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Intellectual Capital and Performance of Staff at Selected Institutions of Higher Learning in Uganda

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Abstract

Purpose: The study examined the relationship between intellectual capital and performance of staff at selected institutions in Uganda. The specific objectives were; i) To establish the relationship between human capital and performance of staff at selected institutions of higher learning in Uganda; ii) To establish the relationship between relational capital and performance of staff in selected institutions of higher learning in Uganda and iii) To establish the relationship between structural capital and performance of staff in selected institutions of higher learning in Uganda.

Methodology: A cross-sectional design was used alongside a quantitative approach whereby a questionnaire was employed to collect the data from the 103 respondents who included lecturers from 10 selected institutions of higher learning. The results were computed using multiple regression and correlation analysis using SPSS and upon analysis,

Findings: The outcomes exposed that; a) human capital has a positive but significant relationship with performance of staff at selected institutions of higher learning in Uganda ($r = .536^{**}$, $p<0.0001$); b) there is a moderate relationship between relational capital and performance of staff at selected institutions of higher learning in Uganda ($r = .374^{**}$, $p>0.0001$); c) there is a positive and very significant relationship between structural capital and performance of staff at selected institutions of higher learning in Uganda ($r = .586^{**}$, $p<0.0001$).

Unique Contribution to Theory, Policy and Practice: The research outcome undertakes that private institutions do not give attention to developing relational capital although it's a very important aspect. It is also imperative to note that more resources are invested in the structural capital given its serious and observable impact on performance if it is put to utmost utilization. The study empirically differentiates the impacts of human, relational and structural capital on staff performance in institutions of higher learning offering context-specific insights and practically underscores the investment in structural and relational capital and continuous human capital development guiding resource allocation and policy formulation to enhance staff performance in Uganda.

Keywords: *Human capital, relational capital, structural capital and institutions of higher learning*

1.1.Introduction

Globally, organizations of numerous natures principally those countries in the North and Southern divide are driven by the desire to review strategic policy options for effective performance (Shah and Shah, 2010 as cited by Obeidat et al, 2017). This is attributed to the sweeping trends of globalization like stiff business competitiveness, advancement in technology and the surging market population that constitute the demand segment (Govaerts et al, 2011 & Radosavljević et al., 2020). Evidently, further development of the intellectual capital base has become fashionable in all walks of organizations in the global economy, academic ones as well (Onah & Anikwe, 2016).

With highly dynamic workplace changes, organizations are mindful of channeling investments in building the capacity of their intellectual (human) capital through training and development interventions (OECD, 2008) with the avowed view of enhancing performance (Palwasha. Et al., 2018). It is these investments that are popularly referred to as intellectual capital (IC), which takes precedence over the physical and financial infrastructure (Zeghal and Maaloul, 2010) in most institutions, universities inclusive. The argument put across is that universities worldwide stand and exist on the premise of its IC base that drives performance, the reason why training and development is critical (Bullut & Culha, 2010).

Performance is the ultimate purpose for all institutions; public or private, profit and non-profit oriented (Gharakhani and Mousakhani, 2012). Whereas staff performance is critical in the competitive business environment, it is characterized by multiple complexities due to varying stakeholders and market conditions (Masa'deh et al, 2015). Performance is a fundamental aspect and it's the reason why institutions tend towards enhancing their human capital for survival amidst tight competition (Ramayah et al, 2011). In higher institutions of learning, performance is the ultimate goal although it cannot be detached from the extent of the quality of the available IC

In the context of the proposed study, intellectual capital from the human, structural and relational perspectives is assumed to have a significant bearing on the extent to which performance at university level is influenced. If universities are to stay alive in the competitive academic environment, more attention to channeling more resources in capital development is critically paramount (Ricco, 2011). Despite the considered view that IC is vital in as far as performance is concerned, it is not clear how IC impacts performance in institutions of higher learning in Uganda and hence the subject of debate in this study that deserves investigation. According to Kasule & Neema, (2015) as cited in Gakowe et al., (2022), institutions in Uganda under look staff development that is a pre-requisite to building a strong IC base.

1.2.Statement of the Problem

Kristal & Rosenzweig (2007), Subramaniam &Youndt (2005) as cited by Kaveh (2014) stress the importance of intellectual capital in relation to institutional performance in the competitive

business world. Nevertheless, managerial stakeholders at institutional level are still characterized by both ineffective and inefficient tendencies in as far as making use of intellectual capital is concerned (Bratianu et al, 2011). On the other hand, Molnar (2004) contends tangible resources are critical, measurement of intellectual capital and institutional performance remains a challenge. Therefore, though intellectual capital is considered vital, theorizing and conceptualizing it as effective and efficient drivers of institutional performance remain questionable and debatable. The extant study intends to further examine the parameters of intellectual capital; human, structural and relational in relation to performance of staff at university level in Uganda. This would further generate the ongoing debate with the view of reaching a logical conclusion by way of filling the existing gap, given that no study of this nature has been undertaken in the extant study.

1.3.Objectives of the study

i.) To establish the relationship between human capital and performance of selected institutions of higher learning in Uganda
ii.) To establish the relationship between relational capital and performance of staff in selected institutions of higher learning in Uganda
iii.) To establish the relationship between structural capital and performance of staff in selected institutions of higher learning in Uganda

1.4.Research Hypotheses

H_{01} There is a statistically significant relationship between Human capital and performance of staff in selected institutions of higher learning in Uganda.

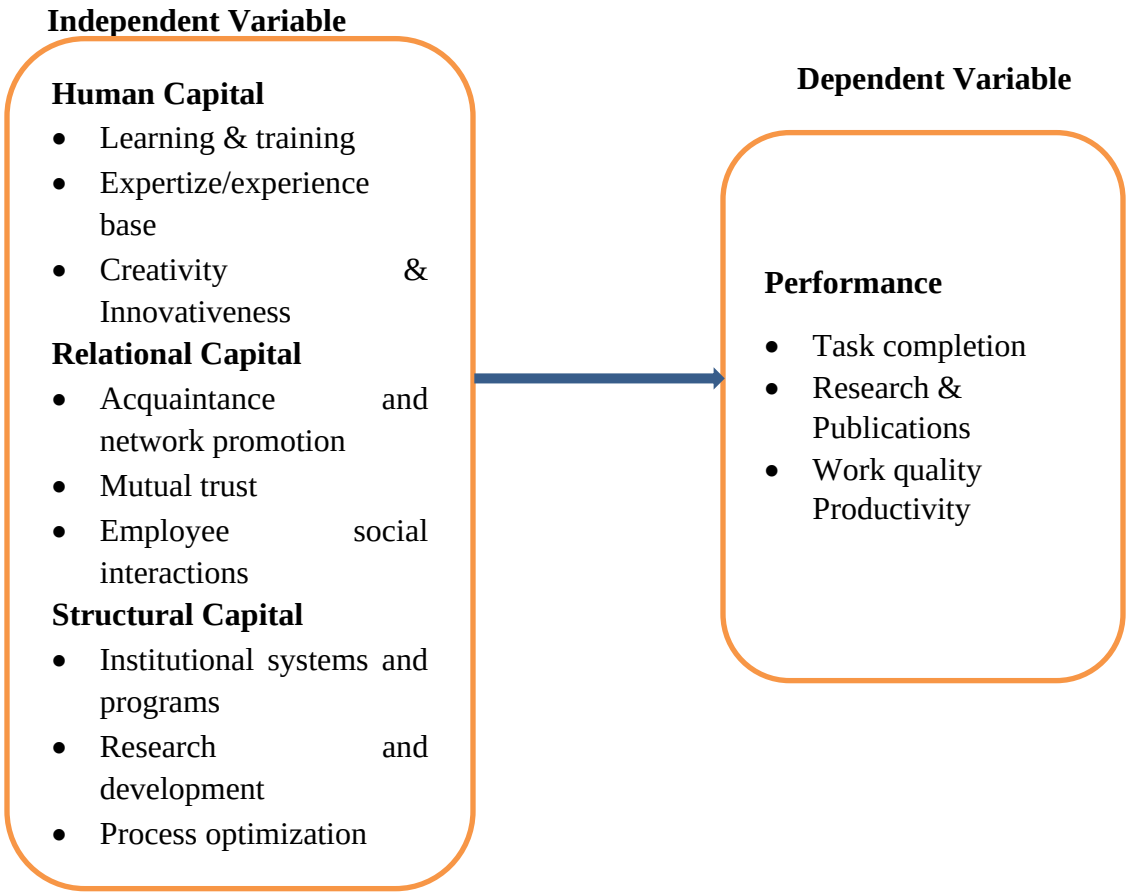
H_{02} There is a statistically significant relationship between relational capital and performance of staff in selected institutions of higher learning in Uganda.

H_{03} There is a statistically significant relationship between structural capital and performance of staff in selected institutions of higher learning in Uganda.

1.5.Conceptual Model

Under this model, the Independent Variable is Intellectual capital (human, relational and structural) and Dependent variable is Performance of institutions of higher learning as illustrated in Figure 1.

Figure 1. Conceptual Framework



2.0. Literature Review

2.1. Human Capital

According to Vargas & Lloria (2017), humans can be viewed as a significant resource or threat to an organization. The term "human capital" refers to the skills, knowledge, and experience of specialists or representatives that they impart to their organization with the intention of increasing its value (Andreeva, 2016). Human resources can be portrayed as prosperity, learning, training, motivation and aptitudes, the achievement of which is seen as an end in itself since they yield fulfillment and satisfaction to the holder. It is also alluded to the delegate wellness in making both un-deniable and un-important assets by contributing in the steady time of learning and contemplations. Human capital, unlike structural capital, is not always owned by the people who own it unless it is recorded in a significant frame or incorporated into the systems and structures of the organization. In light of globalization, high-quality human capital is now more important than wealth given the nature of its expertise and innovation (Dzenopoljac et al., 2017) which impacts performance.

2.2. Relational Capital

All connections between an association and another person or association are included in relational capital. Clients, operators, employees, providers, administrative specialists, groups, lenders, financial specialists, and so forth are among these individuals and associations (Dekoulou & Trivellas, 2017). Contracts and commitments with clients, providers, or principal partners form the first group's formal relationships, while casual connections are part of the second group. According to Bontis (2001) as cited in Ary & Kofand (2018), new definitions have transformed the concept of client cash-flow into relational capital, which encompasses all information regarding the connections that an association establishes between clients and competitors, providers, exchange affiliations, and the government. According to Ferreira & Franco (2017), this capital includes the quality and steadfastness of client relationships in terms of solid networks, trust and staff interactions in order to attain performance goals.

2.3. Structural Capital

Databases, authoritative diagrams, process manuals, systems, and schedules, anything whose value to the organization is greater than its material value are all examples of non-human storage facilities of knowledge that are included in basic capital (Andreeva, 2016). Underlying capital involves thoughts, models, licenses, laptops and systemic activities made by laborers, yet asserted by the affiliation (Cabrita et al., 2017). An association, in a sense, is formed by the combination of individuals and the internal structure. Structural capital will advance once the organization improves its innovation, develops processes, and establishes additional inward activities through the optimization of organizational processes. Thus, fundamental capital means the limit of relationship to suit their clients' solicitation. According to recent research (Soo et al., 2017), an organization's performance will improve if it has a solid structure, skilled representatives, and quality management are well optimized through the existing processes. More performance could be realized through the research structure (ibid) especially in educational-oriented organizations.

2.4. Empirical Review

Organizations of numerous natures attach specific meaning to IC. According to Amin and Aslam (2017) multiple factors contribute business performance, inclusive of learning, customer relations, innovativeness, all of which depend on the extent and quality of capital. It is recognized that IC constitutes the imperative critical resource base that influences performance from a broader perspective. Bontis et al., (2000) as cited in Ary and Kofand (2018) made an investigation in Asia. They attested that IC significantly impacts policy implementation in most sectors given its expansive and quality nature from human, relational and structural forms.

Bontis et al., (2006), Namasivayam and Basak (2006) and Pedro et al., (2018) as cited in Kamukama and Tumwine (2017) emphasize the importance of IC in three dimensions namely; human capital (HC), structural capital (SC) and relational capital RC). They argue that HC

involves whatever an individual staff brings into the value additional processes, composed of four indicators; professional and social competence, staff motivation, as well as leadership capability (Dost, et al., 2016). They on the other hand stress that SC involves whatever occurs among individuals, the way they are connected at organizational level, and what remains of the organization individuals exit (Ali et al., 2022). In addition, it is pointed out that RC has to do with outward organizational value relationships with other organizational establishments as well as individuals that they are engaged in matters of business.

Whereas there could be a broad sense of consensus that IC influences organizational performance at different levels (Wang & Chang, 2005; as cited Kamukama and Tumwine (2017), some scholars such as Firer and Williams (2003) and PekChen (2005) argued that the effect of IC on performance of individuals could be particularistic to given organizations. In line with this argument, F-Jardon and Martos (2009) stressed that the prevalence of some level of variation in the organizations can condition the effect of IC on performance. Villalonga (2004) pushes the debate ahead and provides an argument that, in some organizations and nations, IC resources can even lock organizations in persistent challenges.

In relation to the universities Corcoles et al., (2011), found that it is of critical importance for higher learning institutions to enhance proper information concerning their level of intellectual capital. In this case, the information model of higher learning institutions can turn out to be more effective and applicable. As further attested to by Ramı´rez & Gordillo (2014), measuring IC at university level can be through the identification of the major assets of intangible nature. It was concluded that the indicators could serve as a benchmarking purpose for measuring the IC of universities.

2.5. Performance

No doubt IC constitutes a significant part in line with performance at all forms of organizational levels (Maditinos et al., 2010), higher learning institutions inclusive. Given the context of stiff competition for the scarce resources especially capital, policy managers in education institutions quickly need to take advantage of the available state of information concerning performance for strategic reasons (Min Lu 2012). However, Tayles et al., (2007) posits, performance is a repercussion of a given activity despite that it remains complex to define.

Much as the assessment of performance at higher institutional level is critical, it is still an uphill task to execute. According Maingot and Zeghal (2008), whereas rankings are often utilized in benchmarking higher learning institutions, private institutions can significantly vary not only with regard to the extent of size, human and structural nature, quality standards, research and development but equally across nations. As Leitner (2004) as cited Barbosa et al., (2016) in it is rather complex to estimate the value index and making a critical comparison of performance in terms of research across different educational institutions.

In an attempt to make an assessment of performance in an educational institution, it is prudent to critically examine the IC it builds. Whilst, Shehzard et al., (2014) argue that IC can create a base for new skills and abilities, all of which can broadly impact performance of educational institutions (Min Lu, 2012). As such, a number of studies have attempted to assess the relationship between IC and performance (Leitner, 2004; Lee, 2010; Sanchez & Elena, 2006; Tayles et al., 2007; Ali et al., 2022 and Ary & Kofand, 2018). The aforementioned studies suggest modalities for assessing and measuring the outcomes of IC in relation to the broader performance of higher learning institutions as attested to by Loureiro & Teixeira (2011).

3.0. Methodology

This study took a cross-sectional and quantitative research approach in order to address the formulated hypotheses. Population will consist of 10 private universities in eastern Uganda (*National Council for Higher Education, 2015*). The sample size of 103 lecturers were studied and this number was determined using the Yamane (1973) method of sample selection. Under this methodological approach, sample size was determined accordingly with the use of the formula: n = N/1+N (e) 2.

Where: n -represents a sample size

N -represents total population

e - represents tolerable error

4.0. Analysis

Performance of staff constituted the dependent variable and it was measured by the extent of task completion, promotion of publication due to research, work quality and productivity regarding the capital base. The full details of the staff responses to these items are summarized in Table 4. However, the independent variables were presented in table 1, 2, 3 and 4. Table 5 and 6 presented the correlation and coefficients.

Table 1: Showing responses on Human Capital (HC)

No	Item	Responses		
	Responses on Human Capital	**SA & A %**	**NS %**	**D & SD %**
1.	1 am subjected to some training and education	78.6	5.8	15.5%
2.	I have experience and practical exposure	79.7	11.7	8.7
3.	I have skills and expertise in my work	12.6	82.6	4.9
4.	I am creative and innovative at work	12.6	81.6	5.8
5.	I am well acquainted with the work systems	13.6	76.7	9.7

It is established in Table 1 that 30.1% of the agreed that they are subjected to some training and education, as 48.5% strongly agreed as well. On the flipside, 5.8% of the respondents strongly disagreed that they are subjected to some training and education, whereas 9.7% also disagreed while 5.8% were not sure. According to the findings in Table 1, 51.5% of the respondents agreed that they have experience and practical exposure while 28.2% strongly agreed to this notion as well. It was further established that 4.9% strongly disagreed, 3.9 disagreed while 11.7% were not sure. Still, the analysis showed that 47.6% and 35.0% agreed and strongly agreed to the statement respectively that they have skills and expertise in their work. 37.9% and 43.7% agreed and strongly agreed respectively that they are creative and innovative at work. On the other hand, 1% strongly disagreed, 4.9% disagreed yet 12.6% were not sure. In addition, 46.6% agreed that they are well acquainted with the work systems while 30.1% strongly agreed. However, 2.9% strongly disagreed, 6.8% disagreed while 13.6% were not sure. This implies that most staff are subjected to training and education (78.6%) and also have practical experience and exposure (79.7%). However, much as they have some skills and expertise (12.6%), creative and innovative (12.6%) and with some acquittance with the work systems (13.6%), a lot is still wanting given that the majority were not sure yet others were not in agreement.

Table 2: Showing responses on Relational Capital (RC)

No	Item	Responses		
	Responses on Relational Capital	**SA & A %**	**NS%**	**D & SD%**
1.	I share knowledge with my work mates	84.4	12.6	2.9
2.	I network with my workmates	85.5	7.8	6.8
3.	I trust my colleagues at work	54.4	29.1	16.5
4.	I freely interact with stakeholders	66	18.4	15.5
5.	I have built a good customer relationship	85.4	9.7	4.9

It is established in Table 2 that 32% of the respondents agreed that they share knowledge with workmates, as 52.4% strongly agreed accordingly. On the flipside, 1.9% of the respondents strongly disagreed that they share knowledge with their workmates, whereas 1% also disagreed while 12.6% were not sure. The findings in Table 2 also showed that 45.6% of the respondents agreed that they network with workmates while 39.8% strongly agreed to this notion as well. Further, it was established that 5.8% strongly disagreed, 1% disagreed while 7.8% were not sure. Still, the analysis showed that 37.9% and 16.5% agreed and strongly agreed to the statement respectively that they trust others at work. Nevertheless, 4.9% and 11.7% strongly disagreed and disagreed respectively that they trust colleagues at work, while 29.1% were not sure. In addition, 38.8% agreed that they freely interact with stakeholders while 28.2% strongly agreed. However, 6.8% strongly disagreed, 8.7% disagreed while 18.4% were not sure. This implies that most staff share knowledge with others (84.4%), network with workmates (85.5%), trust colleagues at work (54.4%), freely interact with stakeholders (66%) and have built good customer relationship (85.4%). Ultimately, it can be deduced that relational capital generally constitutes a significant part in staff performance in private universities in Uganda.

Table 3 Showing responses on Structural Capital (SC)

No	Item	Responses		
	Reponses on Structural Capital	**SA & A %**	**NS %**	**D & SD%**
1.	I work within the existing organizational structures	75.8	15.5	8.7
2.	I execute my tasks as per program	82.6	9.7	7.8
3.	The knowledge and information systems are favorable for my work	73.8	16.5	9.7
4.	I follow the institutional processes (Work flow and systems)	82.6	12.6	4.9

It is established in Table 3 that 31.1% of the agreed that they work within organizational structures, as 44.7% strongly agreed accordingly. On the flipside, 4.9% of the respondents strongly disagreed that they work with organizational structures, whereas 3.9% also disagreed while 15.5% were not sure. The findings in Table 3 showed that 44.7% of the respondents agreed that they execute tasks as per program while 37.9% strongly agreed to this notion as well. Further, it was established that 1.9% strongly disagreed, 5.8% disagreed while 9.7% were not sure. Still, the analysis showed that 38.8% and 35.0% agreed and strongly agreed to the statement respectively that knowledge and information systems are favorable at work. On the other hand, 2.9% and 6.8% strongly disagreed and disagreed respectively that knowledge and information systems are favorable at work, while 16.5% were not sure. Whilst, 44.7% agreed that they follow institutional processes while 37.9% strongly agreed. However, 1.9% strongly disagreed, 2.9% disagreed while 12.6% were not sure. This implies that most staff work within the existing structures (75.8%), execute tasks as per program (82.6%), knowledge and information systems are favorable (73.8%), and follow institutional processes (82.6%). Arguably therefore, it is true to assert that structural capital is critical in staff performance in private universities in Uganda.

Table 4: Showing responses on Performance

No	Item	Responses		
	Responses on Performance of Staff at Selected Private Institutions	**SA & A%**	**NS%**	**D & SD%**
1.	I complete my tasks on time	77.7	13.6	8.7
2.	There is promotion of publication due to research	58.2	30.1	11.7
3.	The work quality is standard and admirable	79.6	20.4	4.9
4.	There is productivity with regard to the capital base	75.7	18.4	5.8

It is established in Table 4 that 42.7% of the agreed that they complete their tasks on time, as 35.0% strongly agreed accordingly. On the flipside, 2.9% of the respondents strongly disagreed that they complete their tasks on time, whereas 5.8% also disagreed while 13.6% were not sure. The findings in Table 4 showed that 33.0% of the respondents agreed that there is promotion of publication due to research while 25.2% strongly agreed to this notion as well. Further, it was established that 2.9% strongly disagreed, 8.7% disagreed while 30.1% were not sure. Still, the analysis showed that 45.6% and 34.0% agreed and strongly agreed to the statement respectively that the work quality is standard and admirable. On the other hand, 4.9% and 15.5% strongly disagreed and disagreed respectively that the work quality is standard and admirable, while none of the respondents were not sure. Whilst, 39.8% agreed that there is productivity with regard to the capital base while 35.9% strongly agreed. However, 3.9% strongly disagreed, 1.9% disagreed while 18.9% were not sure. This implies that most staff work complete work tasks on time (77.7%), promotion of publication due to research (58.2%), work quality is standard and admirable (79.6%), and productivity with regard to the capital base (75.7%). By implication therefore, intellectual capital generally has a bearing upon staff performance in private universities in Uganda.

Table 5 Correlation Matrix

	Human capital	Relational capital	Structural capital	Performance of staff
Human capital				
Relational capital	.578**			
Structural capital	.480**	.482**		
Performance of staff	.536**	.374**	.586**	

**. Correlation is significant at the 0.01 level (2-tailed).

Testing the Relationship between human capital and performance of staff in private universities

After the descriptive analysis above, a correlation matrix was generated to establish the relationship between human capital and performance of staff in private universities. As indicated in Table 5, there was a positive and significant correlation between human capital and performance of staff in private universities (r = .536**, n= 103 p<0.0001). this implies that the more the University invests in human capital particularly its staff, the more they are poised to realize the best out of them in terms of performance.

Testing the Relationship between relational capital and performance of staff in private universities

A correlation analysis was also employed to determine the relationship between relational capital and performance of staff in private universities. Results support the hypothesis that there is a moderate relationship between relational capital and performance of staff in private universities

a (r = .374**, n= 103 p>0.0001). This means that much as relational capital utilized, it is not effective enough to impact staff performance in private universities in Uganda.

Testing the Relationship between structural capital and performance of staff in private universities

In order to test the hypothesis between structural capital and performance of staff in private universities, a correlation matrix was generated. As indicated in Table 5, the results reveal a significant and positive correlation between structural capital and performance of staff (r = .586**, p<0.0001). This implies that the more private universities enhance the utilization of structural capital, the more likely staff performance.

Table 6: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.822	.393		2.092	.039
	Human capital	.350	.098	.348	3.583	.001
	Relational capital	-.040	.104	-.038	-.391	.697
	Structural capital	.460	.095	.437	4.833	.000

a. Dependent Variable: performance

As indicated in Table 6, among the three (3) variables studied here, only two (2) variables have a significant and positive effect on performance of staff. These are; human capital [β = .348, t = 3.583, p < 0.0001]; and structural capital [β = .437, t = 4.833 p<0.0001]. The other variable of relational capital has a significant but negative effect on performance of staff [β = -.038, t = -391, p<0.0697). In other words, it is only human and structural capital that private universities have effectively utilized. This was measured by the degree to which the universities subject staff to training and education, practical exposure, skilling, creativity and innovation and acquittance to

work systems. Therefore, much as universities have made significant efforts to promote the use of relational capital, this has left staff with no significant effect on performance. The fact therefore remains that that at present it is only human and structural capital that can determine and guarantee performance of staff in private universities.

5.0. Discussions

Human capital and Performance of Staff

In this area, it is agreed that majority of staff are subjected to training and education (78.6%) and have practical experience and exposure (79.7%). However, there are areas where improvement is highly needed such as clarity on skills, expertise, creativity, innovation and acquaintance with work systems as indicated by the percentages of those who were not sure or in disagreement.

Relational Capital and Performance of Staff

The findings suggest that relational capital including knowledge sharing, networking, trust and interaction with stakeholders plays a significant role in staff performance in private universities in Uganda.

Structural Capital and Performance of Staff

Overall, the results indicate a generally positive perception among staff of the organizational structure, task execution, knowledge and information systems plus institutional processes in private institutions of higher learning. The results also indicate a strong alignment with established frameworks and systems which can contribute to staff performance and general organizational effectiveness.

6.0. Conclusions

The study undertakes that Private Universities in Uganda should invest highly in the three components of intellectual capital, although more effort should be put towards development and employment of structural capital given its strong relationship with staff performance at institutional level.

7.0 Recommendations

The research recommends that educational institutions should prioritize human capital development by investing in training, professional development and skills enhancement programs. As much as it looks usual, Relational capital should be strengthened by fostering very strong networks, key collaborations within and outside the institutions. It should also involve partnering with institutions in the educational industry, supportive engagements and workshops as this will boost overall performance. Institutions of higher learning should consider allocation of resources towards improving organizational processes, supportive systems and infrastructures to enhance institutional performance

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