam, Abbasi, Muneer, & Qadri, 2013). Higher education institutions are also included as one of the organisations that are affected by OC.

According to Imam et al. (2013), OC is considered as a vital component in the higher education institutions as it has a substantial role that leads to the desired performance and change in the higher education sector. Fralinger and

Olson (2007) have pointed out that organisational culture has a particular function of helping academics to enhance students' learning outcomes (SLOs). OC in higher education also provides students with the relevant opportunities that allow them to utilize their competencies, as well as the creative, personal, and professional skills (Vasyakin, Ivleva, Pozharskaya, & Shcherbakova, 2016).

Cultural values are crucial in any organisation around the world. Alsarahani (2012) asserted that OC is the pillar in which the university's principles are built on as it supplements the productivity and the loyalty of faculty members. The culture in Saudi higher education sector creates the individuals' principles, attitude, norms, thoughts, and values of including students and academics (Albatah, 2006; Alsarahani, 2012; Sakarnah, 2009). It also provides a clear vision with regard to the most effective way of communication and interaction between individuals. Alsarahani (2012) further stated that OC is essential in Saudi higher education in terms of unifying the efforts of academic leaders, faculty members, and subordinates to achieve the desired goals and outcomes. Saudi Ministry of Education has initiated new education reform movements by improving the quality of educational leadership, and enhancing SLOs as well as prepare them for future career prospects (Saudi Ministry of Education, 2019). The movements' objectives can be accomplished by putting an emphasis on OC as the cornerstone of higher education institutions which build on the principles and improve both performance and outcomes.

OC has a direct and indirect impact on higher education institutions' performance, effectiveness, outcomes, improvements, as well as students' learning (Imam et al., 2013; Martinez, Beaulieu, Gibbons, Pronovost, & Wang, 2015). It has also been found that OC can affect individuals' creativity and SLOs. (Alsarahani, 2012; Sakarnah, 2009; Vasyakin et al., 2016). Despite these findings, most of the existing studies did not investigate the impact of OC on a specific type of learning outcomes. Rather, the role or impact of OC was typically examined in terms of the performance, outcomes, and individuals' productivities. Discussions in various research of learning outcomes should instead be constructed in relation to the three main elements of cognitive, skill-based, and affective outcomes as proposed by Kraiger, Ford, and Salas (1993). Furthermore, it has recently been observed that Saudi higher education institutions have paid more attention to these components of SLOs (Saudi Ministry of Education, 2019). Studies have also discovered that OC is vital in affecting the performance and outcomes in higher education institutions (Alsarahani, 2012; Imam et al.,

2013; Martinez et al., 2015; Sakarnah, 2009; Vasyakin et al., 2016). Hence, these findings imply that academics and practitioners should examine various elements in the organisation that can enhance the SLOs at the university level.

Nevertheless, the impact of OC on students' cognitive, affective, and skill-based learning outcomes has not been studied in the context of Saudi higher education (Saudi Digital Library, 2019). The previous literature has only focused on the significance of OC in the organisation in terms of its impact on the performance and outcomes. In order to address the literature gap, the current study aims to evaluate the effect of OC on the three main elements of SLOs, i.e., cognitive, skill-based, and affective learning outcomes, in Saudi higher education.

Hence, the objectives of this study are to:

1. Analyse the direct and significant effect of organisational culture on students' cognitive outcomes in higher education in Saudi Arabia.
2. Analyse the direct and significant effect of organisational culture on students' skill-based outcomes in higher education in Saudi Arabia.
3. Analyse the direct and significant effect of organisational culture on students' affective outcomes in higher education in Saudi Arabia.

THEORETICAL FOUNDATION

Organisational Culture (OC)

OC refers to a set of values, norms, behaviours, rules, attitudes, and thoughts that run from the head of the organisation to the line managers who have the ability to spread the values of culture among the individuals in any organisation (Li, Bhutto, Nasiri, Shaikh, & Samo, 2018). According to Coman and Bonciu (2016), OC is an appropriate technique that assists individuals to understand the issues in the organisation which subsequently results in taking relevant actions and solving the issues. OC is a complex and difficult concept to be evaluated within any organisation. Accordingly, there have been various models, instruments, and measurements being developed to assess the culture within the organisation, such as Denison's model of organisational culture, Hofstede's cultural dimensions, Organisational Culture Assessment Instruments OCAI for Cameron and Quinn (Cameron & Quinn, 2011; Denison & Mishra, 1995; Hofstede, Hofstede, & Minkov, 2010; Yadav, 2014). Empirical research has pointed out that these instruments are suitable for studying the culture within organisations including higher education. Hence, the current study has selected the OCAI to measure OC as it is considered as the most appropriate instrument for studying culture in the context of higher education (Alshibani & Alatwi, 2011; McCaffery, 2004; Vasyakin et al., 2016).

The Organisational Culture Assessment Instruments (OCAI)

The current study adopted the Organisational Culture Assessment Instrument (OCAI) for Cameron and Quinn (2011) to examine the effect of organisational culture on students' cognitive, skill-based, and affective learning outcomes in the context of Saudi higher education. The OCAI has been developed to assess six different dimensions in any organisation, namely dominant characteristics, organisational leadership, management of employees, organisational glue, strategic emphasis, and criteria of success. Additionally, each dimension in the model has four different alternative items that represent four types of culture i.e., Clan Culture, Adhocracy Culture, Market Culture, and Hierarchy Culture. In order to assess the type of culture being practised in the organisation, individuals have to divide 100 points among these four items in each dimension. The highest number must be given to the items that are more similar to the organisation. The Total point must be equal to 100 points in each dimension. Although researchers can use the 100 points method to identify the culture in the organisation, they can also rate each statement based on 1 to 5 or 1 to 7 Likert-scale point (Cameron, & Quinn, 2011). It should also be noted that there have been several types of research that utilised both techniques (Cameron, & Quinn, 2011; Quinn & Spreitzer, 1991; Yeung, Brockbank, & Ulrich, 1991). This situation implies that there is a degree of flexibility in terms of method of assessment and statistical technique that can be utilised by scholars in addressing the nature of their research or research questions.

Researchers can also utilise the OCAI to identify the type of OC that has been practised in the organisation being investigated. They can assess the current type of culture and the preferred type of culture in the future. It has also been asserted by Cameron and Quinn (2011) that each type of culture has its own characteristics that have an impact on the organisation. To sum up, the OCAI has six different dimensions and each dimension represents the four different types of culture. Each culture has its own characteristics that affect the individuals. In addition, the OCAI is an appropriate model that can be used to assess OC culture within the context of higher education (Alshibani & Alatwi, 2011; Vasyakin et al., 2016). The OCAI is used by several universities and community colleges around the world. It has also been applied in different organisations and adapted by 60 doctoral dissertations.

Organisational Culture in Higher Education Institutions

Any organisation has its own culture that affects its individuals and leads to changes in outcomes and performance (Haque & Anwar, 2012; Vasyakin et al., 2016). Likewise, higher education institution has its own culture that helps to improve

the performance and outcomes, encourage teamwork, and develop the faculty members' productivity (Alsarahani, 2012). OC is different from one organisation according to their individual missions and visions, leadership processes and the objectives (Boykova, 2011; Vasyakin et al., 2016). Accordingly, OC in higher education has three insights. First, it can be an independent group and represent the department in the institutions. Second, it can be a social group and represent the students and faculty members. Third, it can act as an important part in the institution that contributes in producing qualified graduates who have the desired ability to secure a job at professional organisations (Boykova, 2011; Vasyakin et al., 2016).

OC plays a significant role in higher education in terms of developing the stability, improving faculty members' creativity and motivation, developing their loyalty, as well as increasing the performance and the outcomes (Alsarahani, 2012; Haque& Anwar, 2012; Kotrba et al., 2012). This idea implies that the failure and success in higher education depend on this crucial role that OC plays both for individuals and organisation. It has also been observed that the culture affects the attitude, behaviour, and performance of individuals (James Ng'ang'a & Nyongesa, 2012). Furthermore, previous studies have discovered that OC specifically contributes to the achievement of achieving desired outcomes and performance of the organisation (Haque& Anwar, 2012; Imam et al., 2013; James Ng'ang'a & Nyongesa, 2012; Kotrba et al., 2012).

Likewise, Imam et al., (2013) have conducted research to analyse the relationship between OC and the performance of Pakistani higher education institutions. This relationship was examined by considering the readiness of change of individuals as a mediating role. Findings of this research revealed that individuals' readiness for change plays a mediating effect on OC and performance. Furthermore, it was also discovered that OC and individuals' readiness for change have a major role in achieving the desired performance of higher education.

In a study conducted at the Islamic Azad University in Iran, Sheikhalizadeh and Piralaiy (2017) have examined the influence of OC on academic staff knowledge management. Results of the research have illustrated that a positive and significant effect exists between OC and knowledge management. This deduction denotes that OC plays a vital function in creating knowledge in higher education as it has a positive influence on knowledge management of the academic members. Therefore, it is made evident based on these findings that OC has a positive impact on the outcomes in the higher education sector.

The Organisational Culture in Saudi Higher Education

OC is a crucial component that constructs the attitudes, principles, values, motivations, and behaviours of the individuals (Alsarahani, 2012). Even though OC has been studied in several sectors across the world, it still has not received the deserved attention in Saudi educational environment (Alsarahani, 2012). This phenomenon has resulted in the lack of interest among researchers to examine OC in terms of its significance for the individuals in the context of Saudi higher education sector (Alsarahani, 2012). As such, Alsarahani (2012) has performed research to examine OC in greater details at two Saudi higher education institutions, namely Aljoaf and Haial Universities. This study was aimed at identifying the level of dominance of OC as well as distinguishing the relationship between OC and the faculty members' motivations. The findings indicated that the level of OC practices in both of these universities was high, implying that Saudi higher education sector has an effective implementation of OC. The sound leadership being practised in Saudi universities has also contributed to the strong employment of OC (Alsarahani, 2012). Hence, it is evident that OC is essential in managing and organising the academic staff alongside achieving the desired outcomes in the higher education sector.

Furthermore, Najmi (2011) has examined the relationship between the degree of suitability of the dominant OC and the degree of employing the total quality assurance management in a Saudi higher education institution called Jazan University. The findings have shown that the degree of appropriateness of OC for the was high. Thus, it has been demonstrated that it is highly significant to spread and enhance the culture for total quality management. Alshalawi (2005) has also performed research to examine the OC being practised at King Khalied Military College, Saudi Arabia. The relationship between OC and the level of career affiliation was evaluated according to personal and functional characteristics. It was revealed that the level of OC and career affiliation according to personal and functional characteristics was high. The findings have also suggested no significant difference in the level of OC with regard to their functional and personal characteristics. Furthermore, a study that was conducted in the Kindergarten and 12 years of basic education sector (K-12 educational sector) at Haial province has found that OC has a significant role in increasing the professional performance of supervisors (Alshamari, 2008).

Based on the literature, it is evident that OC plays a crucial role in improving individuals' outcomes and performance. It is also considered as an important element in Saudi higher education. Furthermore, the level of OC practices in Saudi higher education is high, referring to a strong culture, management, and leadership. Nonetheless, previous studies of OC that were conducted at Saudi Arabia only aimed at identifying the degree or level of OC practices in higher education, as well as its role in developing the performance of educational supervisors. The research only highlighted the general view of the effects that

OC has on the performance and outcomes of the organisation and level of practices in the higher education sector.

Students' Learning Outcomes

Cognitive, Skill-Based, and Affective Learning Outcomes

A guideline or conceptual model is essential to measure the learning outcomes of individuals. Kraiger, Ford and Salas (1993) have developed the Classification Scheme of Learning Outcomes to assess the learning outcomes of individuals based on three main outcomes, i.e., cognitive, skill-based, and affective learning outcomes. This theoretical model was developed based on the previous theories of learning which include cognitive theory, skill-based theory, and affective theory. They have further constructed this model based on Bloom's taxonomies (1956) and Gagne's taxonomies (1984). These three learning outcomes comprise of different measurements. First, cognitive learning outcomes encompass three measures, namely cognitive strategies, verbal knowledge, and knowledge organisation. Second, skill-based learning outcomes include two different measures, namely compilation outcomes and automaticity outcomes. Third, affective learning outcomes contain two different measures; attitudinal outcome refers to the object's attitude and strength; motivational outcomes refer to self-efficacy, goal setting, and disposition. To conclude, the evaluation of individuals' learning outcomes encompass the three important elements of cognitive, skill-based, and affective outcomes.

Organisational Culture and Students' Learning Outcomes in Saudi Higher Education

OC has an impact on the performance and outcomes in the higher education sector. Since students' learning is considered as one of the outcomes of higher education, OC can affect the SLOs. It should be noted that the impact of OC on SLOs in higher education has not been thoroughly studied. Esposito (2009) has performed research to analyse whether there is a relationship between OC and SLOs in terms of the activities outside the classroom in a higher education setting. The findings have indicated an impact as well as a positive relationship between OC and SLOs in terms of activities outside the classroom. It was also revealed that the Clan and Adhocracy cultures correspond with the effectiveness of SLOs with regard to activities outside the classroom.

There has been a limited number of studies that evaluate the topics of OC and SLOs in higher education. Hence, this section will include other studies that are related to the same issue in the context of the K-12 educational sector. Similarly, a study Brady (2005) has conducted research to analyse the effect of school culture on the outcomes of students' academic engagement and achievement. While school culture was discovered to have a small effect on students' academic achievement, students' academic engagement was significant

antly impacted by school culture. Hence, the findings implied that school culture has an impact on the students' outcomes. Furthermore, several studies have found that OC can affect different variables in the organisation (Alsarahani, 2012; Haque & Anwar, 2012; Kotrba et al., 2012). Additionally, it has also been revealed in the research that OC has a significant impact on the performance and outcomes of higher education.

Based on the discussion above, it is evident that the impact of OC on SLOs has been evaluated by many studies from different angles. The existing literature has examined the impact of OC on the general performance and the outcomes in higher education. The impact of OC on specific students' outcomes, such as academic achievement, engagement and out-of-classroom activities has also been addressed. Nevertheless, to date, there has been no study that investigates the effect of OC on the specific types of learning outcomes, i.e., students' cognitive, skill-based, and affective learning outcomes in higher education. Therefore, the current study aims to analyse the effect of OC on these specific learning outcomes in the context of Saudi higher education institutions. It has been proposed by Kraiger et al. (1993) that learning outcomes can be evaluated based on the individual's cognitive, skill-based, and affective learning outcomes. Accordingly, this study is aimed at examining the effect of OC on these three types of learning outcomes in a higher education setting.

The conceptual framework of this study has been formulated based on the existing literature as discussed above. It has been concluded in previous research that OC has an impact on the outcomes of the organisation. Research has also implied that OC can affect students' outcomes. Therefore, based on the conclusions and theoretical models proposed in these studies, the conceptual framework employed in the current paper is constructed based on the OCAI (Cameron, & Quinn, 2011) and the Classification Scheme of Learning Outcomes (Kraiger et al., 1993). Figure 1 below demonstrates the conceptual framework in further details.

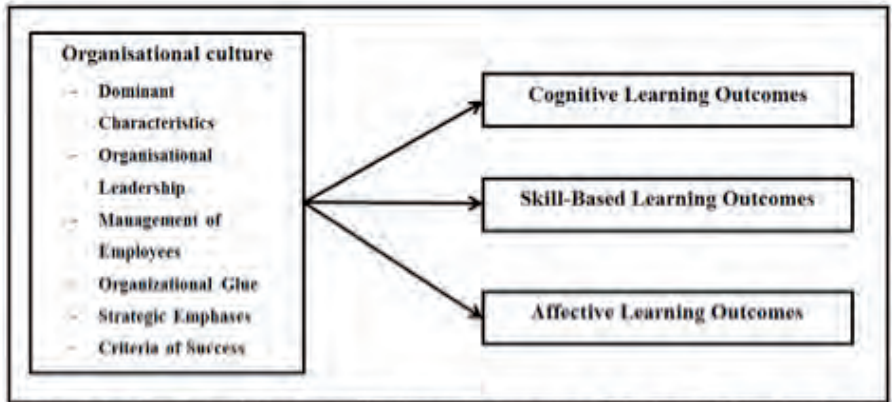


Figure 1: Conceptual Framework (Source: Cameron & Quinn, 2011; Kraiger/et al., 1993)

It can be seen from the diagram above that there are six dimensions that represent the OC, namely dominant characteristics, organisational leadership, management of employees, organisational glue, strategic emphasis, and criteria of success. The organisational culture in this diagram is considered as the exogenous variable that has an impact on three different endogenous variables, i.e., cognitive learning outcomes, skill-based learning outcomes, and affective learning outcomes. These three variables are adopted from the Classification Scheme of Learning Outcomes proposed by Kraiger et al. (1993). It should be reiterated that the conceptual framework adopted in this study represents OC as an exogenous variable that affects students' cognitive, skill-based, and affective learning outcomes as endogenous variables.

Based on the framework, the current study aims to analyze the effect of OC on students' cognitive, skill-based, and affective learning outcomes in higher education in Saudi Arabia. Therefore, the current study will test the following three null hypotheses:

H01: There is no direct and significant positive effect of organisational culture on students' cognitive outcomes in higher education in Saudi Arabia.

H02: There is no direct and significant positive effect of organisational culture on students' skill-based outcomes in higher education in Saudi Arabia.

H03: There is no direct and significant positive effect of organisational culture on students' affective outcomes in higher education in Saudi Arabia.

METHODOLOGY

Research Design, Population and Sampling

A quantitative research methodology was employed in this study by focusing on survey design. Data was collected from two different higher education institutions in Jazan Province, Saudi Arabia. Random sampling technique was applied and questionnaires were distributed among faculty members who worked at Jazan University (JU) and Technical and Vocational Training Corporation (TVTC). The method of randomly distributing questionnaires allows generalisation to be done on the population (Creswell, 2012). The total number of faculty members at both institutions was 3828. Based on the recommended table by Krejcie and Morgan's (1970), the minimum sample size suggested for this total number is 350 respondents (Chua, 2016). However, Creswell (2014) suggested that the reserchers should collect more number of respondents to avoid any problems during data analysis. Based on that, the reserchers collected more than 350 respondents in order to avoid any problems during data analysis.

Instrumentation

A questionnaire which contained 95 items was adapted and developed in this study. It comprised of three core parts, namely demographic information, the organisational culture, and the students' learning outcomes. The demographic information section covered the respondents' gender, age, type of institutes, experience, and qualification. The section of organisational culture was adapted from the OCAI proposed by Cameron and Quinn (2011). It encompassed six different dimensions with 71 items. The section of students' learning outcomes was adapted from the Classification Scheme of Learning Outcomes by Kraiger et al. (1993) which contained 24 items that were distributed between cognitive outcomes, skill-based outcomes, and affective outcomes. Additionally, 5-point Likert scale was applied to analyse the respondents' perspectives. The respondents were asked to select one response for each item according to these answers: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, and 5= Strongly Agree. In short, the questionnaire was built on a 5-point Likert scale and contained 95 items that were divided between two main sections:

organisational culture, and students' learning outcomes.

This instrument was pilot tested at higher education in Saudi Arabia with 150 faculty members. The aim of pilot testing was to assess the validation and reliability of the instrument. Both validation and reliability were testing via PLS-SEM. Moreover, Table 1 and Table 2 below present the results of validity and reliability of the instrument.

Table 1
Results of Validity and Reliability of the Instrument

Construct	Cronbach's Alpha	Composite Reliability (CR)	Convergent Validity (AVE)
DC	0.916	0.915	0.549
OL	0.926	0.926	0.556
ME	0.937	0.937	0.576
OG	0.929	0.929	0.566
SE	0.920	0.920	0.538
CS	0.936	0.936	0.573
SC	0.921	0.921	0.625
SS	0.933	0.933	0.582
SA	0.916	0.916	0.609

Key: DC= Dominant Characteristics; OL= Organisational Leadership; ME= Management of Employees; OG= Organisation Glue; SE= Strategic Emphases; CS= Criteria of Success; SC= Students Cognitive Outcomes; SS= Students Skill Outcomes; SA= Students Affective Outcome

Based on the discussion and Table 1 above, the following subsections will be included more details regarding to the validation and reliability of the instrument.

Validation

The validation test covered face validating, the convergent validity and discriminant validity. A number of five experts in the filed have performed the face validating. The convergent and discriminant validity were tested through PLS-SEM. The Average Variance Extracted (AVE) was tested for convergent validity. The AVE indicated a correlation between the constructs. Hair et al.

(2017) have pointed out that the value of 0.5 and higher refers to a high level of convergent validity. Therefore, the results of Table 2 above illustrated that all values of the AVE were within the acceptable range.

The discriminant validity test indicates to the degree in which a construct in the model is dissimilar from other constructs (Hair et al., 2017). It can be measured through testing the Fornell-Larcker Criterion, Cross Loading, and Heterotrait-monotrait ratio (HTMT). The findings of this study revealed that the discriminant validity was only established under cross loading and HTMT. Since the discriminant validity cannot be established under Fornell-Larcker Criterion, the utilisation of HTMT was proposed (Henseler, Ringle, & Sarstedt, 2015). The discriminant validity cannot be established under Fornell-Larcker criterion; therefore, the HTMT has been tested and it was found that the discriminant validity can be established under the HTMT (Henseler et al., 2015). It must be noted that the acceptable values of HTMT are 0.85 (Kline, 2011) or 0.90 (Teo, Srivastava, & Jiang, 2008). The standard value of HTMT is normed between 0 to 1 in PLS-SEM. If the HTMT values are smaller than 1, it is indicated that the correlation is different between constructs (Alarcón, Sánchez, & De Olavide, 2015). Moreover, the problem accrued if the values of the HTMT are higher than 1 (Alarcón et al., 2015; Henseler et al., 2015), greater than .90 (Teo et al., 2008), or above 0.85 (Kline, 2011). Table 2 below demonstrates the findings of HTMT values.

Table 2

Values of the HTMT (Discriminant Validity)

	CS	DC	ME	OG	OL	SA	SC	SE	SS
CS									
DC	0.863								
ME	0.89	0.942							
OG	0.884	0.874	0.878						
OL	0.895	0.923	0.928	0.838					
SA	0.811	0.803	0.821	0.715	0.806				
SC	0.766	0.754	0.769	0.682	0.758	0.889			
SE	0.943	0.874	0.912	0.85	0.9	0.807	0.774		
SS	0.789	0.788	0.807	0.716	0.792	0.947	0.915	0.813	

Based on the discussion and the results of Table 2 above, the values of the HTMT in the current study were considered acceptable according to Alarcón et al. (2015) and Henseler et al. (2015). Therefore, the discriminant validity in the current study can be established under HTMT.

Reliability

Reliability test was conducted also via PLS-SEM by assessing the construct reliability (composite reliability CR / Cronbach's alpha) and the indicator reliability (loadings). The acceptable values of CR and Cronbach's Alpha should range between 0.70 and 0.95 (Hair et al., 2017; Pallant, 2016). For the reliability indicator, the outer loadings should be 0.70 or higher. According to Hair, Black, Babin, and Anderson (2014), the value of .05 and above is considered significant, and the indicators could be removed if the outer loadings are ranged between 0.40 and 0.70. The removal of indicators occurred if it leads to an increase of CR and AVE over the recommended values. The results of Table 1 above indicated that the values of CR and Cronbach's Alpha were within the acceptable range. Accordingly, the current instrument is considered a valid and reliable instrument that researchers can utilise to collect and analysis data.

DATA ANALYSIS AND FINDINGS

After testing the validity and reliability of the instrument, the researchers collected the data from faculty members who worked at higher education institutions in Jazan Province, Saudi Arabia. A total of 533 responses was collected from respondents. This number of responses was higher than the number suggested earlier, just to avoid any problems during data analysis (Creswell, 2014). After the screening, checking for the missing data and removing the outliers, only 496 responses were found to be ready for analysis.

Accordingly, the data were analysed based on 496 responses using the SPSS (V23) and the Structural Equation Modeling (PLS-SEM). Data analysis section covered the demographic information of the respondents, measurement model, assessment model and the findings of hypothesis testing.

Demographic Information of the Respondents

This section includes analysis of the demographic information of the respondents by descriptive analysis that conducted via SPSS (V23). Table 3 below displays the demographic information of the respondents.

Table 3
Demographic Variables

Items		N	%
Gender	Male	228	46.0
	Female	268	54.0
Age	20-30	101	20.4
	31-40	257	51.8
	41- 50	107	21.6
	Over 50	31	6.3
Institute	JU	339	68.3
	TVTC	157	31.7
Academic Qualification	Diploma	9	1.8
	Bachelor	58	11.7
	Master	299	60.3
	PHD	130	26.2
Years of Work Experience	5 years and less	187	37.7
	6 years to 10	177	35.7
	11 years to 15	67	13.5
	Above 15 years	65	13.1
Total		496	100

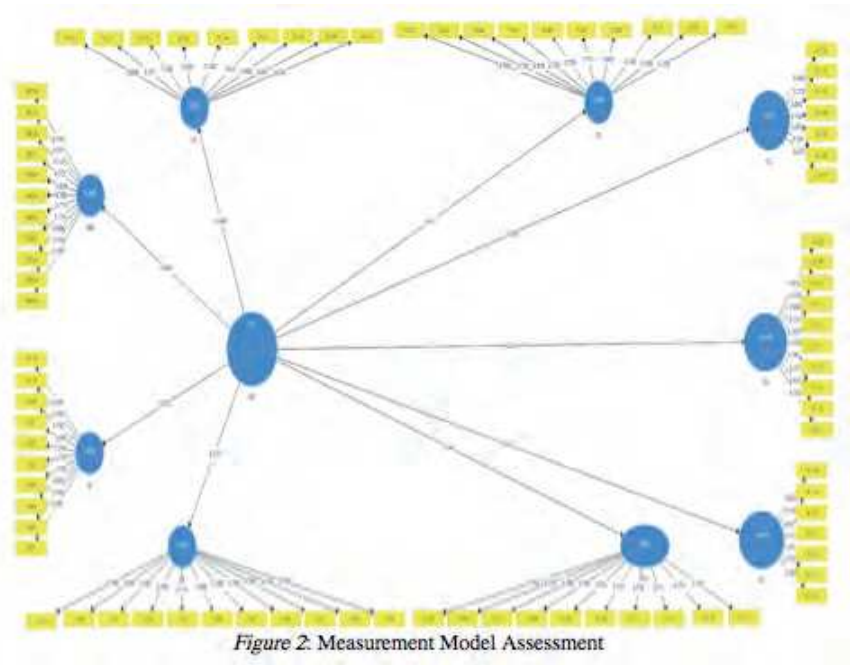
It can be observed from Table 3 above that the number of female respondents of 268 people (54.0%) was higher than that of males who were only 228 people (46.0%). The majority of respondents of 257 people (51.8%) were between 31 to 40 years old. JU had the highest percentage of the respondents with 339 people (68.3%). Also, the majority of the respondents 299 (60.3%) had a master degree. Lastly, a large proportion of the respondents of 187 people (37.7%) had working experience that ranged between five years and less.

Model Assessment

This section includes more details regarding to model assessment. The researchers have to conduct model assessment before testing the research hypotheses. The PLS-SEM used in this study for model assessment. The PLS-SEM comprised of two main assessments, i.e., measurement model assessment and structural model assessment (Hair, Hult, Ringle, & Sarstedt, 2017). The assessment of the model clarifies the relationship between constructs and the

indicators (measurement model) and the relationship between different constructs in the model (structural model).

The Measurement model assessment includes the assessment of the reliability and validity of the scale (Hair et al., 2017). The aspects of reliability and validity already tested through PLS-SEM which present in Table 1 and Table 2 above. Further, Figure 2 displays the results of the PLS Algorithm for the measurement model assessment.



Structural Model Assessment

To assess the hypothesised relationship between different constructs, the second assessment of PLS-SEM have been conducted. This assessment called the assessment of the structural model in which the hypothesised relationship between different constructs is evaluated (Hair et al., 2017). The assessment of the structural model includes several steps, namely assessment of the collinearity issues, measurement of the path coefficient, calculation of the Coefficient of Determination R², measurement of the effect sizes f², and assessment of the predictive relevance Q². Figure 3 below presents the structural model assessment.

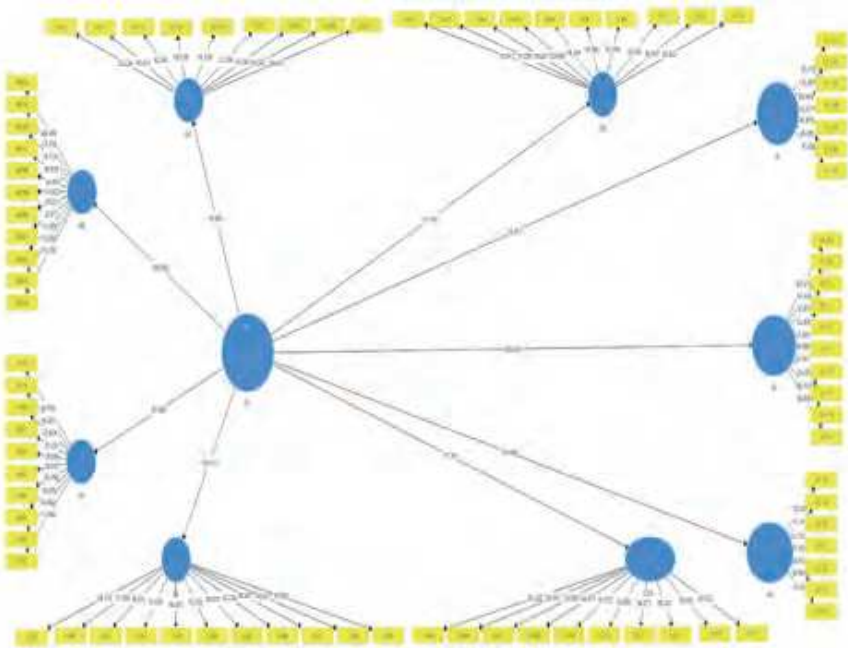


Figure 3: The Structural Model Assessment

The following sections will be included more details regarding to the above mentioned steps of the structural model assessment.

Assessment of Collinearity (VIF Values)

The first step of the structural model assessment is the assessment of collinearity. This assessment can be conducted by utilising the Variance Inflation Factor (VIF). It is aimed at checking the critical levels of collinearity between each group of the predictor constructs (Heir et al., 2017). The acceptable values of the VIF for each construct should be below five. The collinearity problems can be accrued if the value is higher than 5. Table 4 displays the VIF values of the constructs.

Table 4
Values of VIF

Constructs	VIF
DC	1.000
OL	1.000
ME	1.000
OG	1.000
SE	1.000
CS	1.000
SC	1.000
SS	1.000
SA	1.000

Table 4 above shows the VIF values of the constructs, and it is evident that all VIF values were below five. These results depicted that the values of VIF were acceptable and that the level of the collinearity of the constructs did not reach the critical levels.

Path Coefficients of Structural Model

The second step of the structural model assessment is the assessment of path coefficients. The path coefficients (β) indicated the hypothesised relationships among the constructs. The acceptable value of path coefficients should fall between -1 and +1 (Heir et al., 2017). The value that is close to +1 is considered significant, thus, refers to a strong positive relationship between the constructs. While the value that is close to -1 implies a strong negative relationship between the constructs and considered as significant too. A weak relationship between the constructs occurs when the value is close to zero and considered not significant. The path coefficients (β) were tested, and a strong direct positive relationship between tested variables has been discovered. Table 5 depicts the value of path coefficients (β).

Table 5

Results of Path Coefficients (β)

Relationship between Variables	PATH COEFFICIENT (β)
OC->SC	0.752
OC->SS	0.791
OC->SA	0.791

Key: OC= Organisational Culture; SC= Students Cognitive Outcomes; SS= Students Skill-Based Outcomes; SA= Students Affective Outcome

Table 5 presents the value of path coefficients (β), indicating that all values were close to +1 and referred to a strong positive relationship between constructs. Accordingly, the organisational culture has a direct and positive relationship with students' cognitive, skill-based, and affective learning outcomes in Saudi higher education institutions.

Coefficient of Determination R²

The third step of the structural model assessment is the assessment of Coefficient of Determination R².

The R² refers to the evaluation of the model predictive power. It also indicated the combined effects of the exogenous variables on the endogenous variables (Hair et al., 2017). The value of R² ranges from zero to one. High level of R² values implies a high level of predictive power. The R² value of 0.75 is substantial, while 0.50 is moderate, and 0.25 is considered weak (Hair et al., 2017; Henseler et al., 2015). The R² value is substantial if it is over 0.26, moderate if the value is 0.13, and 0.02 is considered weak (Cohen, 1988). The R² value is substantial if it is above 0.65, moderate if it is 0.33, and 0.19 is considered weak (Chin, 1998). Table 6 presents the results of R² values regarding to the current study.

Table 6

The Results of the R-Values

Exogenous Construct	Endogenous Construct	R-	The level of R-value is described as		
			Cohen (1988)	Chin (1998)	Hair et al. (2017); Henseler et al. (2015)
OC	SC	0.621	Substantial	Moderate	Moderate
	SS	0.679	Substantial	Substantial	Moderate
	SA	0.693	Substantial	Substantial	Moderate

Table 7 above displays the values of f^2 which indicated that all values were greater than 1. These values indicated that the exogenous construct (organisational culture) has a very big effect on the endogenous constructs (cognitive, skill-based, and affective learning outcomes) (Chin, 1998; Cohen, 1988).

Evaluate Blindfolding and the Predictive Relevance Q2

The final step of the structural model assessment is the assessment of Predictive Relevance Q2. The Q2 is an indicator of the model predictive relevance. The Q2 value of 0.02 refers to a small predictive relevance for a specific endogenous construct, the value of 0.15 implies a medium predictive relevance, while 0.35 suggests a large predictive relevance (Hair et al., 2017). The results of the Q2 values are shown in Table 8.

Table 8
Results of the Predictive Relevance Q

Exogenous Construct	Endogenous Construct	Q ²	Effect
OC	SC	0.858	Large
	SS	0.817	Large
	SA	0.828	Large

The results in Table 8 above revealed that the exogenous construct (organisational culture) has a large predictive relevance for endogenous construct (cognitive, skill-based, and affective learning outcomes). Clearly, the results suggested a large predictive relevance for endogenous constructs.

Hypotheses Testing

This section presents the findings of hypotheses testing after conducting the assessment of measurement and structural model. The findings of hypotheses testing were obtained from the analysis of PLS-SEM. Only three null hypotheses were tested in this study. The null hypotheses have been tested based on the values of path coefficient (β), T-value (> 1.96), and the P-value with a significance level of 5% (< 0.05). The null hypothesis must be rejected if the P-value is equal or less than the significant level of 0.05. However, the null hypothesis can be accepted if the P-value is greater than 0.05 (Fraenkel, Wallen, & Hyun, 2015; Hair et al., 2014). Figure 4 below presents the hypotheses model.

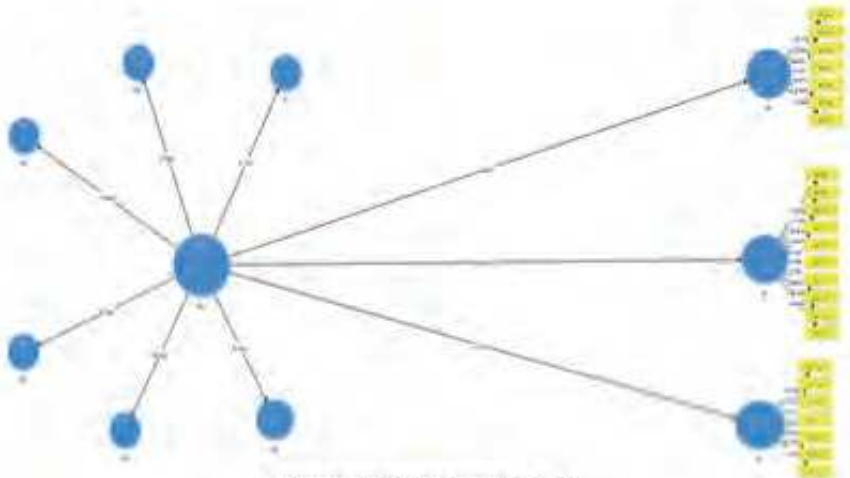


Figure 4: Hypotheses Model

Further, Table 9 below illustrates the results of hypotheses testing.

Further, Table 9 below illustrates the results of hypotheses testing.

Table 9
The Results of Hypotheses Testing

H	PATH COEFFICIENT (β)	T Value (>1.96)	P Value (<0.001)	Decision
H ₁ OC -> SC No direct and significant effect of OC on students' cognitive outcomes	.752	40.659	.000	Not Supported (Rejected)
H ₂ OC -> SS No direct and significant effect of OC on students' skill-based outcomes	.791	38.518	.000	Not Supported (Rejected)
H ₃ OC -> SA No direct and significant effect of OC on students' affective outcomes	.791	40.659	.000	Not Supported (Rejected)

Note: Significance level P<0.05

Key: OC= Organisational Culture; SC= Students Cognitive Outcomes; SS= Students Skill-Based Outcomes; SA= Students Affective Outcome

Table 9 above presents the results of hypotheses testing. It is shown that the findings did not support the three null hypotheses. More in-depth details will be included in the following subsections.

Findings of the First Null hypothesis H₁: Organisational Culture and Students' Cognitive Learning Outcomes

The findings have failed to accept the null hypothesis H01. The results of the effect of OC > SC were ($\beta=.0.752$, $t=40.659$, $p<0.05$). The β value indicated a strong positive relationship between the constructs, the t-value was greater than 1.96, and the p-value was significant. Therefore, the null hypothesis H01 has been rejected. Hence, the results suggested that there is a direct and significant positive effect of OC on students' cognitive learning outcomes in higher education in Saudi Arabia.

Findings of the Second Null hypothesis H02

Organisational Culture and Students' Skill-based Learning Outcomes

The findings have failed to accept the null hypothesis H02. The results of the effect of OC > SS were ($\beta= 0.791$, $t=38.518$, $p<0.05$). The β value suggested a strong positive relationship between the constructs, the t-value was greater than 1.96, and the p-value was significant. Therefore, the null hypothesis H02 has been rejected. Based on these results, it is evident that there is a direct and significant positive effect of OC on students' skill-based learning outcomes in higher education in Saudi Arabia.

Findings of the Third Null hypothesis H03

Organisational Culture and Students' Affective Learning Outcomes

The findings have failed to accept the null hypothesis H03. The results of the effect of OC > SC were ($\beta= 0.791$, $t=40.659$, $p<0.05$). The β value revealed a strong positive relationship between the constructs, the t-value was greater than 1.96, and the p-value was significant. Based on that, the null hypothesis H03 has been rejected. Therefore, the results indicated that there is a direct and significant positive effect of OC on students' affective learning outcomes in higher education in Saudi Arabia.

Based on the results above, it is evident that the null hypotheses failed to be accepted. Therefore, the findings indicated that OC has a direct and significant positive effect on SLOs in terms of their cognitive, skill-based, and affective learning outcomes in higher education in Saudi Arabia.

DISCUSSION AND IMPLICATION

The current study has analysed the effect of OC on students' cognitive, skill-based, and affective learning outcomes in higher education in Saudi Arabia. The findings from hypotheses testing implied that the organisational culture has a direct and significant positive effect on SLOs in terms of their cognitive, skill-based, and affective learning outcomes in higher education in Saudi Arabia.

The current findings correspond with the evidence presented by AlSarahani (2012), Brady (2005), Esposito (2009), Haque and Anwar (2012), Imam et al. (2013), James Ng'ang'a and Nyongesa (2012), and Kotrba et al. (2012). Although these studies have examined the effect and relationship between OC and SLOs from different angles, the same results were obtained, suggesting a strong positive relationship and significant direct effect of OC on students' outcomes. Some of the previous studies have investigated the impact of OC on students' outcomes in terms of their achievement and engagement. Meanwhile, other studies have evaluated the effect of OC on the outcomes of higher education. All of the existing research revealed that OC has a significant effect and a strong relationship with both the outcomes of students and higher education institutions.

Therefore, the findings of the current study correlate with those of AlSarahani (2012), Brady (2005), Esposito (2009), Haque and Anwar (2012), Imam et al. (2013), James Ng'ang'a and Nyongesa (2012), and Kotrba et al. (2012). This study corresponds with the existing literature in terms of the positive relationship and significant effect of OC on SLOs in higher education.

The results of the present research will contribute to the body of literature that examines the effect of OC and SLOs. Also, past research suggested that the OCAI developed by Cameron and Quinn (2011) is an effective instrument in higher education setting such that it can impact positively on SLOs. In addition, the findings have also shown that the Classification Scheme of Learning Outcomes proposed by Kraiger et al. (1993) is an effective model to measure SLOs in higher education institutions. This research has a theoretical implication and will contribute to the body of literature as it has demonstrated the importance of OC in influencing the outcomes in higher education.

Furthermore, the verdicts have the potential to reflect positively on the Ministry of Education, higher educational leaders, policymakers, and practitioners. It can also help policy makers and practitioners to develop relevant programmes for academic leaders and students in a higher education setting. The current study has provided a significant conclusion about the importance of organisation culture in enhancing SLOs in higher education.

CONCLUSION AND RECOMMENDATIONS

The findings of the present research have indicated that there is a direct and significant positive effect of organisational culture on students' cognitive, skill-based, and affective learning outcomes in Saudi higher education institutions. Accordingly, the Ministry of Education and higher education institutions

alike should raise awareness regarding the significance of organisational culture in the higher education sector. Academic leaders at this level are encouraged to employ organisational culture effectively as it has a positive effect on students' outcomes in higher education. The future studies are also recommended to examine the effect of organizational culture on other variables and types of learning outcomes and in higher education. It is also vital to examine these variables in other environments including other institutes of higher education or the K-12 educational sector. Finally, it is crucial that the forthcoming studies analyse whether the demographic variables are able to moderate the relationship between organisational culture and students' learning outcomes.

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