

THE ROLE OF LEARNING ASSESSMENT STRATEGIES ON EFFECTIVE KNOWLEDGE SHARING AMONG UNDERGRADUATE STUDENTS IN SELECTED CHARTERED PRIVATE UNIVERSITIES IN KENYA

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Abstract Knowledge sharing among peers plays an important role in students' learning process, since they are able to gain more insights into and an understanding of concepts or practical applications, thereby improving learning and expertise. Unfortunately, the learning culture that is expected to influence knowledge sharing could be hampered by the educational emphasis on academic performance that triggers competition, resulting in poor knowledge sharing among the students. The rationale of this study was further reinforced by the fact that despite knowledge sharing gaining increasing attention in the organisational context, very few literature have actually focused on students, who are perceived to be the future backbone. To this end, the purpose of the study was to empirically investigate and examine the role of learning assessment strategies on effective knowledge sharing among the undergraduate students in chartered private universities in Kenya. Using stratified random sampling approach, a cross-sectional survey was used as a methodology for data collection by stratifying the population in terms of faculty membership, postgraduates, or undergraduates to ensure accurate representation. The sampling frame for this study was 375 undergraduate students pursuing similar courses, selected to represent the total population within the 4 highly ranked preferred private universities in Kenya, namely Strathmore University (78%), Daystar University (57%), Catholic University (49%), and United States International University (45%). The considerations of the relationships between independent variables and the dependent variable were sought. A questionnaire was used to gather relevant information from the respondents. The data collected was analysed using both descriptive and inferential statistics. Linear regression curves were developed and these revealed positive correlations between all the independent variables and the dependent variable. The study established that there was a positive influence on knowledge sharing in the chartered private universities in Kenya, attributed to units of change for all the independent (learning culture) variables. In conclusion, bivariate Pearson correlation of the two variables were computed, and the findings revealed that there was a statistically significant linear relationship between LAS and EKS ($r = .513, p < .001$). A linear regression established that there was a strong positive relationship between learning assessment strategies and effective knowledge sharing among undergraduate students in the chartered private universities. Using ANOVA, results suggested that learning assessment strategies played a role in predicting effective knowledge sharing. The study recommends that: (i) the management of private universities need to think about alternative assessment methods to reduce direct competition among students; (ii) there is need for the educators and education planners to take appropriate measures to minimise such barriers to knowledge sharing, which in turn are likely to strengthen students' beliefs on the value of knowledge sharing; (iii) there is need to ensure the existence of knowledge sharing culture within the university environment; and (iv) given the advantages of knowledge sharing, it is thus desirable that academic institutions should consider changing their approaches in teaching to place extra emphasis on encouraging collaborative teaching and learning. Lastly, the findings of this study were useful not only for adding to the literature, but to the policy makers of such institutions, as well as curriculum designers and education planners, to consider appropriate measures for integrating knowledge sharing activities in the pedagogy.

Keywords: Learning Culture, Learning Assessment Strategies, Knowledge Economy, Knowledge Management, Knowledge Sharing

BACKGROUND OF THE STUDY

In the knowledge-based era, knowledge is the most precious asset and the foundation of a firm's competitive edge

(Omotayo, 2015). Igbal and Mahmood (2012) alluded that this intellectual resource should be considered as much more important than any other resource within an organisation. Notably, it originates from individual's intelligence, but

exists in the routines, procedures, systems, software, practice, and norms of the organisation, which are difficult to imitate (Yiu & Law, 2012). Thus, knowledge sharing (formal or informal) means transfer, dissemination, and exchange of knowledge, experience, skills, and valuable information from one individual to other members within an organisation (Sajeva, 2014). However, sharing one's knowledge with others does not conform to the human nature, since people are afraid that they will lose the power of knowledge in the organisation if they share it with others (Wang & Noe, 2010). In general, people's expectations from knowledge sharing are to gain more insights into and an understanding of concepts or practical applications, thereby improving learning and expertise (Eid & Nuhu, 2011; Yiu & Law, 2012). According to Majid and Wey (2011), many studies have highlighted that information and knowledge sharing play an important role in the learning and development of individuals. Therefore, to stay competitive in the educational industry, institutional members must promote knowledge sharing that is considered a significant ingredient for mutual learning and intellectual development to students (Eid & Nuhu, 2011).

Secondly, to cope with rapid technological changes, today's information economy needs highly qualified workers at all levels. Higher education institutions around the world are seeking to reconstruct curriculum, pedagogy, and evaluation policies to address existing social needs, to ensure that all students have the desired characteristics and skills at the completion of a bachelor's degree (Chan, Brown & Ludlow, 2014). According to Otara (2011), colleges and universities perform 2 fundamental functions in the knowledge economy: producing human capital and creating new knowledge. This has been emphasised in the related body of organisational learning literature, where knowledge generation and knowledge sharing are deemed as the 2 major components of the learning process (Paulin & Suneson, 2012; Omotayo, 2015).

According to Majid and Chitra (2015), a majority of the previous studies on knowledge sharing had basically focused on corporate and public organisations. However, it was soon realised that it is equally important to understand the knowledge-sharing behaviour of students, as they will be part of the future workforce. Students with a positive attitude towards knowledge sharing are likely to carry this behaviour to their workplace, thus contributing to their organisational success. While there is a strong body of research on knowledge management and knowledge sharing in commercial environments, and growing interest in knowledge management in public sector organisations (Sandhu, Jain & Ahmad, 2011), research on knowledge management in universities is very limited.

Wei et al. (2012) asserted that studies on knowledge sharing among university students had been recognised as

an important and interesting area of study in the academic world. This was revealed by the fact that students achieve more academically and interpersonally in cooperative interaction, compared to competitive or individualistic interactions (Johnson, Johnson & Smith, 2014). Thus, active and voluntarily sharing knowledge is an essential element of effective and meaningful learning at the university level (Chong, Teh & Tan, 2014). However, in many circumstances, students or individuals show a tendency to "hoard" information or feel reluctant to share knowledge with their peers (Xue, Liang, Hauser & O'Hara, 2012; Yiu & Law, 2012). Paulin and Suneson (2012) agreed with this, saying that knowledge sharing is often affected by the relationship existing between the sender and the receiver. Wang and Noe (2010), on the other hand, referred to this last point as power politics, a situation where knowledge is used as a means of control or influence. Therefore, if individuals perceive that power comes from the knowledge they possess, it is more likely to lead to knowledge hoarding instead of knowledge sharing (Yiu & Law 2012). Based on the above arguments, the phrase 'knowledge is power' is key, as noted by Yaghi et al. (2011).

Having said this, however, students may embrace the mentality of hoarding knowledge, as such practices are perceived by the hoarders as providing them with a competitive advantage against other students. This is particularly true when good academic achievements have been linked to limited academic rewards (e.g. recognition, scholarships award, and inclusion in the dean's list), better job prospects, or even the opportunity to pursue higher education in more established universities in the future (Wei et al., 2012). If their unwillingness to share knowledge with peers continues, it is very likely that this may become part of their personality and students may exhibit the same mindset as they continue their studies, or worse, at the workplace (Majid & Chitra, 2015). Therefore, since many students are expected to join the workforce after completing their studies, the results of this study is paramount. As such, this habit of knowledge sharing should be inculcated before the students enter the workforce, since it will not benefit their workplace if they carry with them the attitude of hoarding knowledge.

LEARNING ASSESSMENT STRATEGIES AND KNOWLEDGE SHARING

Learning Assessment Strategies

The fundamental principle of assessment for learning illustrates how assessment and learning are closely related and should be carefully designed to promote, induce, and reinforce learning (Biggs & Tang, 2011). Students are actively involved in their own learning, with the ability to assess themselves and understand how to improve, while

teachers' responsibility lies in monitoring the assessment results, giving timely feedback, and adjusting teaching approaches where appropriate (Price, Handley, Millar & O'Donovan, 2010). In other words, teaching, learning, and assessment have to come together and work together in order to raise students' standards of achievement, and ultimately, help achieve deeper learning (Chan, 2014). Thus, self-reflection helps students develop self-discipline and carry out self-evaluation, as well as identify strengths and seek assistance for overcoming weaknesses, which allows students to become more engaged in their own learning (Thomas, Martin & Pleasant, 2011). According to Chan (2014), group projects can provide students with a valuable learning experience by combining talents of group members through contributing knowledge and ideas. This definitely adds a valuable dimension to learning, i.e., the opportunity to talk, discuss, explain, and challenge each other, which provides opportunities for students to evaluate and develop objectivity in making judgments about their own work and the work of others. Therefore, assessment as part of classroom activities is a fundamental process required to promote learning and ultimately achieve learning outcomes (Baleni, 2015). Likewise, throughout any course delivery, knowledge sharing ought to be incorporated into assessment in order to improve students' learning and achieve deeper learning (Chan, 2014).

Assessment plays a decisive role in how students experience the curriculum, as it has an influence on what the students learn (Biggs & Tang, 2011). According to Boud's paper (as cited in Thomas et al., 2011), assessment typically frames and determines what students do and how they do it, because it provides the clearest indication of what the institution gives priority to. While assessment in the past has primarily been a means of certification and accountability, a much wider range of purposes of assessment are now advocated. A new vision for assessment for the new millennium integrates learning and assessment, and redefines the roles of students and teachers in the assessment process (Amin, 2016). It is also worth noting that the role of student assessment is changing today, largely because today's students face a world that will demand new knowledge and abilities, and the need to become life-long learners in a world that will demand competences and skills not yet defined (Jerald, 2009, as cited in Cydis, 2014). In higher education there is an increasing awareness that traditional lecture-based teaching and exams are insufficient to meet such goals, and at the same time, the previous strong division between learning in school and learning at work is becoming less clear.

Shepard's report (as cited in Clarke, 2011) emphasised the need to deploy new forms of interactive classroom assessment and not those kinds of assessments used to give grades or to satisfy the accountability demands of an external authority, but rather the kind of assessments

that can be used as a part of instruction to support and enhance learning. School learning should be authentic and connected to the world outside of school, not only to make learning more interesting and motivating to students, but also to develop the ability to use knowledge in real-world settings. Therefore, a broader range of assessment tools is needed to capture important learning goals and processes, and to more directly connect assessment to ongoing instruction. It is therefore important to consider the changes in classroom practices that are also needed to make it possible for assessment to be used as part of the learning process. Student learning that is especially valued at a particular college or university is often showcased in the institution's mission statement, its vision statement, and its strategic plan (Schuh & Gansemer, 2010).

Changing perspectives on teaching and learning, combined with new demands in society on students' knowledge and abilities, are gradually reshaping learning cultures with responsibility for assessment being shifted to the student (Gielen, Dochy & Dierick, 2003, as cited in Beaten, Kyndt, Struyven & Dichy, 2010). Hence, institutions of higher learning, like universities, should aim to change their cultural practices so that students and teachers look to assessment as a source of insight and help, instead of an occasion for meting out rewards and punishments. In addition to acquiring specific knowledge and skills, becoming competent in a field of study means learning and internalising the standards by which others will judge our performance.

Following the above discussions, faculties should aim to establish classroom practices that encourage peer assessment, regard errors as opportunities for learning, and promote shared thinking (Shepard, 2000, as cited in Clarke, 2011). Feedback that is important and can be provided in different manners must be used as an integral part of the course design (Hernandez, 2012). This is because students strongly value quality feedback that is a crucial part of the learning process, as it aims to provide information that fills a gap between what is understood and what is aimed to be understood (Price et al., 2010). This implies a profound cultural transformation of classrooms in which both students and teachers focus on learning rather than on grades. Hence, it has become imperative that if higher education curriculum is to meet up with the demands of the 21st century, there is need to reform, restructure, and rethink the curriculum. This will ensure that the gap between the products of higher education and the actual demands by the labour force in the 21st century is effectively bridged (Nkechinyere & Ememe, 2013).

Knowledge Sharing

From the above discussion, the importance of knowledge sharing in improving learning process cannot be

underestimated. Many recent studies have invested considerable attention in finding determinants of knowledge sharing behaviour, but not on its relationship with regard to learning assessment strategies (Osman et al., 2015; Keong & Subhi, 2015; Sabbir Rahman et al., 2014; Chikoore & Ragsdell, 2013; Goh & Sandhu, 2013; Majid & Chitra, 2013; Hau, Kim, Lee & Kim, 2013; Wei et al., 2012; Chang & Chuang, 2011; Yaghi et al., 2011). However, limited attention has been dedicated to knowledge sharing behaviour among students, in both traditional and online learning environments, where teaching and learning are the main concerns.

Knowledge-sharing culture is necessary for undergraduate and postgraduate students as part of the learning process (Ma & Yuen, 2011). Knowledge sharing basically concerns the willingness and behaviour of individuals in an organisation to share with others the knowledge they have acquired or created (Yiu & Law, 2012). In other words, it is a process that includes active communication, talking to colleagues, and learning from colleagues, collaborating, helping others with information or knowledge, consulting, and mentoring (Sajeva, 2014). Thus, knowledge sharing can be viewed as an activity through which knowledge, i.e., information, expertise, and experiences are exchanged within a discipline, a community, or organisation (Wang & Noe, 2010).

Knowledge sharing is considered a social phenomenon related to interpersonal relationships and social interactions (Lin, Wu & Lu, 2012). This is in accordance with Hendriks' study (as cited in Wang & Noe, 2010) who asserted that knowledge sharing implies a relationship between 2 parties, one that possesses the knowledge and the one that acquires it. Christensen's study (as cited in Ashari & Jayasingam, 2014) also acknowledged that "knowledge sharing is the process intended at exploiting existing knowledge, identifying existing and accessible knowledge, in order to transfer and apply this knowledge to solve specific tasks better, faster and cheaper than would otherwise have been solved".

Paulin and Suneson (2012) reiterated that knowledge sharing is the dissemination of information from an individual who shares his or her acquired knowledge with other members of an organisation. In any academic institution, it has played a vital role in the transfer of essential knowledge among lecturers and students in the lecture theatres, practical workshops, laboratories, and tutorials, since there are some aspects of teaching and learning that may not be achieved only through the lecture format (French & Kennedy, 2016). In addition to attaining new knowledge, it may also assist students in gaining deeper understanding of certain topics which were difficult for them to understand, from their colleagues.

According to Wei et al. (2012) and Ashari and Jayasingam (2013), sharing of knowledge is essential in knowledge-

based organisations such as universities, due to the fact that most of the people involved are knowledge workers, particularly the students and teachers. Essentially, active and voluntarily sharing knowledge are elements of effective and meaningful learning at the tertiary level (Yuen & Majid, 2007, as cited in Majid & Chitra, 2013). Furthermore, as Wang and Noe, 2010 and Wei et al., 2012 noted, knowledge sharing among students will significantly enhance group interactions, problem-solving, and decision making skills, which benefit the students. Thus, knowledge sharing that is largely a volitional behaviour ought to be encouraged and facilitated within the educational set-up (Yiu & Law, 2012). Hence, once a positive attitude of sharing knowledge is embraced, this automatically reduces students' competitiveness among peers (Yaghi et al., 2011).

Yaghi et al. (2011) studied the student's perception of knowledge sharing among undergraduate students at Applied Science Private University. The study revealed that most of the students thought that knowledge sharing through sharing lecture notes, PowerPoint slides, and other learning resources among students benefited all, though the existing university culture did not provide sufficient support for sharing knowledge. The major barriers to knowledge sharing were lack of a sharing culture, lack of interaction opportunities, and students' belief that 'knowledge is power' and it could not be shared with others.

In order to determine the knowledge-sharing habits of undergraduate students at public and private universities, Wei et al. (2012) examined the knowledge-sharing behaviour of undergraduate students in Malaysia. They stated that knowledge sharing among students is likely to be facilitated by organised group activities, and further argued that academics should promote knowledge sharing by placing more focus on collective learning to reduce student competition. This could be achieved by having group activities structured in all curricula in order to encourage sharing among students.

Chikoore and Ragsdell (2013) investigated the knowledge sharing behaviours of undergraduate students in the context of preparing assessed group coursework, with the aim of determining the emergent motivational factors. The study highlighted a number of issues that could help inform the design of coursework in future with respect to enhancing the knowledge sharing experience. Although this research managed to gain insight on students' knowledge sharing behaviour, it was limited in its analysis of how group dynamics and member interaction actually affect the knowledge sharing process in coursework groups.

Majid and Chitra (2013) acknowledged that knowledge sharing among peers played an important role in students' learning process. Their study was to investigate students' attitude towards knowledge sharing with their class

fellows, frequency and type of knowledge shared, preferred communication channels, and the factors likely to motivate or inhibit knowledge sharing among junior college students. It revealed that the primary motives of sharing knowledge were to improve understanding of the concepts discussed in the class and to build relationships with classmates. For group assignments, more knowledge sharing occurred within the group members than with other groups. The major barriers to knowledge sharing were lack of time, lack of a sharing culture, and inadequate depth in relationships.

Sabbir Rahman et al. (2014) reckoned it was evident that for any institution, knowledge-sharing culture is necessary for undergraduate and postgraduate students in their learning process, yet research on the nature of knowledge-sharing patterns by undergraduate and postgraduate students within the context of a developing country's (Bangladesh) perspective was scarce. They reported that it was interesting to note that undergraduate students perceived a lack of relationship, competition, showing off, shyness, lack of appreciation, and not knowing what to share, as the significant barriers to knowledge sharing, compared to postgraduate students. In contrast, the postgraduate students perceived concerns of providing wrong information and lack of time as more significant barriers to knowledge sharing, compared to undergraduate students. Overall, this research documented that the postgraduate students had shown higher perceived attitudes towards knowledge sharing, compared to undergraduate students, though it was encouraging to note that the respondents at both levels generally possessed a positive attitude towards knowledge sharing and were aware of its importance in their learning process.

Keong and Subhi (2015) also acknowledged that in recent years, academic institutions were using different learning approaches to enhance students' learning experience, as had been seen in studies that were conducted in various educational fields to examine strategies and techniques. This study aimed to examine students' attitude towards knowledge sharing with their peers, and to determine the factors likely to motivate or inhibit knowledge sharing among the postgraduate students in UKM Malaysian University. Overall, the findings of this study indicated that the students hold positive significant attitudes towards knowledge sharing. In addition, this study had also identified certain other barriers to knowledge sharing, such as lack of time and lack of initiative to voluntarily share information.

In conclusion, from the above discussion it is clear that individual behaviour, interpersonal relationship, knowledge sharing culture, knowledge sharing inhibitors, knowledge sharing motivators, personal attitude, and organisational culture may play an important role in knowledge sharing activity. Therefore, the present study was aimed at exploring how learning assessment strategies could work

as a mechanism in an educational setting in facilitating knowledge sharing strategies. However, it is worth noting that knowledge sharing studies that focus on education are rare (Hou, Chung & Chang 2009, as cited in Igbal & Mohamood, 2012). Until recently, a majority of the studies on knowledge sharing were mainly focused on corporate and public organisations. Thus, there is less information regarding knowledge sharing in an academic environment (Kim & Ju, 2008, as cited in Igbal et al., 2011). Therefore, since many students are expected to join the workforce after finishing their undergraduate studies, a positive attitude towards knowledge sharing would make them more useful to their employing organisations (Paulin & Suneson, 2012; Yaghi et al., 2011; Majid & Chitra, 2013).

Statement of the Problem

Knowledge sharing among peers plays an important role in students' learning process, since they are able to gain more insights and understanding about concepts or practical applications, thereby improving learning and expertise. John's study (as cited in Eid & Nuhu, 2011) posited that researches that focused on factors affecting knowledge sharing have identified the relevance of learning culture, among other variables. Therefore, universities should serve as a platform that enables academics to speak their ideas and insights, besides adding substantial value to the information-processing environment (Martin & Marion, 2005 as cited in Igbal & Mahmood, 2012).

Unfortunately, the learning culture that is expected to influence knowledge sharing in universities in Kenya could be hampered by the educational emphasis on academic performance that triggers competition, resulting in poor knowledge sharing among the students. Chiu (2010) claimed that students were less likely to share as knowledge is considered critical to their academic performance. Majid and Chitra (2013) and Keong and Subhi (2015) reported 2 major barriers to knowledge sharing: competition among students to outperform and lack of in-depth relationship. However, Yaghi et al. (2011) cited lack of a sharing culture, lack of interaction opportunities, and students' belief that 'knowledge is power' and that it cannot be shared with others.

Since information and knowledge sharing is considered essential elements of the learning process, it is highly desirable that educators and other academic stakeholders should adequately understand the perceptions and knowledge sharing behaviour of students (Majid & Chitra, 2013). Eventually, this positive attitude of sharing knowledge reduces competitiveness among peers. Most studies done do not focus on actual relationship of how learning culture affects knowledge sharing in academic

settings (Yaghi et al., 2011; Wei et al., 2012; Fullwood et al., 2013). Hence, the focus of this study is to examine the relationship of learning assessment strategies as a dimension of learning culture on students' knowledge sharing in chartered private universities in Kenya.

Research Aims and Questions

The study was aimed at determining the role of learning assessment strategies on effective knowledge sharing among the undergraduate students in chartered private universities in Kenya.

The primary research questions were:

What are the effects of learning assessment strategies on knowledge sharing?

What is the perceived frequency of knowledge sharing during assignments?

What are the students' perception and attitude towards knowledge sharing?

What are the factors that might inhibit knowledge sharing among the students?

What are the factors likely to motivate students to share their knowledge with peers?

RESEARCH METHODS

To accomplish the study's objective of the study, a descriptive survey design was used. This is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals believed to be true representatives of the population (Gatara, 2010). According to Kothari (2014), surveys are useful in revealing the current status of a variable within an entity. The survey design was preferred because this study aimed to examine the extent to which the sociological variables of learning culture influenced knowledge sharing in private universities in Kenya. It was used for collecting information about people's attitudes, opinions, habits, or any of the variety of education or social issues (Kasomo, 2015).

Bearing in mind that the theoretical population from which the sampling frame was to be drawn was all the 17 private chartered universities in Kenya (Gatara, 2010), the researcher was not able to cover all of them countrywide, but instead restricted the study population to those within the Nairobi metropolitan (CUE website, 2015; Mukhwana

et al., 2016). These 4 universities were purposively selected because they had previously been rated (2012, 2013, 2014, and 2015) among the Top 8 Private Universities Preferred by Kenyan Employers in Kenya (Corporate Staffing Services Survey, April, 2015; University World News, July 2016). The target population for this research study was the registered 2015/2016 bachelor programme students at Strathmore, Daystar, Catholic, and USIU.

The sampling frame was drawn from students pursuing similar courses at Strathmore University, Daystar University, Catholic University, and United States International University. The choice of this group was guided by the premise that these private chartered universities had previously been rated in the past 4 years consecutively as the Top 4 Private Universities Preferred by Kenyan Employers and could have possibly developed a learning culture that may also have created opportunities in accessing and sharing the right knowledge at the right time, and in the right location, to stay competitive in the global educational environment (Kumar, 2005 cited in Yiu & Law, 2012). The unit of observation comprises 375 students doing Business and Economics; Communication & Performing Arts; Humanities & Social Sciences, and IT-related courses at the 4 universities. Using stratified random sampling approach, a cross-sectional survey was used for data collection by stratifying the population into subgroups or strata of faculty membership, postgraduates, or undergraduates to ensure that students of the private universities were accurately represented (Bryman, 2012). The goal of this stratified random sampling was to achieve the desired representation from various subgroups in the population, in order to increase efficiency (Kimalu & Marimba, 2014; Kasomo, 2015). However, since the target population of the study (17,002) is more than 10,000, the final sample size estimate could be adjusted as recommended by Mugenda and Mugenda (2003).

$$fn = \frac{n}{1 + n/N}$$

Where:

nf = the sample size when population is less than 10,000

n = the sample size when the population is above 10,000

N = the population of the target sub-population

Substituted for the values:

$$N = \underline{384}$$

$$1 + 384/17002 = 375$$

Table 1: Sample Frame and Sample Size Distribution

Universities	Business/ Economics	Communication/ Performing Arts	Humanities/ Social Sciences	IT Related	Total
Strathmore	31	14	25	15	85
CUEA	28	20	25	24	97
RDU	20	30	19	18	87
USIU	35	20	22	29	106
TOTAL	114	84	91	86	375

RESULTS

Effects of Learning Assessment Strategies

The main objective of the study was to determine the role of learning assessment strategies on effective knowledge sharing among the undergraduate students in chartered private universities in Kenya.

The study sought to find out the respondents' opinion on the statements regarding learning assessment strategies and its effect on knowledge sharing. From the research findings, a majority of the respondents were in agreement that learning assessment strategies influenced knowledge sharing, whereas a smaller percentage were of the contrary opinion. On the first statement, that the purpose of assessment is primarily to enhance learning not certification, 39.5% of the respondents strongly agreed, 40.8% agreed, 11.2% were neutral, 6.1% disagreed, and 2.4% strongly disagreed, as shown by a mean of 4.09 and a standard deviation of 0.981. On the second statement, that assessment's feedback is a crucial part of the learning process as it provides information between what is understood and what is aimed to be understood, 41.2% of the respondents strongly agreed, 49.7% agreed, 5.3% were neutral, 3.1% disagreed, and 0.7% strongly disagreed, as shown by a mean of 4.28 and a standard deviation of 0.759.

The respondents' opinion was also sought on the statement that the role of students' assessment is changing largely because students face a world that demands new knowledge and abilities. In this, a majority (49.3%) of the respondents strongly agreed, 37.8% agreed, 9.2% were neutral, 2.4% disagreed, and 1.3% strongly disagreed, as shown by a mean of 4.31 and a standard deviation of 0.841. The respondents' opinion was further sought on the statement that students' self-assessment serves cognitive purposes and increases the responsibility for their own learning. On this, 42.2% of the respondents strongly agreed, 44.8% agreed, 7.5% were neutral, 4.1% disagreed, and 1.4% strongly disagreed, as shown by a mean of 4.22 and a standard deviation of 0.857.

The other statement was that assessment tasks provided are varied and measure the full range of desired learning outcomes, on which 32.3% of the respondents strongly agreed, 47.3% agreed, 12.2% were neutral, 7.5% disagreed, and 0.7% strongly disagreed, as shown by a mean of 4.03 and a standard deviation of 0.889.

Lastly, a majority (40.1%) of the respondents also agreed with the statement that traditional lecture-based teaching and exams are insufficient to help students develop competences and skills needed in the workforce; 36.4% agreed, 12.6% were neutral, 8.5% disagreed, and 2.4% strongly disagreed, as shown by a mean of 4.03 and a standard deviation of 1.041. The other statement was that the universities should view learning assessment strategies as a source of insight and help, not an occasion for meting out rewards and punishments to the students. In this, 42.2% of the respondents strongly agreed, 38.8% agreed, 11.1% were neutral, 6.5% disagreed, and 1.4% strongly disagreed, as shown by a mean of 4.14 and a standard deviation of 0.948.

The above findings are in line with Amin (2016), who reiterated that while assessment in the past has primarily been a means of certification and accountability, a much wider range of purposes of assessment are now advocated, whereby the new millennium integrates learning and assessment, and redefines the roles of students and teachers in the entire process. Similarly, the findings by Price et al. (2010) opined that feedback was a crucial part of the learning process, as it filled a gap between what is understood and what is aimed to be understood, as noted by the students' strong value in quality feedback that is vital for learning. Beaten et al. (2010) also noted that the changing perspectives on teaching and learning, combined with new demands in society on students' knowledge and abilities, were gradually reshaping learning cultures with the responsibility for assessment being shifted to the student. Similarly, findings by Thomas et al. (2011) indicated that self-reflection helps students to develop self-discipline and carry out self-evaluation, as well as identify strengths and seek assistance for overcoming weaknesses, which allows students to become more engaged in their own learning. This is shown in Table 2.

Table 2: Effects of Learning Assessment Strategies on Knowledge Sharing (N = 294)

Elements	SA	A	N	D	SD	M	Std.Dev.
Purpose of assessment	39.5%	40.8%	11.2%	6.1%	2.4%	4.09	0.981
Assessment's feedback	41.2%	49.7%	5.3%	3.1%	0.7%	4.28	0.759
Role of student's assessment	49.3%	37.8%	9.2%	2.4%	1.3%	4.31	0.841
Student's self-assessment	42.2%	44.8%	7.5%	4.1%	1.4%	4.22	0.857
Desired learning outcomes	32.3%	47.3%	12.2%	7.5%	0.7%	4.03	0.889
Develop competencies & skills	40.1%	36.4%	12.6%	8.5%	2.4%	4.03	1.041
Source of insights and help	42.2%	38.8%	11.1%	6.5%	1.4%	4.29	0.839

Effective Knowledge Sharing

Attitude towards Knowledge Sharing

The study sought to obtain the students' attitude towards knowledge sharing in private universities. A set of statements were used to assess the different aspects of knowledge sharing. From the research findings, an overwhelming majority of the respondents had a positive attitude towards knowledge sharing, whereas a smaller percentage of the respondents were of the contrary opinion. On the first statement, that sharing knowledge with classmates is useful for acquiring new ideas, 72.8% of the respondents strongly agreed, 24.1% agreed, 1.4% were neutral, 1.0% disagreed, and 0.7% strongly disagreed, as shown by a mean of 4.67 and a standard deviation of 0.626. On the second statement, that sharing knowledge with classmates helps in learning more efficiently, a majority (60.9%) of the respondents strongly agreed, 34.0% agreed, 3.4% were neutral, 0.3% disagreed, and 1.4% strongly disagreed, as shown by a mean of 4.53 and a standard deviation of 0.709. The third statement was that sharing knowledge with classmates gives them the opportunity to learn from more people. In this, 64.6% strongly agreed, 29.9% agreed, 3.1% were neutral, 1.7% disagreed, and 0.7% strongly disagreed, as shown by a mean of 4.56 and a standard deviation of 0.702.

The respondents' opinion was further sought on the statement that sharing knowledge with classmates enhances their learning performance, whereby 56.1% of the respondents strongly agreed, 35.7% agreed, 4.4% were neutral, 3.1% disagreed, and 0.7% strongly disagreed, as shown by a mean of 4.44 and a standard deviation of 0.776. On the statement, that proper awareness and motivation develops a positive attitude towards knowledge sharing with classmates, a majority (51.4%) strongly agreed, 38.0% agreed, 8.5% were neutral, 1.4% disagreed, and 0.7% strongly disagreed, as shown by a mean of 4.38 and a standard deviation of 0.756.

The respondents' opinion was sought on the statement that too much emphasis on grades discourages students from sharing their knowledge with classmates. Around 39.8% of

the respondents strongly agreed, 33.0% agreed, 7.5% were neutral, 13.6% disagreed, and 6.1% strongly disagreed, as shown by a mean of 3.87 and a standard deviation of 1.247. On the last statement, that the belief of 'knowledge is power' discourages knowledge sharing with classmates, 26.9% of the respondents strongly agreed, 27.9% agreed, 14.3% were neutral, 17.3% disagreed, and 13.6% strongly disagreed, as shown by a mean of 3.37 and a standard deviation of 1.393.

The above findings are in line with Majid and Chitra (2013), who acknowledged that effective knowledge sharing in students' learning process was to improve understanding of the concepts discussed in the class and build relationships with classmates. Similarly, Hussein and Nassoura (2011) posited that several previous studies had also reported that an over-emphasis on academic performance was likely to reduce effective knowledge sharing among students. Sabbir Rahman et al. (2014) noted that higher perceived attitudes towards effective knowledge sharing was generally possessed by the students who were aware of its importance in their learning process. This is shown in Table 3.

Table 3: Attitude towards Knowledge Sharing (N = 294)

Elements	SA	A	N	D	SD	M	Std.Dev.
Acquiring new knowledge	72.8%	24.1%	1.4%	1.0%	0.7%	4.67	0.626
Learning more effectively	60.9%	34.0%	3.4%	0.3%	1.4%	4.53	0.709
Learning from more people	64.6%	29.9%	3.1%	1.7%	0.7%	4.56	0.702
Enhances learning performance	56.1%	35.7%	4.4%	3.1%	0.7%	4.44	0.776
Proper awareness & motivation	51.4%	38.0%	8.5%	1.4%	0.7%	4.38	0.756
Emphasis on grades	39.8%	33.0%	7.5%	13.6%	6.1%	3.87	1.247
'Knowledge is power'	26.9%	27.9%	14.3%	17.3%	13.6%	3.37	1.393

Perceived Frequency of Knowledge Sharing on Assignments

The study sought to obtain the students' perceived frequency of knowledge sharing with their classmates for 2 scenarios: when assignments are to be graded and when no grades are involved in private universities. The purpose was to investigate if students' sharing behaviour was different for these 2 scenarios. From the research findings, a majority of the respondents had a positive attitude towards knowledge sharing, whereas a smaller percentage of the respondents were of the contrary opinion. On the first statement, that knowledge sharing is frequent while working on group assignments (within own group) (graded), 37.5% of the respondents strongly agreed, 40.1% agreed, 11.2% were neutral, 8.5% disagreed, and 2.7% strongly disagreed, as shown by a mean of 4.01 and a standard deviation of 1.037. On the second statement on perceived frequency of knowledge sharing while working on group assignments

(from other groups) (graded), 36.7% of the respondents strongly agreed, 48.0% agreed, 9.5% were neutral, 3.1% disagreed, and 2.7% strongly disagreed, as shown by a mean of 4.13 and a standard deviation of 0.903.

The respondents' opinion was sought on the perceived frequency of knowledge sharing while working on group assignments (from other groups) (graded). In this, 32.0% of the respondents strongly agreed, 48.6% agreed, 9.2% were neutral, 8.2% disagreed, and 2.0% strongly disagreed, as shown by a mean of 4.00 and a standard deviation of 0.962. The other statement on perceived frequency of knowledge sharing while working on individual assignments (same topic for all students), 32.7% of the respondents strongly agreed, 41.8% agreed, 9.8% were neutral, 11.6% disagreed, and 4.1% strongly disagreed, as shown by a mean of 3.87 and a standard deviation of 1.115.

The respondents' opinion was sought on the statement on perceived frequency of knowledge sharing while working on group assignments (within own group) (non-graded). Around 36.3% of the respondents strongly agreed, 35.0% agreed, 17.0% were neutral, 11.6% disagreed, and 5.1% strongly disagreed, as shown by a mean of 3.76 and a standard deviation of 1.162. On the statement on perceived frequency of knowledge sharing while working on group assignments (from other groups) (non-graded), 29.3% of the respondents strongly agreed, 40.8% agreed, 12.5% were neutral, 12.6% disagreed, and 4.8% strongly disagreed, as shown by a mean of 3.77 and a standard deviation of 1.141. On the other statement on perceived frequency while working on individual assignments (different topics), 34.4% of the respondents strongly agreed, 38.1% agreed, 13.5% were neutral, 9.9% disagreed, and 4.1% strongly disagreed, as shown by a mean of 3.89 and a standard deviation of 1.110.

The above findings are in line with Majid and Chitra (2013), who acknowledged that some previous studies suggest that assignments are the most common academic tasks for which students share their ideas and knowledge with their peers. This was evident for group assignments, where more effective knowledge sharing occurred within the group members than with other groups. Similarly, Hussein and Nassoura (2011) and Chiu (2010) posited that an over-emphasis on academic performance was likely to reduce effective knowledge sharing among students, as was evident on the individual assignments.

Wei et al. (2012) reported that the structured group activities were likely to encourage effective knowledge sharing among students, when more emphasis is placed on collaborative learning to reduce competition among students. On the contrary, the respondents did not agree with the notion of Hammond et al. (2010) that though students valued the social aspects of working with peers, they were less likely to

agree that cooperation helped them achieve better in assessed tasks, as was evident in the graded assignments. Similarly, findings are in line with Hillyard et al. (2010), who found that students' attitudes towards working in groups were related to their perception of the value of peer interaction, their previous experiences with working in groups, and most importantly, the individual teacher's clarity in explaining the purpose of group work. This is shown in Table 4.

Table 4: Perceived Frequency of Knowledge Sharing during Assignments (N = 294)

Elements	SA	A	N	D	SD	M	Std.Dev.
Individual assignments (graded)	37.5%	40.1%	11.2%	8.5%	2.7%	4.01	1.037
Own group assignments (graded)	36.7%	48.0%	9.5%	3.1%	2.7%	4.13	0.903
Other group assignments (graded)	32.0%	48.6%	9.2%	8.2%	2.0%	4.00	0.962
Individual assignments (same topic)	32.7%	41.8%	9.8%	11.6%	4.1%	3.87	1.115
Own group assignments (non-graded)	36.3%	35.0%	17.0%	11.6%	5.1%	3.76	1.162
Other group assignments (non-graded)	29.3%	40.8%	12.5%	12.6%	4.8%	3.77	1.141
Individual assignments (different topics)	34.4%	38.1%	13.5%	9.9%	4.1%	3.89	1.110

Factors Inhibiting Knowledge Sharing

The study sought to identify the factors that might inhibit knowledge sharing among students in private universities. A set of statements was used to assess the different aspects of knowledge sharing. From the research findings, an overwhelming majority of the respondents had a positive attitude towards knowledge sharing, whereas a smaller percentage of the respondents were of the contrary opinion.

On the first statement, that competition among students to outperform their fellow students inhibits knowledge sharing, 46.6% of the respondents strongly agreed, 31.6% agreed, 8.2% were neutral, 9.2% disagreed, and 4.4% strongly disagreed, as shown by a mean of 4.07 and a standard deviation of 1.146. On the second statement, that lack of knowledge sharing culture in the university inhibits knowledge sharing, 32.4% of the respondents strongly agreed, 39.1% agreed, 11.2% were neutral, 11.9% disagreed, and 5.4% strongly disagreed, as shown by a mean of 3.81 and a standard deviation of 1.170. The other statement, that lack of depth in relationship inhibits knowledge sharing, 24.2% of the respondents strongly agreed, 41.8% agreed, 17.7% were neutral, 9.2% disagreed, and 7.1% strongly disagreed, as shown by a mean of 3.67 and a standard deviation of 1.150.

The respondents' opinion was further sought on the statement that students' belief in 'knowledge is power' inhibits knowledge sharing. On this, 38.4% of the respondents strongly agreed, 32.8% agreed, 12.2% were neutral, 11.2% disagreed, and 5.4% strongly disagreed, as shown by a mean of 3.87 and a standard deviation of 1.198.

The other statement, that lack of initiatives to voluntarily share information inhibits knowledge sharing, 31.4% of the respondents strongly agreed, 39.1% agreed, 12.2% were neutral, 12.2% disagreed, and 5.1% strongly disagreed, as shown by a mean of 3.79 and a standard deviation of 1.160. A majority (45.2%) of the respondents strongly agreed that students only share with those who share with them, whereas 33.7% agreed, 6.5% were neutral, 10.2% disagreed, and 4.4% disagreed with the statement, as shown by a mean of 4.05 and a standard deviation of 1.151. Lastly, on the statement that lack of interaction opportunities inhibits knowledge sharing, 30.3% of the respondents strongly agreed, 37.1% agreed, 12.5% were neutral, 15.0% disagreed, and 5.1% strongly disagreed, as shown by a mean of 3.72 and a standard deviation of 1.190.

The above findings are in line with Yaghi et al. (2011), who acknowledged that major barriers to effective knowledge sharing were reported as lack of a sharing culture, lack of interaction opportunities, competition among students to outperform their fellow students, and students' belief that 'knowledge is power' and that it cannot be shared with others. Similarly, Keong and Subhi (2015) identified lack of initiatives to voluntarily share information, lack of depth in relationship, and that students only shared with those who share with them. Findings are also in line with the findings by Sabbir Rahman et al. (2014), who opined that perceived lack of depth in relationship, lack of effective knowledge sharing culture, lack of appreciation by the group mates, and competition are the significant barriers to effective knowledge sharing. This is shown in Table 5.

**Table 5: Factors Inhibiting Knowledge Sharing
(N = 294)**

Elements	SA	A	N	D	SD	M	Std.Dev.
Competition to outperform	46.6%	31.6%	8.2%	9.2%	4.4%	4.07	1.146
Knowledge sharing culture	32.4%	39.1%	11.2%	11.9%	5.4%	3.81	1.170
In-depth relationship	24.2%	41.8%	17.7%	9.2%	7.1%	3.67	1.150
Belief 'knowledge is power'	38.4%	32.8%	12.2%	11.2%	5.4%	3.87	1.198
Knowledge sharing initiatives	31.4%	39.1%	12.2%	12.2%	5.1%	3.79	1.160
Reciprocity	45.2%	33.7%	6.5%	10.2%	4.4%	4.05	1.151
Interaction opportunities	30.3%	37.1%	12.5%	15.0%	5.1	3.72	1.190

Factors Motivating Knowledge Sharing

The study sought to identify factors that are likely to motivate students to share their knowledge with peers in private universities. A set of statements were used to assess the different aspects of knowledge sharing. From the research findings, an overwhelming majority of the

respondents had a positive attitude towards knowledge sharing, whereas a smaller percentage of the respondents were of the contrary opinion. On the first statement, that to improve understanding of concepts learnt in the class through sharing ideas with other students motivates knowledge sharing, a majority (61.2%) of the respondents strongly agreed, 29.6% agreed, 6.1% were neutral, 1.4% disagreed, and 1.7% strongly disagreed, as shown by a mean of 4.27 and a standard deviation of 0.812. The other statement, that developing relationships with other students motivates knowledge sharing, 41.2% of the respondents strongly agreed, 43.5% agreed, 10.2% were neutral, 3.7% disagreed, and 1.4% strongly disagreed, as shown by a mean of 4.19 and a standard deviation of 0.866. The respondents' opinion was sought on the statement that to gain respect from others by portraying the image of a knowledgeable person motivates knowledge sharing. On this, 33.7% of the respondents strongly agreed, 33.7% agreed, 13.9% were neutral, 12.9% disagreed, and 5.8% strongly disagreed, as shown by a mean of 3.77 and a standard deviation of 1.210.

The respondents' opinion was further sought on the statement, that to feel a sense of belonging and to fit into a group motivates knowledge sharing. In this, 36.1% strongly agreed, 41.2% agreed, 12.5% were neutral, 6.5% disagreed, and 3.7% strongly disagreed, as shown by a mean of 3.99 and a standard deviation of 1.042. On the statement, that self-satisfaction motivates knowledge sharing, 36.7% strongly agreed, 44.6% agreed, 9.2% were neutral, 6.1% disagreed, and 3.4% strongly disagreed, as shown by a mean of 4.05 and a standard deviation of 1.006. On the statement, that altruism helps others motivate knowledge sharing, 39.1% strongly agreed, 39.8% agreed, 15.3% were neutral, 5.4% disagreed, and 1.4% strongly disagreed, as shown by a mean of 4.09 and a standard deviation of 0.938.

Lastly, on the statement, that rewards, e.g. class or online forum participation marks, motivates knowledge sharing, 37.1% strongly agreed, 37.1% agreed, 10.1% were neutral, 11.6% disagreed, and 4.1% strongly disagreed, as shown by a mean of 3.91 and a standard deviation of 1.140.

The above findings are in line with the findings by Zaqout & Abbas (2012) and Wei et al. (2012), who noted that factors motivating effective knowledge sharing were to improve understanding of concepts discussed in the class, to develop relationships with other students, the feeling of belongingness, to gain respect from classmates, self-satisfaction, and the urge to help others. It indicates that the students were aware of the benefits of effective knowledge sharing in their learning process. Similarly, the findings are also in line with Majid and Chitra (2013), who acknowledged that effective knowledge sharing among peers played an important role

in students’ learning process, since its primary motive was to improve understanding of the concepts discussed in the class and build relationships with classmates. This is shown in Table 6.

Table 6: Factors Motivating Knowledge Sharing (N = 294)

Elements	SA	A	N	D	SD	M	Std.Dev.
Improve understanding	61.2%	29.6%	6.1%	1.4%	1.7%	4.27	0.812
Develop relationships	41.2%	43.5%	10.2%	3.7%	1.4%	4.19	0.866
Gain respect	33.7%	33.7%	13.9%	12.9%	5.8%	3.77	1.210
Fit into a group	36.1%	41.2%	12.5%	6.5%	3.7%	3.99	1.042
Self-satisfaction	36.7%	44.6%	9.2%	6.1%	3.4%	4.05	1.006
Altruism	39.1%	39.8%	15.3%	5.4%	1.4%	4.09	0.938
For rewards	37.1%	37.1%	10.1%	11.6%	4.1%	3.91	1.140

Regression Analysis

Adjusted R square is the coefficient of determination, which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in Table 7, the independent variable (learning assessment strategies) has an impact of 67.5% (R) on the dependent variable (knowledge sharing). R is the correlation coefficient which shows the relationship between the study variables. The overall model was satisfactory, as it was supported by a coefficient of determination of 0.455. This means that the independent variable (learning assessment strategies) explained 45.5% variation of effective knowledge sharing in chartered private universities in Kenya. This showed that by considering the independent variable, there is a probability of predicting effective knowledge sharing in chartered private universities in Kenya by 45.5% (R-squared = 0.455). The independent variable (LAS) amounted to 45.4%, as shown in the model summary, with the other 54.6% attributed to other factors not addressed in the study. This is shown in Table 7.

Table 7: Regression Analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.675 ^a	.455	.454	7.62535

a. Predictors: (Constant), ASSESSMENT_WA

Analysis of Variance (ANOVA)

To explain whether the construct of learning culture (learning assessment strategies) plays a role in effective knowledge sharing, Table 8 provides the results on the Analysis of Variance (ANOVA). The results indicated that the overall model was statistically significant. This meant that the independent variable (learning assessment strategies) is a good predictor of effective knowledge sharing. The findings in the table indicated that the coefficient of determination was significant, as evidenced by an F value of 244.262 and the reported p-value (0.000), which was less than the conventional probability of 0.05 significance level. This means that the model was fit to predict effective knowledge sharing in chartered private universities in Kenya using learning assessment strategies. This is shown in Table 8.

Table 8: Analysis of Variance (ANOVA)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14202.824	1	14202.824	244.262	.000 ^b
	Residual	16978.621	292	58.146		
	Total	31181.446	293			

a. Dependent Variable: KNOWLEDGE_SHARING
 b. Predictors: (Constant), ASSESSMENT_WA

Combined Correlation Analysis of Research Variables

This was to check the relationship of independent variable (learning assessment strategies) with the dependent variable (knowledge sharing). The findings revealed that there was a significant relationship between the independent variable, since the p-values were less than 0.01, that is, p-values 0.000 < 0.01. Table 9 showed that learning assessment strategies (ρ = 0.675, p < 0.01) have a positive and significant relationship with effective knowledge sharing in chartered private universities in Kenya. Therefore, in general, we can conclude that the variables used in this study have a significantly positive, strong to medium correlation. This is shown in Table 9.

Table 9: Combined Correlation Analysis

Correlations			
		KNOWLEDGE_SHARING	ASSESSMENT_WA
KNOWLEDGE_SHARING	Pearson Correlation	1	.675**
	Sig. (2-tailed)		.000
	N	294	294
ASSESSMENT_WA	Pearson Correlation	.675**	1
	Sig. (2-tailed)	.000	
	N	294	294

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

Regression Coefficients

A linear regression model was used to test the significance role of the independent variable (learning assessment strategies) on the dependent variable

(knowledge sharing). The findings show that learning assessment strategies has a positive and significant effect on effective knowledge sharing in chartered private universities in Kenya ($\beta_4 = 0.599, p < 0.001$). This is shown in Table 10.

Table 10: Regression Coefficients

Coefficients ^a								
Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	30.705	3.218		9.542	.000	24.372	37.038
	ASSESSMENT_WA	.599	.038	.675	15.629	.000	.524	.674

a. Dependent Variable: KNOWLEDGE_SHARING

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The overall objective was to examine the role of learning assessment strategies on effective knowledge sharing among undergraduate students in chartered private universities in Kenya. As per the findings of this study, effective knowledge sharing among the students have played a very important role in their learning process, as it enables them to gain more insights and understanding about concepts or practical applications taught within the curriculum. Hence, there is need for the universities to reconstruct curriculum, pedagogy, and assessment policies to ensure that all students have the desired attributes and competencies upon their studies' completion.

Learning Assessment Strategies

The study established that students preferred new forms of interactive classroom assessment and not exam-based one which could be used as part of instruction to support and

enhance learning. Preference was on assessment strategies that encouraged effective feedback, peer assessment, regarded errors as opportunities for learning, and promoted shared thinking. Academic institutions need to think about alternative assessment methods to reduce direct competition among students. It is, therefore, desirable that educators and education planners should take appropriate measures to minimise such barriers to effective knowledge sharing, which in turn are likely to strengthen students' belief on the value of effective knowledge sharing. Once convinced, students are likely to take this positive attitude to their workplace and contribute to their organisational success.

Knowledge Sharing

On the other hand, it was satisfying to note that the participants of this study were fully aware of the benefits of effective knowledge sharing and showed a positive attitude towards it. However, academic competition among students and lack of an effective knowledge sharing culture was hindering effective knowledge sharing. In addition, this study has also identified certain other barriers to effective knowledge sharing, such as students'

belief that ‘knowledge is power’ and lack of initiatives to voluntarily share information. Therefore, this indicates that the university needs to do more to encourage effective knowledge sharing among students, and to decrease the barriers that inhibit effective knowledge sharing, which in turn may strengthen effective knowledge sharing. Personal attitude plays a vital role in increasing students’ willingness and ability to share knowledge. Positive attitude towards effective knowledge sharing will be useful for their future employing organisations, and thus should be instilled prior to entering the workforce.

Recommendations

Based on the findings, the study recommends that private universities should take appropriate measures to encourage knowledge sharing among the students as a means of attaining greater understanding on certain subjects, as well as assisting them in learning more effectively and efficiently. Universities ought to properly integrate collaborative academic activities into the instructional design to make learning more interactive and engaging, leading to enhanced academic achievement, students’ positive attitudes towards knowledge sharing, and improved student retention.

Learning Assessment Strategies

The study recommends that the management of chartered private universities need to deploy new forms of interactive classroom assessment methods that can be used as part of instruction to support and enhance learning, thereby reducing direct competition among students, which in turn is likely to strengthen students’ belief on the value of effective knowledge sharing. Additionally, institutions of higher learning like universities should aim to change their cultural practices so that students and teachers look to assessment as a source of insight and help, instead of an occasion for meting out rewards and punishments.

Knowledge Sharing

Given the advantages of effective knowledge sharing in the students’ learning process, it is desirable that their attitude and behaviour be thoroughly investigated to ensure that effective knowledge sharing culture is cultivated while pursuing education. Thus, it is necessary that academic institutions should consider changing their approaches in teaching. The study recommends that the chartered private universities need to put extra emphasis on encouraging collaborative teaching and learning that triggers effective knowledge sharing among the students, eventually leading to enhanced group interactions, problem-solving, and decision-

making skills, which benefit the students.

Further Areas of Research

Since the study was on the role of learning assessment strategies on effective knowledge sharing among undergraduate students in selected chartered private universities in Kenya, the study recommends that similar and other studies be conducted in other universities in Kenya for comparison purposes, and to allow for generalisation of findings. The independent variable in the study, which was learning assessment strategies, amounted to 45.4%, as shown in the model summary. The study recommends that other factors accounting for 54.6% need to be established and their effects assessed as well. On the same strength, a prospective study should also be conducted to assess the changes in students’ effective knowledge sharing behaviour as they progress in the subsequent years of their studies. Lastly, the use of a survey-based approach, while offering a profile of behaviours and attitudes does not develop a deeper understanding of the context of effective knowledge sharing processes.

REFERENCES

- Amin, J. N. (2016). Redefining the role of teachers in the digital era. *The International Journal of Indian Psychology*, 3(3), 40-45.
- Ashari, H., & Jayasingam, S. (2014). The effect of knowledge sharing behaviour in influencing knowledge-based economy. In *International Conference on Technology and Business Management March* (vol. 24, p. 26).
- Baeten, M., Kyndt, E., Struyven, K., & Dochy, F. (2010). Using student-centred learning environments to stimulate deep approaches to learning: Factors encouraging or discouraging their effectiveness. *Educational Research Review*, 5(3), 243-260.
- Baleni, Z. (2015). Online formative assessment in higher education: Its pros and cons. *The Electronic Journal of E-Learning Volume*, 13(4), 228-236.
- Biggs, J., & Tang, C. (2011). *Teaching for quality learning at University: What the student does* (4th ed.). Maidenhead: Open University Press.
- Chan, P. P. W. (2014). A study on the methods of assessment and strategy of knowledge sharing in computer course. In *Multi Conference on Computer Science and Information Systems* (pp. 114-148). S. l.: IADIS Press. Retrieved from <http://files.eric.ed.gov/fulltext/ED557251.pdf>
- Chan, R. Y., Brown, G. T., & Ludlow, L. H. (2014). What is the purpose of higher education?: A comparison of institutional and student perspectives on the goals and purposes of completing a bachelor’s degree in the 21st century. In

- The American Education Research Association (AERA) Annual Conference. Philadelphia, The United State of America.* Retrieved from [http://www.dal.ca/content/dam/dalhousie/pdf/clt/Events/Chan_Brown_Ludlow\(2014\).pdf](http://www.dal.ca/content/dam/dalhousie/pdf/clt/Events/Chan_Brown_Ludlow(2014).pdf)
- Chang, H. H., & Chuang, S.-S. (2011). Social capital and individual motivations on knowledge sharing: Participant involvement as a moderator. *Information & Management*, 48(1), 9-18. doi:<http://doi.org/10.1016/j.im.2010.11.001>
- Chikoore, L., & Ragsdell, G. (2013). Knowledge sharing in higher education: A study of students preparing assessed group work. *Journal of Knowledge Management Practice*, 14(1).
- Chiu, S.-H. (2010). Students' knowledge sources and knowledge sharing in the design studio - An exploratory study. *International Journal of Technology and Design Education*, 20(1), 27-42. doi:<http://doi.org/10.1007/s10798-008-9061-9>
- Chong, W., Teh, P.-L., & Tan, C. (2014). Knowledge sharing among Malaysian universities' students: Do personality traits, class room and technological factors matter? *Educational Studies*, 40(1), 1-25. doi:<https://doi.org/10.1080/03055698.2013.825577>
- Clarke, M. (2011). Framework for building an effective student assessment system. READ/SABER Working Paper. World Bank. Retrieved from <http://eric.ed.gov/?id=ED553178>
- Commission for University Education. (2015). Status of Universities. Retrieved February 20, 2016, from <http://www.cue.or.ke/>
- Corporate Staffing Services Survey. (2015). Top private universities favored by Kenyan employers. Retrieved May 22, 2015, from <http://www.careerpointkenya.co.ke/2015/04/top-private-universities-in-kenya/>
- Crisp, G. T. (2012). Integrative assessment: Reframing assessment practice for current and future learning. *Assessment & Evaluation in Higher Education*, 37(1), 33-43. doi:<https://doi.org/10.1080/02602938.2010.494234>
- David, B. (2011). *Regression analysis application: Regression sensitization as a dimension of personality*. New York: Free Press.
- Eid, M., & Nuhu, N. A. (2011). Impact of learning culture and information technology use on knowledge sharing of Saudi students. *Knowledge Management Research & Practice*, 9(1), 48-57. doi:<http://doi.org/10.1057/kmrp.2010.25>
- French, S., & Kennedy, G. (2016). Reassessing the value of university lectures. *Teaching in Higher Education*, 1-16. doi:<https://doi.org/10.1080/13562517.2016.1273213>
- Fullwood, R., Rowley, J., & Delbridge, R. (2013). Knowledge sharing amongst academics in UK universities. *Journal of Knowledge Management*, 17(1), 123-136. doi:<http://doi.org/10.1108/13673271311300831>
- Gatara, T. H. (2010). *Introduction to research methodology*. Nairobi: The Olive.
- Goh, S. K., & Sandhu, M. S. (2013). Affiliation, reciprocal relationships and peer pressure in knowledge sharing in public universities in Malaysia. *Asian Social Science*, 9(7), 290-298.
- Hammond, J. A., Bithell, C. P., Jones, L., & Bidgood, P. (2010). A first year experience of student-directed peer-assisted learning. *Active Learning in Higher Education*, 11(3), 201-212. doi:<http://doi.org/10.1177/1469787410379683>
- Hau, Y. S., Kim, B., Lee, H., & Kim, Y.-G. (2013). The effects of individual motivations and social capital on employees' tacit and explicit knowledge sharing intentions. *International Journal of Information Management*, 33(2), 356-366. doi:<http://doi.org/10.1016/j.ijinfomgt.2012.10.009>
- Hernandez, R. (2012). Does continuous assessment in higher education support student learning? *Higher Education: The International Journal of Higher Education and Educational Planning*, 64(4), 489-502. doi:<http://doi.org/10.1007/s10734-012-9506-7>
- Hillyard, C., Gillespie, D., & Littig, P. (2010). University students' attitudes about learning in small groups after frequent participation. *Active Learning in Higher Education*, 11(1), 9-20. doi:<http://doi.org/10.1177/1469787409355867>
- Hussein, A. R. H., & Nassuora, A. B. (2011). Jordanian student's attitudes and perceptions towards knowledge sharing in institutions of higher education. *International Journal of Academic Research*, 3(4), 401-405.
- Iqbal, J., & Mahmood, Y. (2012). Reviewing knowledge management literature. *Interdisciplinary Journal of Contemporary Research in Business*, 4(6), 1005-1026.
- Iqbal, M. J., Rasli, A., Heng, L. H., Ali, M. B. B., Ibne, H., & Jolae, A. (2011). Academic staff knowledge sharing intentions and university innovation capability. *African Journal of Business Management*, 5(27), 11051-11059. doi:<https://doi.org/DOI:10.5897/AJBM11.576>
- Kasomo, D. (2015). *Research methods in humanities and education*. Nairobi: The Jomo Kenyatta Foundation.
- Keong, Y. C., & Subhi, S. N. (2015). The role of knowledge sharing in the learning process among Iraqi EFL postgraduate students in UKM. *International Journal of Education and Research*, 3(12), 185-198.
- Kimalu, P. K., & Marimba, K. (2014). *Research methods monitoring and evaluation*. Nairobi: Kamumi Enterprises Limited.
- Kothari, C. R., & Garg, G. (2014). *Research methodology: Methods techniques*. New Age International (P) Limited, Publishers.
- Lin, T. C., Wu, S., & Lu, C. T. (2012). Exploring the affect factors of knowledge sharing behavior: The rela-

- tions model theory perspective. *Expert Systems with Applications*, 39(1), 751-764.
- Ma, W. W. K., & Yuen, A. H. K. (2011). Understanding online knowledge-sharing: An interpersonal relationship perspective. *Computers & Education*, 56(1), 210-219.
- Majid, S., & Chitra, P. K. (2013). Role of knowledge sharing in the learning process. *Literacy Information and Computer Education Journal (LICEJ)*, 2(1), 1201-1207.
- Majid, S., & Chitra, P. (2015). Perceptions and knowledge-sharing behavior of pre-university students. *International Information & Library Review*, 47(1-2), 30-38. doi:<https://doi.org/10.1080/10572317.2015.1049489>
- Majid, S., & Wey, S. M. (2011). Knowledge sharing behavior of graduate students. In M. E. Jennex (Eds.), *Global Aspects and Cultural Perspectives on Knowledge Management: Emerging Dimensions* (pp. 113-127). IGI Global. doi:<https://doi.org/10.4018/978-1-60960-555-1>
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. Nairobi: African Centre for Technology Studies.
- Mugenda, O. M., & Mugenda, A. G. (2008). *Research methods: Quantitative and qualitative approaches*. Nairobi: African Centre for Technology Studies.
- Mukhwana, E. J., Oure, S., Kiptoo, S., Kande, A., Njue, R., Too, J., & Some, D. K. (2016). *State of university education in Kenya*. Nairobi: Commission for University Education, Kenya.
- Nkechinyere Amadi, M., & Ememe, P. (2013). Rethinking higher education curriculum in Nigeria to meet global challenges in the 21st century. In *The Development of Higher Education in Africa: Prospects and Challenges* (vol. 21, pp. 459-483). Emerald Group Publishing Limited. doi:[https://doi.org/10.1108/S1479-3679\(2013\)0000021019](https://doi.org/10.1108/S1479-3679(2013)0000021019)
- Omotayo, F. O. (2015). Knowledge management as an important tool in organisational management: A review of literature. *Library Philosophy and Practice*.
- Osman, S., Kamal, S. N.-I. M., Ali, M. N., Noor, J. M. M., Wahid Anuar, M. A., & Othman, R. (2015). Mechanisms of knowledge sharing among undergraduate students in UiTM Johor. *Procedia Economics and Finance*, 31, 903-908. doi:[https://doi.org/10.1016/S2212-5671\(15\)01189-2](https://doi.org/10.1016/S2212-5671(15)01189-2)
- Otara, A. (2014). Rethinking university education: A navigation in the emerging knowledge economy in Africa. *Journal of Education & Human Development*, 3(1), 449-471.
- Paulin, D., & Suneson, K. (2012). Knowledge transfer, knowledge sharing and knowledge barriers - Three blurry terms in KM. *The Electronic Journal of Knowledge Management*, 10(1), 81-91. Retrieved from www.ejkm.com
- Price, M., Handley, K., Millar, J., & O'Donovan, B. (2010). Feedback: All that effort, but what is the effect? *Assessment & Evaluation in Higher Education*, 35(3), 277-289. doi:<http://doi.org/10.1080/02602930903541007>
- Sabbir Rahman, M., Highe Khan, A., Mahabub Alam, M., Mustamil, N., & Wei Chong, C. (2014). A comparative study of knowledge sharing pattern among the undergraduate and postgraduate students of private universities in Bangladesh. *Library Review*, 63(8/9), 653-669.
- Šajeva, S. (2014). Encouraging knowledge sharing among employees: How reward matters. *Procedia - Social and Behavioral Sciences*, 156, 130-134. doi:<https://doi.org/10.1016/j.sbspro.2014.11.134>
- Sandhu, M. S., Jain, K. K., & Ahmad, I. U. K. (2011). Knowledge sharing among public sector employees: Evidence from Malaysia. *International Journal of Public Sector Management*, 24(3), 206-226. doi:<http://doi.org/10.1108/0951355111121347>
- Schuh, J. H., & Gansemer-Topf, A. M. (2010). The role of student affairs in student learning assessment. *NILOA Occasional Paper*, 7, 1-14.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. New York: Allyn and Bacon.
- Thomas, G., Martin, D., & Pleasants, K. (2011). Using self- and peer-assessment to enhance students' future-learning in higher education. *Journal of University Teaching & Learning Practice*, 8(1), 5.
- University World News. (2016). Employer poll reveals preferred university graduates. Retrieved July 29, 2016, from <http://www.universityworldnews.com/article.php?story=20150416162015990>
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, 20(2), 115-131.
- Wei, C. C., Choy, C. S., Chew, G. G., & Yen, Y. Y. (2012). Knowledge sharing patterns of undergraduate students. *Library Review*, 61(5), 327-344.
- Xue, Y., Liang, H., Hauser, R., & O'Hara, M. T. (2012). An empirical study of knowledge sharing intention within virtual teams. *International Journal of Knowledge Management*, 8(3), 47-61. doi:<http://doi.org/10.4018/jkm.2012070103>
- Yaghi, K., Barakat, S., Alfawaer, Z. M., Shkokani, M., & Nassuora, A. (2011). Knowledge sharing degree among the undergraduate students: a case study at applied science private university. *International Journal of Academic Research*, 3(1), 20-24.
- Yiu, M., & Law, R. (2012). Factors influencing knowledge sharing behavior: A social-psychological view in Tourism. *Service Science*, 3(2), 11-31.
- Zaqout, F., & Abbas, M. (2012). Towards a model for understanding the influence of the factors that stimulate university students' engagement and performance in knowledge sharing. *Library Review*, 61(5), 345-361.