

**ORGANIZATIONAL CULTURE AND INNOVATIVENESS OF ACADEMIC STAFF IN
HIGHER EDUCATION**

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Abstract

Employee innovativeness has been the area of interest among academic researchers and practitioners because it is believed to have an effect on organizational performance. There are plethora of studies examining and evaluating the antecedents and correlates of employees' innovativeness, but little efforts have been given to investigate the relationship between Organizational culture and innovativeness of academic staff. The purpose of the present paper is to examine the influence of organizational culture on innovativeness of academic staff in Kyambogo University. It also assesses the impact of leadership on innovativeness of academic staff. Focusing on Kyambogo University context, data were collected from 186 academic staff. The study conducted a questionnaire survey to test the research model. Linear regression analysis was used to examine the main effects of the independent variables, and the multi-level linear regression model was used to evaluate the effects of the independent variables.

The findings revealed that organizational culture dimensions stimulate innovativeness of academic staff. Specifically, uncertainty acceptance, power distance and collectivism cultural dimensions were shown to positively influence innovative work behavior of academic staff.

Keywords: *Uncertainty Acceptance, Power Distance, Collectivism, Innovative behavior, Innovativeness of Academic Staff.*

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1-Introduction

One way for organizations to become more innovative is to capitalize on their employees' ability to innovate (De Jong and Den Hartog, 2007). Many studies focus mainly on the creative or idea generation stage of innovation (Mumford, 2000; McAdam and McClelland, 2002). Yet, employee innovativeness also includes; opportunity exploration, idea championing

and idea implementation. Innovative behavior has been referred to as behavior directed towards the initiation and application (within a work role, group or organization) of new and useful ideas, processes, products or procedures (Farr and Ford, 1990). Thus, defined, innovative behavior can be seen as a multi-dimensional, overarching construct that captures all behaviors through which employees can contribute to the innovation process (Dejong and Hartog, 2007). Innovativeness of academics staff is important to many stakeholders, including the student, the staff, the university and the labour market. Employee innovativeness in general is critical for organizations to win competitive market positions. Moreover, employee innovativeness constitutes the basic unit of innovation and is essential to organizational innovation (Tu et al., 2017). According to organizational culture theory, employee innovativeness can be promoted through uncertainty acceptance, power distance and collectivism (Hofstede, 2010). Other scholars have described employee innovativeness as engagement in innovative behaviors related to the innovation process, i.e. idea generation, idea promotion and idea realization, with the aim of producing innovations (Kanter 1988, Scott & Bruce 1994, Ramamoorthy, Flood, Slattery & Sardesai 2005). Other studies have shown that employee innovativeness can promote opportunity exploration, idea generation, idea championing and idea implementation (Parsefall, Seeck and Leppänen, 2008). Accordingly, organizations and businesses have pursued highly innovative workforce and an innovative culture because studies have shown that employee innovativeness is a crucial ingredient for staying competitive (Alkailani & Kumar, 2016).

The definition of the concept of employee innovativeness has been the subject of academic discourse (Melhem, 2018). Whereas some scholars operationalized employee innovativeness with one dimensional measure with limited items (Scott & Bruce, 1998), De Jong and den Hartog (2007),and Bania, (2018) operationalized employee innovativeness as a multi-dimensional construct consisting of some of the terms like; user experience, (Altbach, Gumport, & Berdahl, 2011) and willingness to innovate (Cebrián, Grace, & Humphris, 2015). Studies have shown that employee innovativeness is a crucial component for remaining competitive (Alkailani & Kumar, 2016). Employee innovativeness have been described as the propensity or willingness to try new things, open to new experiences and ready to face risks and challenges (Gogio and Barua, 2018). Lu and Zhang (2007) defined employees' innovative behavior as "finding innovative opportunities, generating innovative ideas, taking actions and ultimately yielding innovative achievements. For them, employees' innovative behavior mainly

comprises two parts: the generation and implementation of innovative ideas. Yet, employee innovativeness maybe scrutinized throughout the innovation process, from initial idea generation to product development, and eventually to product commercialization, or the adoption of new processes or structures in the organization. New findings attribute individual variation in innovativeness to psychological factors basic to individual differences in adopting novel ideas, experiences or approaches (Aldahdouh et al, 2018). Apparently, in organizational practice, organizational culture can exist without any ‘innovation results’ since as Shalley & Gilson (2004) observed, innovativeness can be perceived as an internal force, positive tension, perseverance and desire to excel. One possible reason is that not all organizational culture can efficiently encourage employee innovativeness. In other words, different types of cultural dimensions have different impacts on the advancement of employee innovativeness. Additional likely reason is that organizational culture can be disordered by situational factors when stimulating employee innovativeness. Only in suitable situations can organizational culture effectively drive employee innovativeness. Therefore, it is important to explore what type of organizational culture can more effectively stimulate employee innovativeness and what kind of situation will be more conducive to prompt employee innovativeness.

Situational theory holds that to understand the behaviors of people in a particular country/region, one should first understand the cultural context in which they live. In addition, employees’ cultural value alignment has been proved to be an important situational factor in the influencing employee innovative behavior. For example, individualism/collectivism, uncertainty acceptance/avoidance and power distance as some of the core dimensions of Hofstede’s cultural analysis framework, was found closely related to employee innovativeness (Li and Chen, 2015) and innovation management (Liu et al., 2016). In other words, different types of organizational culture have different impacts on the promotion of employee innovativeness.

Employee knowledge is crucial for one to innovate and develop a competitive advantage in an organization. It is therefore essential to know how to create an organizational climate that cultivates innovativeness among employees (Deshpande and Farley, 2004; Nybakk and Jenssen, 2012; Patterson, Warr, and West, 2004). However, Isaksen and Ekvall (2010) observed that the deliberate management of organizational culture supportive of employee innovativeness is a key challenge for those who lead and manage organizations. More specifically, France, Mott, and Wagner (2007) assert that failing to innovate can place organizations at risk and thus potentially

reduce their ability to sustain or gain a competitive advantage. They argue that the challenge of being competitive can be met if organizations recognize that their ability to innovate is intimately connected to the manner in which their leaders, people, climate, culture as well as structures support innovation and creativity.

2- Statement of the problem

Higher education (HE) has faced issues of economic transformation, workforce development, and reduced funding in previous years but the urgency with which higher education is anticipated to respond to these changes by both government and the private sector is rather extraordinary. Thus, the need for institutions of higher education to have innovative academic staff who can deal with these changes. Innovativeness of academics staff is important to many stakeholders, including the student, the staff, the university and the labour market. If the academic staff are innovative, they have the potential for enhancing Innovative Work Behavior (Schein, 2010) through opportunity exploration, idea generation, idea championing and implementation. In terms of student and university benefits, academic staff innovativeness enables students' achievements, personal responsibility, teamwork, tolerance, collaboration and integration. Innovative academic staff would contribute to national development as they would have skills needed in the achievement of national development goals, vision 2040 and Sustainable Development Goals (SDGs). However, due to massification pressure on HE systems to diversify, the rise of the knowledge-based society and aggressive competition inherent in globalization, academic staff became overloaded with many extra duties demanding novel modes of knowledge production, new professional development and new forms of teaching and learning practices (McNaughton & Billot, 2016). Consequently, there resulted into low innovativeness among academic staff. This situation of low innovativeness is also evident in Kyambogo (Kasule, Wesselink, Noroozi, & Mulder, (2015). Kagaari, Munene, Mpeera among Ntayi, (2010) too reported that the numbers of publications, spearheaded research in agriculture, new ventures in engineering and innovative ways of solving community problems were low. Such indicators of low innovativeness among academic staff could disadvantage the university in terms of innovative breakthrough. Although there are a number of factors that could explain the problem of low innovativeness among academic staff in Kyambogo, this study intended to explore whether organizational cultural dimensions of; Uncertainty Acceptance, Power Distance

and Collectivism could explain the problem. Hence this paper explored influence of organizational culture on innovativeness of academic staff in Kyambogo University.

Objectives of the paper

The paper was guided by the following objectives: First, to investigate whether uncertainty acceptance influence the innovativeness of academic staff at Kyambogo University. Secondly, to investigate the influence of power distance on the innovativeness of academic staff at Kyambogo University and thirdly, to investigate the influence of collectivism on the innovativeness of academic staff at Kyambogo University.

This paper focused on organizational culture influence on innovativeness of academic staff in terms of opportunity exploration, idea generation, idea championing and idea implementation- from 2003 to 2019. Out of six faculties, four were chosen because of their age and size namely; Faculty Arts and Social Science, Faculty of Education, Faculty of vocational studies and faculty of Agriculture. On the positivist side, the paper targeted academic staff while on the interpretive side, the paper targeted Deans and Heads of Departments. Innovativeness of Academic Staff (IAS) was operationalized as academic readiness to explore opportunities, generate ideas, champion and implement them. The paper hypothesized the predictors of innovativeness of academic staff to be uncertainty acceptance, power distance and collectivism culture of the university. This paper was provoked by an impetus to secure an empirical confirmatory test of innovativeness of academic staff in Kyambogo University following a literature review which revealed that innovation-stimulating leadership could enhance the innovative behavior of employees.

3- Basic theory and construct definition

De Jong and den Hartog (2010) came up with an advanced Innovative Work Behavior (IWB) model. This model indicated four indices strategy, namely; Opportunity Exploration, Idea Generation, Championing and Application that manifest employee innovativeness.

3.1 *Opportunity exploration.* Opportunity exploration measures the urge to discover and to identify something new, looking for ways to improve current products, services, processes (Basadur, 2004). According to De Jong and den Hartog (2010) opportunity exploitation manifests through construction of new ways to address needs, development of concept, ideas, processes, new products, services or processes, and improvements in current work processes, or in general terms, solutions to identified problems.

3.2 Idea Generation .Idea generation measures the degree of opportunity exploitation through construction of new ways to address needs, development of concept, ideas, processes, new products, services or processes, and improvements in current work processes, or in general terms, solutions to identified problems.

3.3 Idea Championing. Idea Championing index measures the urge to sell, finding support and building coalition.

3.4 Idea implementation. This constitutes innovativeness as part of regular work process.

The paper identified predictors of innovativeness of academic staff as organizational culture with focus on three dimensions; Uncertainty Acceptance, Power Distance and Collectivism.

3.2.1 Uncertainty Acceptance.

Objective one of the paper was to explore whether Uncertainty Acceptance culture (UA) had influence on the innovativeness of academic staff. Studies pointed to organizational culture as having the capacity to enhance employee innovativeness. The assumption in the literature is that UA culture is directly related to innovativeness because the culture creates conducive environment of ease, low stress and less apprehension (Galves & Garcia 2011). According to Hofstede (2001), Uncertainty Acceptance culture refers to a culture that creates ease, lower stress and creates low anxiety. It deals with the extent to which a social system rejects unstructured and ambiguous situations. Members of such a culture feel threatened by ambiguous or unknown situations created by lack of structures. Instead, they tend to create beliefs and institutions that ensures certainty and predictability to avoid ambiguity and risky situation through tolerance of ambiguity and keeping stress levels low (Nana, 2013).

3.2.2 Power distance and innovativeness of academic staff.

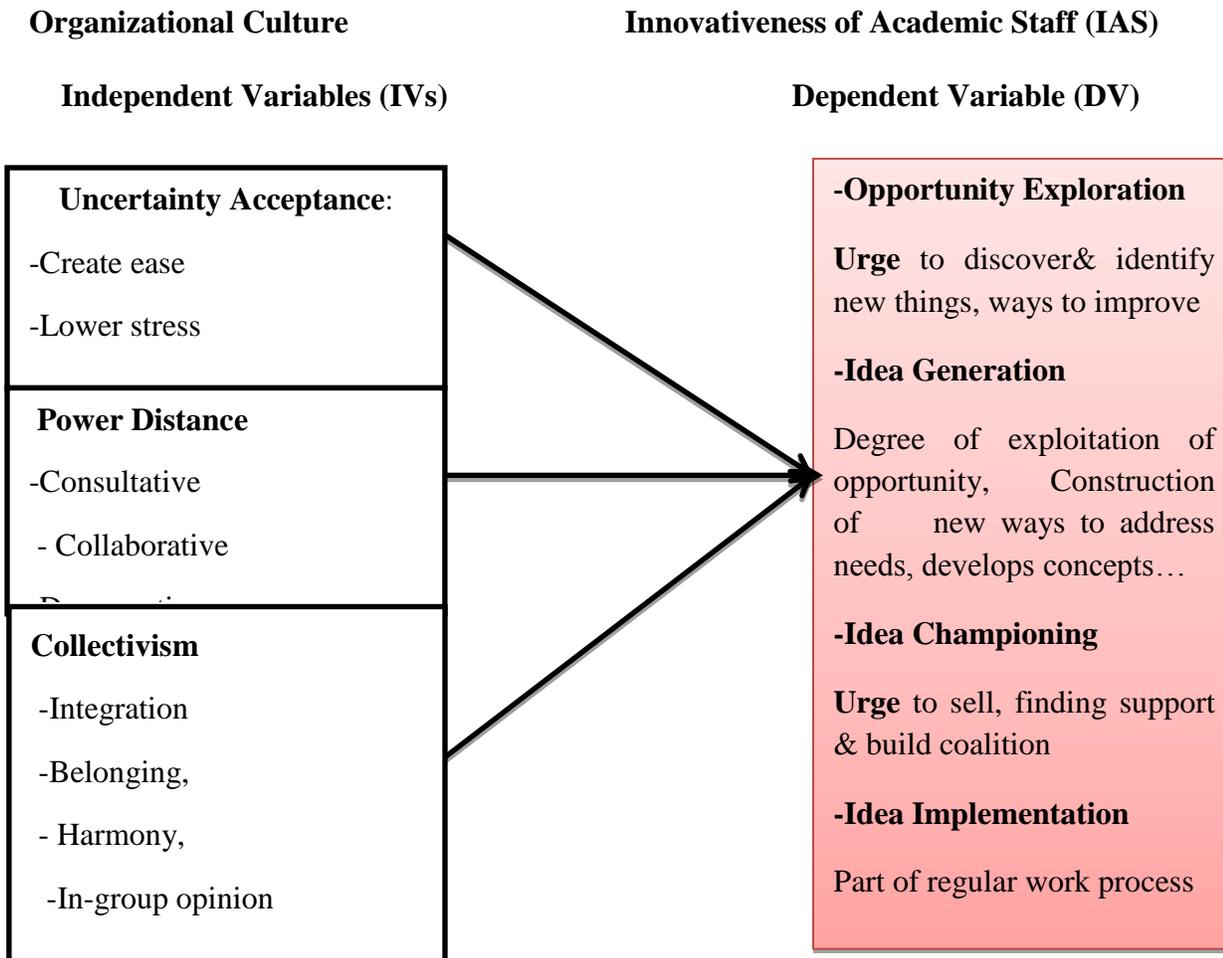
Power distance is the measure of inequality among people. It is the extent to which the less powerful persons in society accept and tolerate inequality of power and consider it as normal(Hofstede, 2010). A culture that accepts inequalities is a high power distance society. This implies that a society's measure of inequality might be approved by both leaders and followers (Wei et al., 2008, Bankole, 2017). Low power distance, on the other hand, supports egalitarianism-or equality.

3.2.3 Collectivism and Innovativeness of Academic staff.

Collectivism emphasizes on organization interests as more important than the individual interests, which requires employees to prioritize the maximization of collective interests. When

employees are engaged in IWB even if they are originally oriented to help an individual complete his tasks, driven by collectivism, they will pay more attention to the overall development goals and needs of the organization.

Figure 1. Framework for Innovativeness of Academic staff



On the basis of this theoretical framework, it was hypothesized that academic staff innovativeness varies with the level of influence of organizational culture on academic staff. In this paper, innovativeness of academic staff was explained by the level of uncertainty acceptance, power distance and collectivism at the university.

4- Research Methodology

To test the research model, a questionnaire survey was conducted. Self-Administered Questionnaires were given to respondents with no prior interpretation so as to keep a distance. The unit of analysis was academic staff while the target population consisted of; academic staff and university administrators (Deans and Heads of Departments) from four faculties, namely;

Faculty of Science, Faculty of Education, Faculty of Arts and Social Science, and Faculty of Vocational Studies. A random sample of 186 faculty members was identified to ensure that the characteristics found in the sample faithfully reflect those in the whole population of 358. A total of 74, roughly 40 percent of faculty members completed and returned the questionnaires. Out of 25 target population of administrative staff, 8 were purposively selected for interviews. The survey method was used to collect quantitative data from academic staff. Key Informants Interviews were conducted to get in depth qualitative data from Deans and Heads of Departments. This allowed for an interactive expression of their real voices, emotions, feelings, perceptions and beliefs to paint a picture about organizational culture and its impact on innovativeness of academic staff in Kyambogo University.

The questionnaire was pre-tested using four academics in order to ensure that the survey content and measurement scales were clear, valid and appropriate. (Cho & Trent, 2006). Content Validity Index (CVI) for quantitative data was used for quality control for ensuring the validity and reliability of the instruments to be used. The validity and reliability of quantitative data was assured by collecting factual data. Validity of the instruments was assured by the use of ready-made instruments whose validities had already been determined.

After data collection, Confirmatory Factor Analysis was done with the help of IBM SPSS statistics to ensure validity of constructs in the instrument. Internal consistency of the instruments was measured using Cronbach's alpha to establish causality of innovativeness. For interpretive data, the issue is not validity and reliability of instruments but on the data quality control, enshrined in trustworthiness. Trustworthiness focused on research credibility, confirmability, dependability and transferability in the research process and outcomes. Quantitative data was analyzed using SPSS statistical package while qualitative data was analyzed using thematic analysis to identify all data that relate to the already classified patterns. A predictive data analysis was done to establish whether there was a strong relationship between dimensions of organizational culture and innovativeness of academic staff. This was followed by content analysis meant to gauge how individual testimonies augment the figures of quantitative data. The link between organizational culture and innovativeness of academic staff was analyzed using regression where the regression model could explain 0.83 of the variation in the dependent variable. And since the Sig or P value 0.85 was greater than 0.05 then at 5% level of significance

we deduced that there was a correlation between organizational culture and innovativeness of academic staff.

To test whether the four items of innovativeness, namely; Opportunity Exploration, Idea Generation, Idea Championing and Idea Implementation were valid measures of innovativeness, validity and reliability of innovativeness was run as showed below.

Table 4.1 Validity and Reliability on the Meaning of Innovativeness

Component Matrix ^a		
	Validity	Reliability
(M1) Opportunity exploration	0.674	0.650
(M2) Idea generation	0.674	
(M3) Idea championing	0.707	
(M4) Idea Implementation	0.728	

According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 4.1, all the four items namely M1, M2, M3, and M4 were valid measures of the meaning of innovativeness. The reliability (Cronbach alpha) in Table 4.1 ($\alpha = 0.65$), meant that the items were reliable measures of meaning of innovativeness (according to (Lee et al, 2009) who said that even Cronbach alpha.($\alpha=0.423$) is still acceptable as it exceeds 0.35.

Table 4.2 Extraction method principal component analysis

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.703	56.775	56.775	1.703	56.775	56.775
2	.791	26.365	83.140			
3	.506	16.860	100.000			

Table 4.3 Validity and reliability on Items of Uncertainty Acceptance:

Component Matrix ^a		Validity	Reliability
A culture that creates ease.		.831	
A culture that lowers stress.		.645	0.613
A culture that tolerates deviant behavior.		.773	

According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 4.3, all the four items namely UAC1, UAC2 and UAC3 were valid measures of the organizational culture of Uncertainty Acceptance.

The reliability (Cronbach alpha) in Table 4.3 ($\alpha = 0.613$), meant that the items were reliable measures of meaning of innovativeness. Uncertainty acceptance constructs depict that the constructs as very important to innovativeness of academic staff as indicated by the mean percentage of 49.7 (Very important) as compared to 17.3 (Not important) account. The results suggested that organizational culture of uncertainty acceptance which creates ease, lowers stress and tolerates deviant behavior is important to innovativeness of academic staff. Considering the mean of 2.42 which corresponds to low, the results suggest that although the frequency showed high for 'Very Important', overall average was low indicating that culture had not been internalized in their profession.

Table 4.4 Validity and reliability on Items of Power Distance

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.196	73.210	73.210	2.196	73.210	73.210
2	.435	14.500	87.709			

3	.369	12.291	100.000		
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Table 4. 5 Extraction Method: Principal Component Analysis. Component Matrix^a

	Validity	Reliability
A consultative culture	.839	
A culture with collaborative staff	.863	0.816
A democratic work culture	.864	

According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 5.20 all the three items namely PDC1, PDC2 and PDC3 were valid measures of the meaning of power distance culture. The reliability (Cronbach alpha) in Table 4.3 ($\alpha = 0.816$), which meant that the items were reliable measures of meaning of power distance.

Principle Component Analysis on Collectivism culture

Table 4.6 Extraction method: Principal component analysis

	Validity	Reliability
Integration	.803	
In-group opinion	.787	0.739
Knowledge sharing	.848	

According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 4.6 all the three items namely CC1, CC2 and CC3, were valid measures of the culture of collectivism. The reliability (Cronbach alpha) in Table 4.4 ($\alpha = 0.739$), meant that the items were reliable measures of the culture of Collectivism.

Correlation DV (ASI) and IV (Organizational Culture)

Table 4.7 Correlation results

Uncertainty acceptance	Pearson	Sig(2tailed) P value
UAC	0.300	0.018 Y
UACLIWB	-0.009	0.945 N
Power distance		
PD	0.194	0.134 N
PDLIWB	0.361	0.005 Y
Collectivism		

CC	0.230	0.077 N
CCLIWB	0.028	.0829 N

4.8 Extraction Method: Principal Component Analysis.

Rotated Component Matrix ^a			
	Validity		Reliability of valid items
	1	2	
My leaders show sincere interest wherever I come up with an idea	*0.827	.208	*0.765
My leaders react enthusiastically to my creative thought.	*0.835	-.087	
My leaders support me when I want to improve things.	-.040	.764	
My leaders solicit for my opinion	*0.621	.500	
My leaders consult me about important changes	*0.507	.588	
My leaders allow me influence decisions about long term plans & directions.	.174	.811	

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 3 iterations. According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 4.6, only one item namely PDCLIWB1, was valid measures of PDCLIMB. The reliability (Cronbach alpha) in

Table 4.6 for the one valid item was $\alpha = *0.765$ which meant that only the one item was reliable measures of PDCLIWB.

Extraction Method: Component Matrix ^a		
	Validity	Reliability

Publically recognizes me when I am innovative.	.827	0.836
Praises my innovative effort.	.902	
Recognizes my contribution to innovation.	.871	
a. 1 component extracted.		

According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 4.7, only one CCLIWB1 was valid measure of Leadership and Innovative work behavior. The reliability (Cronbach alpha) in Table 4.7 ($\alpha = 0.836$), meant that the item was reliable measure of Leadership and Innovative work behavior.

4.1 Meaning of Individual innovativeness

Under this construct of the dependent variable innovativeness of academic staff, respondents were asked whether they knew the meaning of innovativeness in terms of: opportunity exploration, idea generation, idea championing and idea implementation. These items were scaled using a four point Likert scale where 1 stood for not relevant, 2 for somehow relevant, 3 relevant and 4 very relevant. The results of the descriptive statistics are shown in Table 4.8

Table 4.8 Frequencies, Percentages and Means of items in Meaning of innovativeness

Item	Description	Not relevant Count (%) 1	Somehow relevant Count (%) 2	Relevant Count (%) 3	Very relevant Count (%) 4	Mean	Overall Rating
MI	Opportunity Exploration	2 (3)	12 (17.9)	26 (38.8)	27 (40.3)	3.16	Relevant
M2	Idea Generation	00 (00)	10 (14.5)	25 (36.)	34 (49.3)	3.34	Very Relevant

M3	Idea Championing	6 (8.7)	10 (14.5)	28 (40.6)	25 (36.2)	3.04	Relevant
M4	Idea Implementation	6 (9.01)	12 (17.9)	20 (29.9)	29 (43.3)	3.7	Very Relevant

Results in table 4.8 on meanings of innovativeness of academic staff showed that opportunity exploration, cumulatively (79.1%) stated that it was relevant as compared to minority (20.9%) who said opportunity exploration was not relevant. On idea generation, majority 85.3% stated that it was relevant as compared to minority 14.5 who said idea generation was not relevant. Considering the mean of 3.16 which is close to 3 which stands for relevant, it means respondents said that opportunity exploration was relevant. On idea championing, majority (76.8) stated that it was relevant as compared to minority (23.2%) who said idea championing was not relevant. On idea implementation, majority (73.2%) stated that it was relevant as compared to minority (26.9%) who said idea implementation was not relevant.

To test whether the four items were valid measures of innovativeness, validity and reliability of innovativeness was run as showed in Table 4.10 below.

Table 4.9 Validity and reliability

Component Matrix ^a		
	Validity	Reliability
M1 Opportunity exploration	0.674	0.650
M2 Idea generation	0.674	
M3 Idea championing	0.707	
M4 Idea Implementation	0.728	

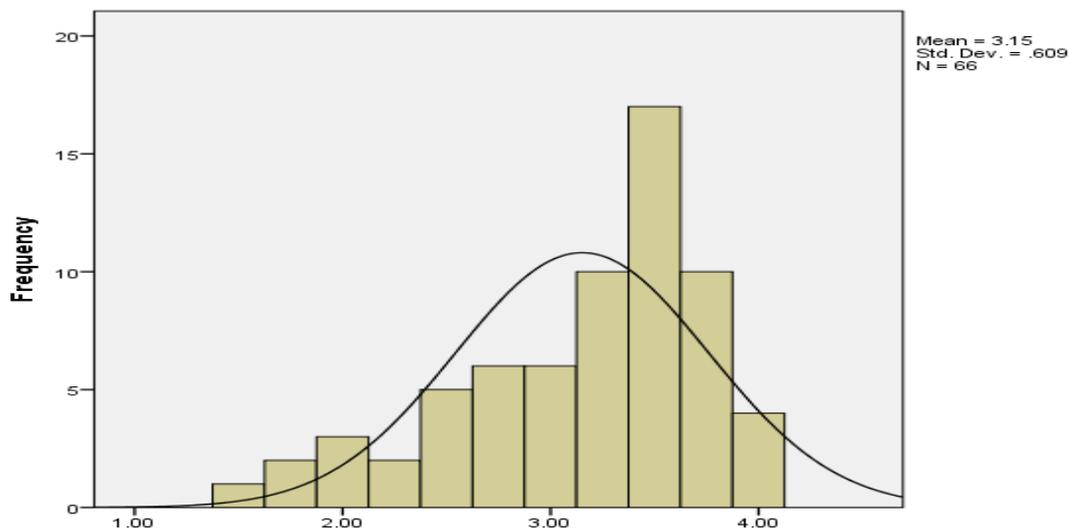
According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 4.9, all the four items namely M1, M2, M3, and M4 were valid measures of the meaning of innovativeness. The reliability (Cronbach alpha) in Table 4.2 ($\alpha = 0.65$), meant that the items were reliable measures of meaning of innovativeness (according to (Lee et al, 2009) who said that even Cronbach alpha.($\alpha=0.423$) is still acceptable as it exceeds 0.35.

Through reliability and factor Analysis, Cronbach Alpha coefficients for variables were calculated ranging from 0.66 for power distance to 0.90. After conducting a factor analysis for

the multi-unit constructs, results showed that factor loadings for all items were above 50 which indicated that factors were significant and valid for measurement.

To test whether the four items were valid measures of innovativeness, validity and reliability of innovativeness was run as showed below.

Validity and reliability: According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 4.9, all the four items namely M1, M2, M3, and M4 were valid measures of the meaning of innovativeness. The reliability (Cronbach alpha) in Table 4.9 ($\alpha = 0.65$), meant that the items were reliable measures of meaning of innovativeness (according to (Lee et al, 2009) who said that even Cronbach alpha.($\alpha=0.423$) is still acceptable as it exceeds 0.35.



Histogram on Meaning of Innovativeness of academic staff

Average Index of Valid items of IAS

To understand how respondents rated themselves on IAS, the average for IAS was computed ($IAS = IAS1+IAS2+IAS3+IAS4+IAS5+IAS11/6$). This gave the mean of 3.15 which corresponds to the code 3 which stood for “relevant.” This meant that respondents conceptualized innovativeness to be relevant to them.

According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, from Table 4.9, only six items namely IAS, 2,3,4,5 and 11, were valid measures of IAS. The reliability (Cronbach alpha) in Table 4.9 for the six valid items was $\alpha = 0.801$ which meant that only the six items were reliable measures of IAS

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	4.711	23.554	23.554	4.711	23.554	23.554	3.456	17.281
2	3.047	15.237	38.791	3.047	15.237	38.791	2.573	12.864	30.146
3	2.194	10.972	49.763	2.194	10.972	49.763	2.536	12.679	42.825
4	1.514	7.568	57.330	1.514	7.568	57.330	2.139	10.693	53.518
5	1.020	5.099	62.430	1.020	5.099	62.430	1.521	7.603	61.121
6	1.009	5.043	67.473	1.009	5.043	67.473	1.270	6.352	67.473

Reliability of only valid items

Table 4.10 Reliability of Valid Items

Average Index of Valid items of IAS

To understand how respondents rated themselves on IIAS, the average for IIAS was computed (IAS = IAS1+IAS2+IAS3+IIAS4+IIAS5+IIAS11/6). This gave the mean of 3.15 which corresponds to the code 3 which stood for “relevant.” This meant that respondents conceptualized innovativeness to be relevant to them.

5. Findings on the variables-Positivist findings

Under uncertainty acceptance, respondents were asked whether their culture created ease, lowered their stress, and tolerated deviant behavior. On a scale 1-4 which stood for; Not very important, Important, Somehow important and Very important, results depicted uncertainty acceptance as very important to innovativeness of academic staff as indicated by the mean percentage of 49.8 (Very important) as compared to 17.3 (Not important) account. The results suggested that organizational culture of uncertainty acceptance which creates ease, lowers stress and tolerates deviant behavior is important to innovativeness of academic staff. Considering the mean of 2.42 which corresponds to low, the results suggest that although the frequency showed high for ‘Very Important’, overall average was low indicating that culture had not been internalized in their profession.

Under Power Distance, reflected in a consultative culture (64.5%) stated that it was very important as compared to minority (2.6%) who said consultative culture was not important. Also, power distance reflected in collaborative staff (69.7%) stated that a collaborative culture was very important compared to (2.6%) who said it was not important. On power distance reflected in democratic work culture (65.8%) stated that it was very important as compared to minority (2.6%) who said a democratic work culture was not important. Considering the average mean of 3.0 which corresponds to high, the results suggests that organizational culture of power distance had strong influence on innovativeness of academic staff. To understand how respondents rated themselves on the importance of Power Distance on innovativeness of academic staff, the average for PDC was computed ($PDC = PDC1+PDC2+PDC3/3$). This gave the mean of 3.0 which corresponds to the code 3 which stood for “relevant.” This meant that Power Distance Culture was relevant (in terms of increasing the likelihood of innovativeness of academic staff). To establish an overall representation of how academic staff rated themselves on Power Distance Culture, aggregate index was computed. The measure of central tendency on the same were, mean 2.65 and median was 2.55. The mean being close to 3.00 indicated that the respondents rated Power distance culture to have high impact on academic staff’s innovative behavior.

Under collectivism, reflected in integrative culture (61.8%) stated that it was important as compared to minority (3.9%) who said integrative culture was not important. Collectivism culture reflected in in-group opinion (67.5%) stated that in-group opinion culture was important compared to (5.2%) who said it was not important. Lastly, collectivism reflected in Knowledge sharing culture (78.9%) stated that it was important as compared to minority (3.9%) who said knowledge sharing culture was not important. Considering the average mean of 3.0 which corresponds to high, the results suggests that organizational culture of collectivism had strong influence on innovativeness of academic staff.

To understand how respondents rated themselves on the importance of collectivism on innovativeness of academic staff, the average for CC was computed ($CC = CC1+CC2+CC3/3$). This gave the mean of 3.0 which corresponds to the code 3 which stood for “relevant.” This meant that collectivism was relevant (in terms of increasing the likelihood of innovativeness of academic staff).

5.1 Data quality analysis

Reliability analysis. Reliability refers to the extent to which measurement results are free from errors (American Psychological Association, 1985), which is used to evaluate the consistency, stability, and reliability of measurement tools. In this paper, the composite reliability (CR) and internal consistency of all variables were tested to evaluate the reliability of the scales. The most widely used indicator for evaluating internal consistency is the Cronbach alfa value developed for the Likert scale, with the CR value and the Cronbach a value greater than 0.7 as the criterion (MacKenzie et al., 2011).

Validity and reliability on Items of Uncertainty Acceptance was ascertained using Castello and Osborne (2005). According to Castello and Osborne (2005), validity of the items of at least 0.5 should be considered high and therefore, all the three items namely UAC1, UAC2 and UAC3 were valid measures of the organizational culture of Uncertainty Acceptance. The reliability (Cronbach alpha) ($\alpha = 0.613$), meant that the items were reliable measures of meaning of innovativeness. Uncertainty acceptance constructs depict that the constructs as very important to innovativeness of academic staff as indicated by the mean percentage of 49.7 (Very important) as compared to 17.3 (Not important) account. The results suggested that organizational culture of uncertainty acceptance which creates ease, lowers stress and tolerates deviant behavior is important to innovativeness of academic staff.

Results on power distance, namely; in a consultative culture (64.5%) stated that it was very important; power distance reflected in collaborative staff (69.7%) stated that a collaborative culture was very important. Power distance reflected in democratic work culture (65.8%) stated that it was very important. Considering the average mean of 3.0 which corresponds to high, the results suggests that organizational culture of power distance had strong influence on innovativeness of academic staff. On the measure of central tendency on power distance, mean was 3.05 and median was 3.00. The mean being close to 3.00 indicated that the respondents rated power distance culture to have high impact on academic staff's innovative behavior. The reliability (Cronbach alpha) ($\alpha = 0.816$), meant that the items were reliable measures of meaning of power distance.

Organizational culture of Collectivism reflected in integrative culture (61.8%), in-group opinion (67.5%) and Knowledge sharing culture (78.9%) stated that they were important. The results suggest that organizational culture of collectivism had strong influence on innovativeness of academic staff. Considering the average mean of 3.0 which corresponds to high, the results

suggests that organizational culture of collectivism had strong influence on innovativeness of academic staff.

From Principal component analysis, all the three items namely CC1, CC2 and CC3 were valid measures of the culture of collectivism. The reliability (Cronbach alpha- α = 0.739), meant that the items were reliable measures of the culture of collectivism.

Average Index of Valid items of CC was calculated to understand how respondents rated themselves on the importance of collectivism on innovativeness of academic staff, the average for CC was computed ($CC = (CC1+CC2+CC3)/3$). This gave the mean of 3.0 which corresponds to the code 3 which stood for “relevant.” This meant that collectivism was relevant (in terms of increasing the likelihood of innovativeness).

Table 5.1 Correlation DV (IAS) and IV (Organizational Culture)

Uncertainty acceptance	Pearson	Sig(2tailed) P value
UAC	0.300	0.018 Y
UACLIWB	-0.009	0.945 N
Power distance		
PD	0.194	0.134 N
PDLIWB	0.361	0.005 Y
Collectivism		
CC	0.230	0.077 N
CCLIWB	0.028	.0829 N

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nder

the 1st objective, the hypothesis that Uncertainty Acceptance (UAC) positively relates to Innovativeness Academic Staff (IAS) was tested. Under the 2nd Objective, the hypothesis that Power Distance (PD) positively relates to innovativeness of academic staff (IAS) was tested. Under the 3rd Objective, the hypothesis that Collectivism positively relates to academic staff innovativeness (ASII) was tested.

a) Table 5.2 SPSS output Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.288 ^a	.083	.051		.35244

ca. Predictors: (Constant), UACLIWB, UAC

b) Table 5.3 ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.641	2	.321	2.580	.085 ^b
	Residual	7.080	57	.124		
	Total	7.721	59			

a. Dependent Variable: IAS

b. Predictors: (Constant), UA CLIWB, UAC

Table 5.4

Dependent Variable: IAS Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.112	.312		6.776	.000
	UAC	.214	.094	.288	2.271	.027
	UA CLIW B	-.008	.072	-.014	-.113	.911

a) Table 5.5 SPSS output Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.288 ^a	.083	.051	.35244

ca. Predictors: (Constant), UA CLIWB, UAC

b)Table 5.6 ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
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1	Regression	.641	2	.321	2.580	.085 ^b
	Residual	7.080	57	.124		
	Total	7.721	59			

a. Dependent Variable: ASI

b. Predictors: (Constant), UACLIWB, UAC

C) Table 5.7 Dependent Variable: IAS Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.112	.312		6.776	.000
	UAC	.214	.094	.288	2.271	.027
	UACLIWB	-.008	.072	-.014	-.113	.911

When examining the influence of organizational culture on Innovativeness of academic staff, the multi-level linear regression model proposed by Kleinbaum, Kupper, Nizam & Rosenberg (2013), was used.

i) The R square 0.83 means that the IV in the regression model could explain 0.83x 100= 83% of the variation in the dependent variable IAS1.

ii) The F test, that is, the significance of the regression model is F=2.58 compared to the p value (Sig) level 0.85, where F value 2.58 is larger than P value 0.85, we deduced that the computed or observed F is large enough. Since the Sig or P value 0.85 is greater than 0.05 , then at 5% level of significance, we deduce that the computed or observed F was small hence we accept the null hypothesis and reject the research or alternative hypothesis. Hence we infer that the score on innovativeness of academic staff could be predicted from the uncertainty acceptance UAC and UACLIMB.

iii) Unstandardized b coefficient for UAC is positive 0.214 suggesting that there is a positive correlation between the predicted IAS while the predictor, b coefficient UALIWB was negative - 0.008 which shows there was no correlation between the predicted IAS.

6. Interpretivist findings

The paper investigated how organizational culture impacted on innovativeness of academic staff. The original survey lacked a way for respondents to indicate whether the influence of organizational culture was positive or negative; therefore, the researcher decided to ask the open-ended questions for respondents to indicate if the influence was a positive or a negative one thereby strengthening the paper. To understand this, interview guide was administered to solicit participants' responses on how innovativeness of academic staff was like in Kyambogo University. The checklist used for the in-depth interviews was based on a survey of the literature on the ways in which organization cultures manifest in influencing employees innovativeness. Organizational culture was studied using three dimensions: Uncertainty Acceptance, Power Distance and Collectivism. The overall emerging themes were synthesized into positive themes related to; Innovativeness (Opportunity Exploration, Idea Generation Idea Championing and Idea Implementation) and Organizational Culture (Uncertainty Acceptance, Power Distance and Collectivism). Positive themes that emerged overall related to; Perceptions, (Policy framework, Value difference). Work orientation (Ease, Tolerance, Low stress), Teamwork (Consultation, Collaboration, Cohesion) and Accommodation (Integration, In-group Opinion, Knowledge sharing). Negative theme was stress due to excess workload and academic staff working below their capacity. Participants pointed to indicators of a culture that build innovativeness of academic staff; namely; uncertainty acceptance, power distance and collectivism which needs to be strengthened. Participants noted inadequate mechanisms that facilitate academic staff innovativeness, namely; University support and legitimization of experimentation, creation of emotional safety for trial and error and performance appraisals of academic staff against set targets.

On opportunity exploration, academic staff acknowledged that it enhances the generation and enhancement of new ideas. More so, opportunity exploration facilitates in ironing out discrepancies, divergences and gaps. It also sheds light on shared perceived dissatisfaction with the status-quo among academic staff, such as, problems in existing working practices hindering exploitation of available opportunities. On the construct of idea championing, participants

indicated that it facilitates in finding solutions to identified problems through; intellectual stimulation, creation of avenues for knowledge sharing and dissemination, and in assigning challenging tasks. Most of the participants agreed that Idea Implementation plays a crucial role in the innovation process by demonstrating application-oriented behavior.

7. Contributions and limitations

7.1 Theoretical contribution

Theoretically, Hofstede's model of organizational culture helped to identify hypotheses that were significant positive predictors of the respective constructs. All the three hypotheses were supported. A theoretical framework was developed to explain the new relationships of organizational culture and innovativeness of academic staff as per the findings in the paper. Second, the paper developed and tested the validity and reliability of an instrument basing on the substitution, augmentation, modification and redefinition of Hofstede's organizational culture model. The main variable, organizational culture was found to have influence on innovativeness of academic staff in Kyambogo University. Lastly, the paper developed and tested the validity and reliability of an instrument on the constructs of the IAS as explanatory variables.

Under the 1st objective, the hypothesis that Uncertainty Acceptance (UAC) positively relates to Academic Staff Innovativeness (IAS) was tested. Under the 2nd Objective, the hypothesis that Power Distance (PD) positively relates to academic staff innovativeness (IAS) was tested. Under the 3rd Objective, the hypothesis that Collectivism positively relates to academic staff innovativeness (IAS) was tested. This paper verifies that organizational culture can affect differently innovative work behavior of employees and provides new theoretical perspectives for future paper. Furthermore, we found that both organizational culture and Leadership can positively influence innovativeness of academic staff, but there are differences in terms of effectiveness. We not only extended the classification of organizational culture from the stimulant and restraint perspective, but also revealed that it could be an obstacle depending on the value provided by the culture (Naranjo- Valentia, 2015). Hence, in some organizational culture contexts, innovative staff may respond to challenges faster, introduce new programs and exploit higher education markets opportunities better than non-innovative universities (Jimenez-Jemenez, Sanz-valle and Rodriguez-Espallado, 2008).

7.2 Practical enlightenment

Besides the theoretical insights, the paper provides the following implications for managers; without faculty support in their innovativeness effort, institutional changes in instructional format of their courses are likely to fail. Hence, the role of organizational culture in creating ease, and tolerance of deviant behavior, integration of individual faculty and in-group opinion are crucial for effective innovativeness of academic staff. Moreover, an individual's engagement in IWB requires the individual to be both able (having certain cognitive abilities, expertise in relevant task knowledge, necessary technical skills and personal characteristics) and willing- motivated and satisfied for him to be innovative (Hofstede, 1980).

7.3 Research prospects

This paper selected only three organizational cultural dimensions as representatives of other organizational cultural variables. Therefore, other studies can develop moderating models of more cultural variables influencing innovativeness of academic staff in Higher Education Institutions. Second, this paper employed the cross-section data collected in the same time period and same institution, which inevitably led to the localization issues. Therefore, future studies can optimize the research design through collecting longitudinal data to test the strength and universality of conclusions of this paper.

Finally, in this paper, cultural dimensions of; uncertainty acceptance, power distance and collectivism were explored with focus on Kyambogo University. Therefore, the conclusions of this paper may be applicable to government universities in Uganda. Another paper could focus on private Universities.

REFERENCES

- Aldahdouh, T., Z., Nokelainen, P. & Korhonen, V. (2018) Innovativeness of Staff in Higher Education .Do Implicit Theories and Goal Orientations Matter? *International Journal of Higher Education* Vol. 7, No. 2;
- Alkailani M., & Kumar, R. (2016). Impacting innovativeness: The role of interpersonal influences and cultural dimensions on consumer innovativeness. *Journal of Strategic Innovation and Sustainability*, 11(1).
- Altbach, P. G., Gumport, P. J., & Berdahl, R. O. (2011). *American higher education in the twenty-first century: Social, political, and economic challenges*: JHU Press.

- Association, A.E. (1985), "Standards for educational and psychological testing", American Educational Research Association, Washington, DC,WA.
- Banai,E.(2018) Strategies to Cultivate Sustainable Open Innovation Culture in High-Tech Organizations. Walden University Scholar Works
- Cebrián, G., Grace, M., & Humphris, D. (2015). Academic staff engagement in education for sustainable development. *Journal of cleaner production*, 106, 79-86.
- Cho, J., & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative research*, 6(3), 319-340. De Jong, J. P., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, 10(1), 41-64.
- De Jong and den Hartog (2010) Measuring innovative work behavior, *Creativity and Innovation Management*, 19(1), 23-36.
- De Jong, J. P., & Den Hartog, D. N. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, 10(1), 41-64.
- Deshpandé, R, JU Farley. (2004) Organizational culture, market orientation, innovativeness, and firm performance: an international research odyssey *International Journal of research in Marketing*, - Elsevier
- France, C., Mott, C., & Wagner, D. (2007). The innovation imperative: How leaders can build an innovation engine. *Oliver Wyman Journal*, 23, 45-52.
- Hofstede, (2011) Hofstede, Dimensionalizing cultures: The Hofstede model in context. *Online readings in psychology and culture*, 2(1), 8.
- Janssen, O. (2005) The joint impact of perceived influence and supervisor supportiveness on employee innovative behaviour. *Journal of Occupational and Organizational Psychology* Vol. 78, 573–579 q 2005 The British Psychological Society
- Kagaari, J., Munene, J. C., & Mpeera Ntayi, J. (2010). Performance management practices, employee attitudes and managed performance. *International Journal of Educational Management*, 24(6), 507-530.
- Kleinbaum,D., Kupper, L., Nizam, A., & Rosenberg,E(2013). *Applied regression analysis and other multivariate methods*(5th Ed). Boston, MA: Cengage Learning.
- Lu, X.J. and Zhang, G.L. (2007), "The relationship between work motivation and individual innovation behavior", *Soft Science*, Vol. 21No. 6, pp. 124-127.

- Nana. Y, O., (2013) Towards African Work Orientations: Guide from Hofstede's Cultural Dimensions. *European Journal of Business and Management* www.iiste.org Vol.5, No.20
- Naranjo-Valencia, J. C., Jiménez-Jiménez, D., & Sanz-Valle, R. (2016). Studying the links between organizational culture, innovation, and performance in Spanish companies. *Revista Latinoamericana de Psicología*, 48(1), 30-41.
- Nyabakk,E., 2014. Learning orientation, innovativeness and financial performance in traditional manufacturing firms: A higher-order structural equation mode.
- Omerzel, D. G., Nastav, B., Köves, A., Király, G., Pataki, G., Balázs, B., . . . Bojnec, Š. (2016). *International Research Journal*.
- Osama, Al-Kurdia, Ramzi El-Haddadehb and Tillal, (2020) The role of organizational climate in managing knowledge sharing among academics in higher education. *International Journal of Information Management* Vol. 50;217-227
- Parzefall, M.-R., Seeck, H., & Leppänen, A. (2008). Employee innovativeness in organizations: a review of the antecedents. *Finnish Journal of Business Economics*, 2(08), 165-182.
- Schein, E. H. (2010). *Organizational culture and leadership* (Vol. 2): John Wiley & Sons.
- Tu, X.Y., Wang, Z.Y., He, X. and Zhang, Q. (2017), “Critical thinking, creative process engagement and innovation behavior: the empirical study of Technology-Based enterprises”, *Science of Science and Management of S & T (China)*, Vol. 38 No. 3, pp. 126-138.
- Wei, J., Stankosky, M., Calabrese, F., Lu, L., (2008). A framework for studying the impact of national culture on knowledge sharing motivation in virtual teams. *J. Inf. Knowl. Manage. Syst.* 38 (2), 221–231.