

Knowledge acquisition and organisational performance: An empirical study of National Teachers' Colleges (NTCs) in Uganda

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Abstract

The role of knowledge as an essential source of competitive advantage in organisations has become critical. To operate effectively in today's economy, it is necessary to become a knowledge-based organisation. The purpose of this research, therefore, is to assess the impact of knowledge acquisition on the organisational performance of National Teachers' Colleges (NTCs) in Uganda. Using a questionnaire, from a target population of 221, data were collected from a sample size of 141 respondents from the five National Teachers' Colleges in Uganda. The data were analysed using descriptive statistical techniques, which included frequencies and percentages, and inferential statistical techniques, which included Spearman's correlation, the coefficient of determination, and regression analyses to determine the impact of knowledge management as an independent variable on the performance of the NTCs. The findings show a moderate positive relationship ($\rho = 0.670$) between knowledge acquisition and the performance of NTCs in Uganda. The coefficient of determination ($\rho^2 = 0.449$) shows that knowledge acquisition accounted for 44.9% of the change in the performance of the NTCs in Uganda. The significance value ($p = 0.000$) was less than .05. Hence, the hypothesis that knowledge acquisition has a significant positive impact on the performance of NTCs in Uganda was accepted. This study will guide the NTCs to integrate their knowledge and assets such as databases, people and their experience and expertise, systems, policies, and procedures into knowledge management in order to improve performance. The results of this research will be used to improve the management of

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knowledge at the NTCs in Uganda, which may lead to an improvement in the way NTCs make themselves relevant to the society in which they operate.

Key words

knowledge acquisition, organisational performance, higher education institutions (HEIs).

Introduction

Increasing competition and the growing complexity of the environment force organisations to search for organisational solutions that are more effective, as only such an approach enables them to survive and thrive on the market. The result of this search is the concept of knowledge management.

There are many definitions of knowledge management in the literature. For example, according to the definition of Swan et al. (1999), knowledge management consists of all processes and activities related to the creation, acquisition, extraction, exchange, and use of knowledge, which influences the efficiency, effectiveness, and learning capacity of the organisation. Furthermore, according to Davenport and Prusak (2000), knowledge management is a set of specific activities and initiatives that organisations undertake to increase organisational knowledge. Finally, according to Paliszkiwicz (2007), knowledge management can be defined as a systematic and organised process of locating, acquiring, transferring, using, and retaining knowledge, using the appropriate technologies and cultural environment, the purpose of which is to improve the performance of the organisation. Organisations vary, but the basic principles of knowledge management apply equally to all. Organisations must systematically locate, acquire, transfer, utilise and retain knowledge, wishing to accomplish their tasks in the context of an ever-changing environment. On the other hand, it therefore suffices to recognise organisational performance as the

ability of an organisation to reach its goals and optimise results. In the context of today, organisational performance can be defined as the ability of a company to achieve its goals in a state of constant change.

The purpose of this research is to assess the impact of knowledge acquisition on the organisational performance of the five National Teachers' Colleges in Uganda, which are higher education institutions (HEIs) where teachers for lower secondary education are trained. The paper is constructed as follows: firstly the literature review is described, and subsequently the methodological part and the research results are presented. Finally, the conclusions, limitations and future directions for research are provided.

1. Literature review

A large stream of literature has emphasised the role of knowledge management as central to the success of any business. Research on knowledge acquisition and organisational performance at higher education institutions (HEIs), however, is still needed.

Higher education institutions (HEIs) are required to generate knowledge from internal and external sources so that they can use it strategically to improve and maintain competitiveness on a global scale (Ouma, Muthith and Nzioki, 2022). Therefore, HEIs perceive knowledge acquisition as an institutional strategy used to improve their quality of learning and novelty value, to advance better decision-making and improve the

performance of their academic staff and students as well as their general performance as HEIs (Wanderage et al., 2021; Amayah, 2020; Wanjiku, 2017). Knowledge acquisition at HEIs pertains to how they are involved in identifying, generating and creating the required knowledge used to achieve set objectives (Gakuo and Rotich, 2017). The manner in which this process is conducted determines the extent to which HEIs successfully impart ideas that inspire the discourses of scholars.

HEIs have adopted various approaches and models to improve the quality of lectures as well as the academic leaning experience of students (Shahzad, 2020). For example, some of the most popular and effective teaching and learning approaches utilised by HEIs include working group presentations, collaborative problem solving, as well as online and classroom discussions for acquiring knowledge for improved and effective teaching and learning processes (Rono, 2017). Notwithstanding the above process of acquiring knowledge, the improvement of HEI performance is highly dependent on the behaviour and attitude of each lecturer and student, as well as the technological and scientific innovations that are utilised to carry out the knowledge acquisition methods and approaches explained above (Zhou and Li, 2012).

In the context of higher learning, HEIs are considered sources of academic and non-academic knowledge obtained through human effort, research works and other academic works designed for consumption by various HEI stakeholders that include faculty members, students, as well as the national, regional and international communities (Ouma et al., 2022). As stated by Ramakrishnan and Yasin (2018), in order to guarantee that HEIs are successful in their educational activities, the acquired knowledge is required to contribute to the success of the overall performance of HEIs. The acquisition of knowledge should therefore be

seen as an urgent strategy that is necessary for institutions to remain competitive and attractive in the national, regional and international academic markets. Moreover, this process of acquiring knowledge will mean that HEIs are more likely to achieve their desired goals in a more sustainable manner.

Acquisition of knowledge, however, remains a limited research area in the context of HEIs in Uganda. Poonkothai (2016) explained that the success of HEI excellence around the world generally focuses on academic classroom performance as the main method of performance evaluation; little attention has been paid to the acquisition of knowledge itself. Webster, Hammond and Rothwell (2014) were of the view that in general, knowledge acquisition should focus more on market fit compared to the current state of assessment and other academic performance measures utilised by many HEIs.

The resource-based theory (RBT) developed by Penrose in 1959 (Sousa et al., 2021) was used in this study to explain how knowledge acquisition impacts the performance of NTCs in Uganda. The theoretical assumption of RBT is that not only are organisational characteristics modified but an organisation must adjust its overall direction if it is to succeed and gain a sustainable competitive advantage (Barney, Ketchen Jr. and Wright, 2021; Chen, Michel and Lin, 2021; Craighead, Ketchen and Darby, 2020; Davis and DeWitt, 2021). The principal paradigm of organisational performance proposes that internal organisational factors, such as capabilities and resources, determine the competitiveness of the organisation. In other words, the RBT asserts that having valuable capabilities and resources gives an organisation a golden opportunity to develop competitive advantages over its competitors (Molloy, Chadwick, Ployhart and Golden, 2011; D'Oria, Crook, Ketchen, Sirmon and Wright, 2021; Felin and Zenger, 2009; Gerhart and Feng, 2021). These

competitive advantages can also help the organisation to enjoy more benefits, especially in the long run. Valuable capabilities and resources are expensive, rare, difficult to imitate and are irreplaceable.

The RBT as applied in the context of HEIs states that knowledge acquisition is one of the most critical assets of a firm. Differences in organisational performance occur when they have valuable capabilities and resources that other firms do not have, allowing them to maintain their quasi-monopoly status (Barney et al., 2021; Gibson, Gibson and Webster, 2021; Greve, 2021). According to Penrose and Pitelis (cited in Ahmed, Kristal and Pagell, 2014), RBT is a modern way of analysing the knowledge acquired for the lasting benefit of the organisation. In this way, the theory has been useful in explaining the internal capabilities and resources of the HEIs, focusing on the ability to formulate strategies for the success of academic performance in a sustainable way. The RBT provides an important framework for explaining and predicting the underpinnings of organisational performance and competitive advantage. The RBT is an approach considered influential to strategic management as it is widely used as a management framework by means of which to determine a company's critical capabilities and resources to gain a sustainable competitive advantage (Lieberman, 2021; Priem and Butler, 2001).

The seminal work on valuable resources by Barney (1991) was an essential contribution to RBT, leading the conceptual transformation from the resource-based view to the theory developed as RBT (Hitt, Xu and Carnes, 2016; Chen, Michel and Lin, 2021; Craighead, Ketchen and Darby, 2020). Traditional RBT, however, does not explain how and why some organisations gain a competitive advantage in unpredictable resources, but also by developing new capabilities through learning, skill acquisition, and knowledge accumulation over time. The

logic of RBT suggests that if capabilities and resources are owned by organisations, those who have the ability to control those capabilities and resources can generate a sustainable competitive advantage (Setia and Patel, 2013; Davis and DeWitt, 2021; D'Oria, Crook, Ketchen, Sirmon and Wright, 2021; Felin and Zenger, 2009). Therefore, organisations can take advantage by continuously combining or configuring various types of capabilities and resources to create a new way of acquiring knowledge to meet market needs (Sousa et al., 2021; Gerhart and Feng, 2021; Gibson, Gibson and Webster, 2021; Greve, 2021).

In addition to being used in strategic management, RBT has been accepted and used both quantitatively and qualitatively in other areas of business management. In the present day, the use of RBT has been extended to a range of business studies such as entrepreneurship (Molloy et al., 2011; Lieberman, 2021), information systems (Priem and Butler, 2001; Setia and Patel, 2013), supply chain management (Ahmed et al., 2014), economics (Ahmed et al., 2014), operations management (Hitt et al., 2016) and marketing (Kozlenkova, Samaha and Palmatier, 2014; Amis, Barney, Mahoney and Wang, 2020; Barney, 2020; Burt and Soda, 2021). Several studies have focused on examining the connection between RBT and its implementation of various business goals.

2. Methodology

The methodological section includes the research design, the research approach adopted, the sample and sampling technique used, the data collection method and instrument, the procedure of data collection, data analysis and ethical considerations.

2.1. Research design and approach

A cross-sectional descriptive survey design was adopted, as the data was collected over a short span of time across the five National

Teachers’ Colleges; given the nature of the data, a deductive approach was adopted as recommended by Amin (2005).

2.2. Sample and sampling technique

There are five National Teachers’ Colleges (NTC) in Uganda: NTC Muni, NTC Unyama, NTC Kaliro, NTC Mubende and NTC Kabale. The NTCs are higher institutions of learning that train and produce certified teachers in Uganda. Data was collected from a sample of 141 teaching staff, including 29 from Muni NTC, 18 from Unyama NTC, 30 from Kaliro NTC, 32 from Mubende NTC, and 32 from Kabale NTC. Each of the lecturers had an equal opportunity to be selected using simple random

sampling. They are the focus of this study with regard to knowledge management.

2.3. Data collection method and instrument

The research, having adopted a purely quantitative approach, used a questionnaire to collect data that was analysed using both descriptive and inferential data analysis techniques.

2.4. Validity

A closed-ended questionnaire was created by the authors. The researchers subjected the data collection instrument to two raters in order to determine that the instrument would collect the data that it purported to. The results are shown in Table 1.

Table 1. Validity of the data collection instrument

Raters	Relevant items	Non-relevant items	Total
Rater 1	22	4	26
Rater 2	19	7	26
Total	41	11	52

CVI = $41/52 \approx .788$
 Source: Primary data

Amin (2005) recommends a CVI of 0.7. This means that the instrument used for the data collection was capable of collecting valid data. Therefore, the findings were considered reliable.

Reliability

To ensure that the data collection instrument was capable of collecting reliable data, the researcher performed a reliability test using SPSS to determine Cronbach’s alpha. The results are as in Table 2.

Table 2. Reliability of the data collection instrument

Variable	Cronbach’s alpha	N of Items
Knowledge acquisition	0.823	15
Performance of NTCs	0.743	11

Average Cronbach’s alpha = .783
 Source: Primary data

Amin (2005) recommends a CVI of 0.7 and above. This means that the instrument

used for the data collection was capable of collecting data consistently, since for the

independent and dependent variables, the Cronbach's Alpha was .823 and .743 respectively, which are above the level recommended. Therefore, the findings were considered reliable.

2.5. Data collection procedure

The researcher contacted each National Teachers' College involved in the study and sought permission from the principal of each college to administer the questionnaire to the teaching staff of the college in accordance with the study design.

2.6. Data analysis

The results are original in that primary data sources were exclusively relied upon in this research. These primary data sources involved gathering first-hand information directly from those who participated in this research, unlike secondary data sources, which involve gathering information that has already been compiled by another (Prada-Ramallal et al., 2018). This implies that the information analysed in this research was originally collected directly from the participants.

Data was analysed using quantitative analysis. Quantitative data was entered into the computer programme Statistical Package for Social Sciences (SPSS), which makes it possible to analyse large amounts of data in a shorter time, as suggested by Hazarika (2019). The same programme helped to compute univariate and multivariate statistics. Univariate statistics are in the form of descriptive statistics performed on the variable, as explained by various scholars (e.g. Allen, 2017; Canova, Cortinovic and Ambrogi, 2017; Zhang, 2016). Such descriptive statistics include frequencies and percentages, which are necessary in order to understand how participants in this study have responded to statements for the variable. The reason for relying on frequencies and percentages in this research is that the responses to the items/questions in the questionnaire were

measured using an ordinal scale (in other words, respondents selected one discrete response suitable to the item/question) as suggested by Canova et al. (2017). The frequencies and percentages are followed by multivariate statistics, which involved performing inferential statistics in the form of Spearman's correlation, the coefficient of determination, and regression results that helped to address the objective of this research, as advocated by McQuitty (2018).

2.7. Ethical consideration

In terms of the consideration of ethics, before the researchers arrived at each college to undertake data collection, they explained the purpose of the research to the principal, as head of the institution. Upon obtaining permission, they then approached the teaching staff to explain the purpose of the research and offered assurances that all data collected would be treated with the utmost confidentiality and the questionnaires were anonymous. The researchers further informed the respondents that they were under no obligation to participate in the study, and furthermore that any of them were free to withdraw at any point if they so wished. By doing so, they ensured that the research process was conducted ethically.

3. Research results

This section presents the empirical findings, and is divided into two major sections. The first section presents the demographic data, while the second section presents the results pertaining to the impact of knowledge acquisition on the performance of the NTCs in Uganda.

3.1. Background information

The NTC teaching staff were asked about the NTCs at which they were employed, as well as their gender, age and the length of time they had been working at the NTC. The demographic data are presented in Table 3.

Table 3. Demographic data

Institution	Frequency	%
Muni NTC	29	20
Unyama NTC	18	13
Kaliro NTC	30	21
Mubende NTC	32	23
Kabale NTC	32	23
Total	141	100
Gender of teaching staff	Frequency	%
Male	128	91
Female	13	9
Total	141	100
Age of teaching staff	Frequency	%
20-29 years	12	9
30-39 years	96	68
40-49 years	19	13
Over 49 years	14	10
Total	141	100
Length of time worked at the NTC	Frequency	%
Fewer than 5 years	38	26
5-10 years	98	70
11-15 years	5	4
Total	141	100

Source: Primary data

The findings in Table 3 show that 20% of the teaching staff members who participated in this study were from Muni NTC, 13% were from Unyama NTC, 21% were from Kaliro NTC, 23% were from Mubende NTC, and 23% were from Kabale NTC, giving broadly equal levels of representation among the five NTCs. Further, the data shows that more male teaching staff members (91%) participated in this study than their female counterparts (9%). In addition, the majority of the teaching staff members (68%) were aged between 30 and 39, with 13% of teaching staff members aged between

40 and 49, 10% aged over 49 years and 9% aged between 20 and 29. Lastly, the majority of the teaching staff had worked at the NTCs for between five and 10 years, while 26% had worked with them for fewer than five years and 4% for 11 to 15 years. All this meant that the respondents were capable of providing valid and reliable data.

3.2. Impact of knowledge acquisition on the performance of NTCs in Uganda

It is recommended that descriptive statistics for each variable of the objective investigated in a study be presented before the

inferential findings. Therefore, in this section, descriptive findings related to knowledge acquisition at NTCs and those related to the performance of NTCs are presented

separately. These are then followed by inferential findings related to knowledge acquisition and the performance of NTCs.

3.3. Descriptive findings related to knowledge acquisition at NTCs in Uganda

Knowledge acquisition at NTCs in this study was measured in terms of data/information searching, data/information analysis, and data/information validation. The teaching staff members were requested to respond

to a statement on each of these three measures of knowledge acquisition using a five-response Likert scale ranging from 'never' to 'very often', as shown in Table 4.

Table 4. Descriptive findings related to knowledge acquisition at NTCs in Uganda

Statement about data/information searching	N	VR	Total	R	O	VO	Total
There is sufficient time for the academic community at this institution to engage in knowledge-seeking activities	13%	37%	50%	7%	22%	21%	43%
There are sufficient funds to enable the academic community at this institution to engage in knowledge-seeking activities	22%	43%	65%	6%	17%	12%	29%
The academic community at this institution engages in the search for new ideas to address problems of concern	18%	40%	58%	6%	15%	21%	36%
The academic community at this institution generates a new understanding of problems of concern	17%	43%	60%	5%	14%	21%	35%
The academic community at this institution studies problems to discover new facts about them	25%	39%	64%	5%	18%	13%	31%
Statement about data/information analysis	N	VR	Total	R	O	VO	Total
There is sufficient time for the academic community at this institution to analyse the newly acquired knowledge	22%	32%	54%	2%	22%	22%	44%
There are sufficient funds to enable the academic community at this institution to analyse the newly acquired knowledge	26%	40%	66%	9%	19%	6%	25%
The academic community at this institution critically analyses new ideas	13%	42%	55%	8%	12%	25%	37%
The academic community at this institution critically analyses the new understanding of problems of concern	21%	40%	61%	9%	15%	15%	30%
The academic community at this institution critically analyses the new facts discovered pertaining to problems	18%	42%	60%	6%	17%	17%	34%

Statement about data/information validation	N	VR	Total	R	O	VO	Total
There is sufficient time for the academic community at this institution to validate the newly acquired knowledge	18%	38%	56%	6%	25%	13%	38%
There are sufficient funds to enable the academic community at this institution to validate the newly acquired knowledge	18%	36%	54%	4%	21%	21%	42%
The academic community at this institution critically validates new ideas	14%	38%	52%	13%	17%	18%	35%
The academic community at this institution critically validates the new understanding of problems of concern	21%	40%	61%	3%	22%	14%	36%
The academic community at this institution critically validates the new facts discovered pertaining to problems	16%	35%	51%	12%	21%	16%	37%

Note: N = Never, VR = Very rarely, R = Rarely, O = Often and VO = Very often
Source: Primary data

In order to facilitate the analysis of the results in Table 4, a sum of the percentages for “Never” and “Very rarely” was computed to indicate teaching staff members who responded “less favourably” to the statements. In addition, a sum of the percentages for “Often” and “Very often” was computed to indicate teaching staff members who responded “more favourably” to the statements. On the other hand, the percentages for “Rarely” were left as they were, and were treated as though teaching staff members had responded fairly to the statements.

Therefore, the findings in Table 4 related to data/information searching show that the most frequent response according to the range of percentages (that is, the range of responses from lowest to highest in percentage terms) in terms of the five statements was that of teaching staff members who responded unfavourably to the statements (50% to 65%). This was followed by the group of teaching staff members who responded favourably to the statements (29% to 43%), while the least populous group was comprised of teaching staff members who responded fairly to the statements (5% to 7%). Therefore,

the interpretation from this analysis is that most of the teaching staff members were of the view that data/information searching was poor at the NTCs, while approximately a third of them were of the view that it was good, and very few of them were of the opinion that it was fair.

The findings in Table 4 related to data/information analysis show that the most frequent response according to the range of percentages (that is, the range of responses from lowest to highest in percentage terms) in terms of the five statements was that of teaching staff members who responded unfavourably to the statements (54% to 66%). This was followed by the group of teaching staff members who responded favourably to the statements (25% to 44%), while the least populous group was comprised of teaching staff members who responded fairly to the statements (2% to 9%). Therefore, the interpretation from this analysis is that most of the teaching staff members were of the view that data/information analysis was poor at the NTCs, while approximately a third of them were of the opinion that it was good, and very few of them were of the opinion that it was fair.

The findings in Table 4 related to data/information validation show that the most frequent response according to the range of percentages (that is, the range of responses from lowest to highest in percentage terms) in terms of the five statements was that of teaching staff members who responded unfavourably to the statements (51% to 61%). This was followed by the group of teaching staff members who responded favourably to the statements (35% to 42%), while the least populous group was comprised of teaching staff members who responded fairly to the statements (3% to 13%). Therefore, the interpretation from this analysis is that most of the teaching staff members were of the view that data/

information validation was poor at the NTCs in Uganda, while approximately a third of them were of the view that it was good, and very few of them were of the view that it was fair.

3.4. Descriptive findings on the organisational performance of NTCs in Uganda

The organisational performance of NTCs in this study was measured in terms of impact (visibility) performance, transparency (openness) performance and excellence. The teaching staff members were requested to respond to statements on each of these three measures of performance of NTCs using a five-response Likert scale ranging from 'never' to 'very often', as shown in Table 5.

Table 5. Descriptive findings on the organisational performance of NTCs in Uganda

Statement about impact (visibility) performance	N	VR	Total	R	O	VO	Total
The institution has been recognised globally for educating graduates with the skills and knowledge needed by society	18%	38%	56%	6%	25%	13%	38%
The institution has been recognised globally for engaging research/innovations that have been useful to the community	18%	36%	54%	4%	21%	21%	42%
The institution has been recognised globally for helping the country to address developmental challenges	14%	38%	52%	13%	17%	18%	35%
Statement about transparency (openness) performance	N	VR	Total	R	O	VO	Total
The institution has been recognised globally for having published works that are accessible	21%	40%	61%	3%	22%	14%	36%
The institution has been recognised globally for employing international academic staff in various fields of expertise	16%	35%	51%	12%	21%	16%	37%
The institution has been recognised globally for enrolling international students in various fields of expertise	13%	42%	55%	8%	12%	25%	37%
The institution has been recognised globally for publishing a large volume of research on various platforms	21%	51%	72%	3%	11%	14%	25%

Statement about excellence	N	VR	Total	R	O	VO	Total
The institution has been recognised globally for carrying out world-class research in various fields of expertise	13%	42%	55%	8%	13%	24%	37%
The institution has been recognised globally for having high-quality teaching in various fields of expertise	18%	38%	56%	8%	25%	11%	36%
The academic community at the institution has been recognised globally for winning Nobel Prizes and Fields Medals	13%	42%	55%	8%	12%	25%	37%
The academic community at the institution has been recognised globally for producing frequently cited research publications	18%	38%	56%	8%	25%	11%	36%

Note: N = Never, VR = Very rarely, R = Rarely, O = Often and VO = Very often

Source: Primary data

The findings in Table 5 related to impact (visibility) performance show that the most frequent response according to the range of percentages (that is, the range of responses from lowest to highest in percentage terms) in terms of the five statements was that of teaching staff members who responded unfavourably to the statements (52% to 56%). This was followed by the group of teaching staff members who responded favourably to the statements (35% to 42%), while the least populous group was comprised of teaching staff members who responded fairly to the statements (4% to 13%). Therefore, the interpretation from this analysis is that most of the teaching staff members were of the view that the impact (visibility) performance of NTCs in Uganda was poor, while approximately a third of them were of the view that it was good, and very few of them were of the view that it was fair.

The findings in Table 5 related to transparency (openness) performance show that the most frequent response according to the range of percentages (that is, the range of responses from lowest to highest in percentage terms) in terms of the five statements was that of teaching staff members who responded unfavourably to the statements

(51% to 72%). This was followed by the group of teaching staff members who responded favourably to the statements (25% to 37%), while the least populous group was comprised of teaching staff members who responded fairly to the statements (3% to 12%). Therefore, the interpretation from this analysis is that most of the teaching staff members were of the view that the transparency (openness) performance of NTCs was poor, while approximately a third of them were of the view that it was good, and very few of them were of the view that it was fair.

The findings in Table 5 related to excellence show that the most frequent response according to the range of percentages (that is, the range of responses from lowest to highest in percentage terms) in terms of the five statements was that of teaching staff members who responded unfavourably to the statements (55% to 56%). This was followed by the group of teaching staff members who responded favourably to the statements (36% to 37%), while the least populous group was comprised of teaching staff members who responded fairly to the statements (8%). Therefore, the interpretation from this analysis is that most of the teaching staff members were of the view that the excellence of

NTCs in Uganda was poor, while approximately a third of them were of the view that it was good, and very few of them were of the view that it was fair.

3.5. Inferential findings on knowledge acquisition and the performance of NTCs in Uganda

Inferential findings were used to address the objective of this study, which was to assess the impact of knowledge acquisition on the performance of NTCs in Uganda. The inferential analysis involved computing

Spearman’s correlation, the coefficient of determination and multiple regression. The results are presented in the following paragraphs.

The hypothesis which was tested stated that “*knowledge acquisition has a significant positive impact on the performance of NTCs in Uganda*”. The results of Spearman’s correlation and the coefficient of determination for knowledge acquisition and the performance of NTCs in Uganda are presented in Table 6.

Table 6. Correlation and coefficient of determination for knowledge acquisition and the performance of NTCs in Uganda

	Knowledge acquisition in NTCs
Performance of NTCs in Uganda	$\rho = 0.670$ $\rho^2 = 449$ $p = 0.000$ $n = 141$

Source: Primary data

Table 6 shows a moderate positive relationship ($\rho = .670$) between knowledge acquisition and the performance of NTCs in Uganda. Since the hypothesis emphasises the “*impact*” rather than the “*relationship*” itself, a coefficient of determination ($\rho^2 = .449$) was computed in order to address the research objective. This shows that knowledge acquisition accounted for 44.9% of the change in the performance of NTCs in Uganda. Testing this finding revealed that the significance value in Table 4 ($p = .000$) was less than the recommended .05. Because of this, this finding was accepted, leading to the acceptance of the hypothesis. Therefore, it was concluded that knowledge acquisition had a significant positive impact on the performance of NTCs in

Uganda. The positive nature of the impact indicated that poor knowledge acquisition contributed to the poor performance of NTCs in Uganda, while better knowledge acquisition contributed to better performance. The moderate nature of the impact indicated that a unit change in knowledge acquisition contributed to a moderate change in the performance of NTCs in Uganda.

The regression analysis was important in this study as it enabled the researchers to determine how the three measures of knowledge acquisition, namely data/information searching, data/information analysis and data/information validation, impacted the performance of NTCs in Uganda. The relevant findings are presented in Table 7.

Table 7. Regression findings for knowledge acquisition and the performance of NTCs in Uganda

<i>Multiple Regression Statistics</i>					
R	0.682				
R-Squared	0.466				
Adjusted R-Squared	0.454				
Standard Error	1.760				
Observations	141				

<i>ANOVA statistics</i>					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Sig F</i>
Regression	3	370.0	123.3	39.8	0.000
Residual	137	424.6	3.1		
Total	140	794.6			

<i>Coefficients statistics</i>					
	<i>Coefficients</i>	<i>Standard Error</i>	<i>Beta</i>	<i>t Stat</i>	<i>p-value</i>
Intercept	2.89	.80		3.60	0.000
Data/information searching	0.22	0.04	0.38	5.73	0.000
Data/information analysis	0.16	0.04	0.27	3.87	0.000
Data/information validation	0.23	0.04	0.35	5.21	0.000

Source: Primary data

Table 7 shows a moderate linear relationship ($R = .682$) between the combined measures of knowledge acquisition (data/information searching, data/information analysis and data/information validation) and the performance of NTCs in Uganda. The adjusted R-squared (.454) shows that the combined measures of knowledge acquisition (data/information searching, data/information analysis, and data/information validation) accounted for 45.4% of the change in the performance of NTCs in Uganda. Testing

this finding using ANOVA statistics shows that the significance value (Sig F = .000) of Fisher’s ratio ($F = 39.8$) was less than the recommended significance value of .05. Because of this, this finding was accepted.

Statistics pertaining to the coefficients were used to determine how each of the measures of knowledge acquisition (data/information searching, data/information analysis and data/information validation) impacted the performance of NTCs in Uganda. The findings show that all three

measures of knowledge acquisition (data/information searching, data/information analysis and data/information validation) had significance values ($p = .000$) of less than .05. This indicated that they all impacted the performance of NTCs in Uganda. However, the value of the t-statistic for data/information searching (5.73) was highest, followed by data/information validation (5.21) and data/information analysis (3.87), respectively. This indicated that data/information searching had the greatest impact on the organisational performance of NTCs in Uganda, followed by the impact of data/information validation and then data/information analysis.

4. Discussion

This study established that knowledge acquisition accounted for 45.4% of the change in performance of the NTCS in Uganda, whereby poor knowledge acquisition contributed to the poor performance of NTCs while better knowledge acquisition contributed to better performance. This result indicates that knowledge acquisition is important for NTCs in Uganda, which consistently endeavour to be equipped with the most up-to-date information that can be transferred to their students. This finding is supported by various studies. For example, the results of this study are consistent with those of Jyoti and Rani (2017), Hussinki, Ritala, Vanhala and Kianto (2017), and Ahmad, Lodhi, Zaman, and Naseem (2015), who contend that organisations that promote knowledge acquisition among their employees perform better.

Similarly to the present study, Matin and Sabagh (2015) also investigated the connection between knowledge management abilities and the performance of Iranian export firms. Their research centred on different aspects of knowledge management, such as knowledge acquisition, knowledge transfer, knowledge protection, and knowledge

application. By means of path analysis, they discovered that a strong and meaningful correlation exists between knowledge acquisition and organisational performance.

In addition, a study conducted by Nnabuife, Onwuka, and Ojukwu (2015) also supported the results of this research. Their study investigated the relationship between knowledge management and organisational performance in selected commercial banks located in Awka, Anambra State, Nigeria. The primary focus was on the impact of knowledge acquisition on organisational performance. By utilising Pearson's correlation, the data indicated that there is a positive connection between knowledge acquisition and organisational performance. However, while Pearson's correlation was used for testing the hypothesis in the study in Nigeria, the researchers in this study used Spearman rank-order correlation because of the ordinal nature of the data.

The findings of Nyaboke (2019), who conducted a case study on the effect of knowledge management on the performance of the KEMRI research institution in Kisumu County, Kenya, also support the results established in this study. Their regression analysis indicated that knowledge acquisition correlates positively with performance, as $\beta = 0.921$, leading to the conclusion that an increase in knowledge acquisition led to improved performance at KEMRI.

Agbim (2014), who assessed the effect of knowledge acquisition on competitive advantage based on a knowledge-based and resource-based study, also concurred with the findings of this study, finding that knowledge acquisition was significantly related to competitive advantage.

Conclusion

This study was conducted to investigate the impacts of acquisition processes (including data/information searching, data/

information analysis, and data/information validation) on the performance of NTCs in Uganda. Using a quantitative survey method, the results demonstrate that knowledge acquisition positively impacted the performance of NTCs in Uganda. Therefore, in order for the NTCs to improve their performance, the administrators need to improve on their knowledge acquisition by improving data/information searching, data/information analysis, and data/information validation.

Recommendation

In line with the findings, the study recommends that the NTCs vigorously adopt knowledge acquisition, as it will directly lead to improved performance. Administrators and leaders of educational institutions can use these results to consult with investors about implementing knowledge acquisition projects at their institutions.

Contribution to science

The major reason for conducting this research is to utilise the findings to propose a new approach to organisational norms and values for the NTCs in Uganda to support knowledge management, which will help to improve their performance. This approach focused on how the NTCs can integrate their knowledge assets, including databases, people and their experience and expertise, systems, policies, and procedures into knowledge management to improve performance.

Socio-economic effects of the research and the impact of the research results

Higher education institutions play a critical role in facilitating the socio-economic development of a country in various ways, such as channelling people who have been equipped with knowledge to the labour force, contributing to innovation, and conducting research to address social problems. Such contributions are part of the measurement of

the performance of the NTCs. Moreover, the various ways in which NTCs facilitate the socio-economic development of the country are anchored in the effectiveness of knowledge management. Thus, the results of this research are likely to be used to improve knowledge management at the NTCs in Uganda, which may lead to an improvement in the way NTCs make themselves relevant to the society in which they operate.

Limitations and future directions of the research

This study has some limitations which may open the doors to future studies. First, the study targeted only teaching staff members from the NTCs in Uganda. Further research may also include other employees of higher education institutions, such as members of the administration. Secondly, the study was conducted exclusively on NTCs in Uganda. A study expanded to other developed countries may lead to more insights into the impact of knowledge acquisition on the performance of NTCs. Furthermore, the study also utilised quantitative analysis. It may not be clear as to whether the findings would be the same if the study had used mixed methods research. Last but not least, opportunities exist for more research to explore a moderator analysis based on respondent demographics such as position.

Directions of future research

According to the definition of Swan et al. (1999), knowledge management consists of all processes and activities related to the creation, acquisition, extraction, exchange, and use of knowledge, which influences the efficiency, effectiveness, and learning capacity of an organisation. This study focused on knowledge acquisition and organisational performance. The researchers therefore wish to recommend that future research be conducted on knowledge creation, extraction, exchange, and use, and how they impact organisational performance.

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