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The Impact of Self-Efficacy and Prior Computer Experience on the Creativity of New Librarians in Selected Universities Libraries in Southwest Nigeria

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Introduction

The continuing explosion of information, as well as continuing developments in information technology, mean that organizations continue to look for employees who are creative. Creative people are needed to deal with the constant re-engineering that organizations are going through. Libraries in Nigeria are not left out of this search for excellence. Morgan (2004: 1) observes that, [t]raditionally, librarianship has been aligned with the collecting; organizing, archiving, disseminating, and sometimes evaluation of data and information. Libraries are not about books. They are about information and knowledge. The past librarianship has been associated with books only because books were the primary manifestation of information. In today's world, information manifests itself in many more mediums. Most notable is the electronic medium. If librarians are to continue with their self-imposed mission, then there will be a continuing need for creative librarians. This will be like a midwife for the profession enabling the clientele to give birth to new ideas through then use of collected, organized, archived, disseminated, and evaluated, electronic data and information."

Related to this view, Kumaravel (2005: 1) asserts that, "universities libraries are in transition wherein the process of information acquisition, synthesis, navigation, and archiving are increasingly focused on networked and interactive access to digital multimedia information to point of need, and on the innovative application of electronic technologies." Morgan observes that university libraries are changing their role from information providers to information *access* providers. This calls for creativity on the part of the librarians as well versatility in the application of electronic technologies.

Creativity is a fundamentally human characteristic. Sternberg (1996) observes that, "[c]reative people generate ideas that are like undervalued stocks (stocks with a low price-to-earning ratio), and both are generally rejected by the public. When creative ideas are proposed, they are often view as bizarre, useless, and even foolish, and are summarily rejected, and the person proposing them regarded with suspicion and perhaps even disdain and derision." Leonard and Straus (1997) express the related view that creativity is difficult to manage, and Candy (2000) remarks that creative people are "notorious for resisting rigid formulaic approach."

Prior computer experience and librarians self-efficacy are two factors that can make a difference in libraries' search for creativity. It is not surprising that computer experience is valuable, and an investment in computer training for new employees is a good one. Likewise, self-efficacy has been proven to be a consistent predictor in a vast array of human behaviours (Stajkovic and Luthans, 1998). Do these two factors have any relationship with creativity? The present study examines the impact of self-efficacy and prior computer experience on creativity in freshly-recruited librarians in selected universities libraries in Southwest Nigeria.

Literature Review

Self-Efficacy

Self-efficacy is defined in terms of individuals' perceived capabilities to attain designated types of performances and to achieve specific results (Pajares, 1996). It has been found that a strong sense of personal efficacy is related to better health, higher achievement and creativity, and better social integration (Bandura, 1997; Schwarzer, 1992). The construct of self-efficacy represents one core aspect of Bandura's Social Cognitive theory (Bandura, 1977, 1997, 2000, 2001). In a unifying theory of behaviour change, "Bandura hypothesizes that expectations of self-efficacy determine whether instrumental action will be initiated, how much efforts will be expended, and

how long it will be sustained in the face of obstacles and failures" (Schwarzer and Schmitz, 2005). According to theory and research, self-efficacy makes a difference in how people think, feel, and act (Bandura, 1997). In terms of feeling, low self-efficacy is associated with depression, anxiety, and helplessness. Persons with low self-efficacy also have low self-esteem, and they "harbour pessimistic thoughts about their accomplishments and personal development" (Schwarzer and Schmitz, 2005). A "strong sense of competence facilitates cognitive processes and performance in a variety of settings, including quality of decision-making and achievement. People with high self-efficacy choose to perform more challenging tasks and are creative (Bandura, 1997). High self-efficacy also allows people to select challenging settings, explore their environment or create new ones (Schwarzer and Schmitz, 2005). Having confidence in one's ability to and tolerate, to overcome (Bandura, 1977), to grow start-up companies (Baum and Locke, 2004) and many other activities is a critical predictor of improved performance and creativity. "Without self-efficacy, individuals give up trying to accomplish their goals, making self-limiting decisions that foreclose opportunities even though individuals have the necessary skills to follow a path of action." (Bandura in Lucas and Cooper, 2005:5).

Research indicates that self-efficacy predicts performance. Stajkovic and Luthans (1998) identified 114 studies that used a task performance view of self-efficacy. They then analyzed the data on 21,616 subjects in those studies using a meta-analysis method, and concluded that enhanced self-efficacy predicts successful performance of those tasks. Self-efficacy has been found in a few studies to relate to improved work performance. Anna, Chandler, Jansen, and Mero (2000) studied the success of women in both traditional and non-traditional new venture business and found that confidence in task skills predicted success in both domains. Baum and Locke (2004) studied more than two hundred entrepreneurs over a period of six years and found that "goals, vision, and gains in self-efficacy were the explanatory factors for new ventures which were more successful and had grown over time. With this evidence of the importance of self-efficacy in general, its role in sustaining intention, its conceptual alignment, and its predictive power on performance in the business world, including a relationship between founder self-efficacy and start-up success" (Lucas and Cooper, 2005), it then stands to reason that self-efficacy might play an important role in the development of librarians and their creativity.

Prior Computer Experience

Prior knowledge or experience provides a large amount of relevant information in specific domains as well as strategies for organizing that knowledge. Studies have shown that if student enter a program with a wide range of prior knowledge and experience, it will help them to quickly learn, adopt, and develop confidence in the new skills they are learning (Yates and Chandler, 1994). The same logic could be applicable to the librarians. A librarian with prior computer experience will always be confident about developing new skills. According to Loyd and Gressard (1984b), prior experience with computers creates a more positive attitude toward computing. Librarians with more computer experience seem to be more confident about computer related tasks, and more innovative and creative than those with less prior computer experience. Loyd and Gressard (1984: 67) state that, "[i]t is becoming increasingly evident that familiarity with computer and the ability to use them effectively will be of critical importance to success in many different fields including librarianship" (Loyd and Gressard, 1984: 67).

Nunamaker, Applegate, and Konsynski (1987) reported on a study of the effect of an electronic group decision support system used for group idea generation. Results indicated that, while certain negative effects were noted, the electronic system enhanced productivity, quality, and user satisfaction in idea generation. Studies have also shown that computer experience influences perceived efficacy with computer technologies. Moreover, positive experience has been found to be a predictor of self-efficacy (Hills, Smith & Mann, 1987; Delcourt & Kinzie, 1991; Geer; White & Barr, 1998). Russell (1998) indicated that previous computer experience is one of the seven factors found to have a significant correlation with achievement. The focus of the present study therefore, is to find out the impact of prior computer experience on the creativity of the librarians.

Creativity

According to (Akinboye, 1976:67) "creativity is a human behaviour capacity, yet it appears too complex for behavioural capacity. It is characterized as paradoxically complex, transcending human capacity to conceptualize. Creativity seems to involve a lot of dimensions such as a process, a product, a trait, an attitude, an aptitude, and sometimes a life style." Akinboye (1976:68) explains further that, "creativity encompasses the divine, the unknown as well as the expression of novelty useful to a person as well as to society; and often involves the emission of statistically infrequent ideas in person for solving the personal and social problems of life." Simonton (2000), describes creativity as "one of the special ways that

human beings display optimal functionality." Quigley (1998) puts it simply as "the ability to produce something effective and novel." Standler (1998) contrasts creativity and intelligence. According to him, "intelligence is the ability to learn and to think, while creativity is to do things that have never being done before. A tacit implication of this is that creative people are intelligent but the converse is not always the case." (Standler, 1998: 8)

In organisations (e.g., a library), "experiences of flow are facilitated when individuals are given maximum discretion in how they organise their work, when self-efficacy is strong, and when information is of high quality" (McManus, 2005:8). This author explains that individual and organisational creative development is supported by "structures and processes that ensure permeable boundaries, values increasing complexity, and provide safe psychological spaces."

Amabile (1983) found that people perform more creatively if they are motivated by interest in the activity itself, rather than promises or threats. Creativity is better facilitated by giving individuals high levels of discretion, especially in the use of time. McManus (2005) asserts that, "conditions that allow an individual to work in accordance with their own creative process ... encourages and nurtures creative performance."

Based on the available evidence, there is the likelihood that self-efficacy and prior computer experience may influence creative behaviours in library practice. The issue therefore is: if creativity is so important in library services and librarianship, how do we identify factors that are relevant to it and that could predict it among freshly recruited librarians? The following research questions were asked in this study.

1. What is the relationship among self-efficacy, prior computer experience, and creativity?
2. What is the joint effect of self-efficacy, prior computer experience, (independent variables) on the creativity of the freshly recruited librarians?
3. What is the relative effect of self-efficacy and prior computer experience on the creativity of the subjects?

Method

The study adopted an ex-post-facto research approach, which carefully observes and records information as it naturally occurred at the time the

study was conducted. A total enumeration sampling technique was used to select fifty-two (52) freshly-recruited librarians in ten selected Southwest Nigeria university libraries. The sample consists of the following:

- University of Benin =4
- University of Education, Ijebu-Ode=5
- University of Ado-Ekiti=4
- Federal University of Technology, Akure=5
- University of Lagos=6
- Olabisi Onabanjo University=6
- Lagos State University=7
- Ladoko Akintola University of Technology Ogbomoso=5
- Obafemi Awolowo University, O.A.U.=5
- Adekunle Ajasin University =5.

Of these 52 respondents, 35 (67.3%) were males, while 17 (32.7%) were females. Twenty (38.5%) were married, thirty-two (61.5%) were single. Ages of the respondents ranged from 25-49 years. The educational qualifications ranged from Bachelor's degree to a doctoral degree in librarianship.

Instrument

General Perceived Self-Efficacy Scale (G.P.S.S)

The general perceived self-efficacy (G.P.S.S) was developed by Schwarzer and Jerusalem (1995). Respondents indicate the extent of their agreement with each of ten statements, using a four-point scale: 1 (not at all true), 2 (barely true), 3 (moderately true), and 4 (exactly true). The G.P.S.S has demonstrated high internal consistencies with cronbach alpha ranging from .75 and .90 (Schwarzer and Jerusalem, 1995).

Prior Computer Experience Scale

The prior computer experience scale was constructed by the researcher. It is a ten-item scale designed to elicit responses on the subjects' prior knowledge of computer. The instrument has response anchors ranging from 0 (no experience) to 1 (some experience). The scale has a theoretical value ranging between 20 and 60. It has a test-retest reliability index of 0.82.

Creative Thinking Rating Scale

The Creative Thinking Skill Rating Scale of Workers Behaviour Assessment Battery by Hammed (2002) was used to assess the creativity of the respondents. The instrument is a thirty-item scale and had an overall reliability co-efficient of 0.75. The instrument has a response format ranging from No skill=1, to Excellent Skill=5. Items in the instrument include:

- I. Teach others an attention–direction tools of creativity.
- II. Understand that a problem is something we are forced to tackle.
- III. Recognize that generating alternatives opens up possibilities.

Procedure

The researcher went to the selected libraries and administered the instruments to the respondents. In each of the university libraries, the instruments were administered and collected on the same day. Data collection took two weeks. Out of the 65 questionnaires distributed, 52 were properly filled in and considered useful for the analysis. The multiple regression analysis, intercorrelation matrix, analysis of variance (ANOVA), and t-test statistical tools were employed to analyse the data collected.

Results

The first research question sought to find the correlation among self-efficacy, prior computer experience, and creativity of the freshly-recruited librarians.

The results is represent in the Table 1 below.

Table 1: Descriptive Statistics and Intercorrelations among the Variables

variables	N	Mean	S.D	Creativity.	Self-eff.	Prior Comp
creativity	52	25.52	5.9	1.000		
Self-Eff.	52	4.52	1.18	-.215**	1.000	
Prior Comp.	52	4.25	1.03	-.105**	.202**	1.000

N=52, correlation greater than .11 are significant at P<.05, **P<.001.

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Table 2: Multiple regression analysis on creativity data.

Analysis of Variance

Sources of variation		Sums of squares (ss)	df	Mean Square
Regression	F	8420.22	2	4210.11
Residual		16,211.10	49	330.84
Total		24631.32	51	

Table 2 shows that the independent variables (self-efficacy and prior computer experience) have a significant effect on the creativity of the freshly-recruited librarians. The values for R are R (adjusted) =0.53 and R² (adjusted) =0.335. The analysis of variance performed on multiple regression yielded an F-ratio of 12.73 and was found to be significant at .05 level.

Table 3: Relative contributions of the independent variables to the prediction.

Model	Unstandardized coefficients		Standardized coefficients		t	p
	B	Standard Error	Beta			
Constant	18.250	2.111	4.3		<.05	
Self-efficacy	.311	.045	.213	2.81	<.05	
Prior Com.	.217	.075	.164	2.21	<.05	

The table shows that each of the independent variables made a significant contribution to the prediction of creativity. Self-efficacy made the most significant contribution (Beta = .2.13; t =2.81; P <.05). Prior computer experience also made a significant contribution with Beta =.164; t =2.21; P <.05.

Discussion

The results of this study reveal that self-efficacy and prior computer experience significantly predict and contribute to the creativity of the subjects. The magnitude of the effectiveness of the two variables was reflected in the value of $R = 0.53$ and R^2 (adjusted) $= 0.335$. The results demonstrate that 33.5% of the variance in the creativity of the freshly recruited librarians is accounted for by linear combination of the two variables. The result was further strengthened by the value of F-ratio ($F = 12.73$, $P < .05$), which reveals that the capability of the two independent variables to predict creativity could not have happened by chance. This result is in accordance with the work of researchers like Stajkovic and Luthans (1998), Anna, Chandler, Jansen, and Mero (2000), and Loyd and Gressard (1984).

It was postulated by McManus (2005) that self-efficacy goes along with creativity and Csikszentmihayi (1990, 1997) asserts that when self-efficacy is strong and information is of high quality, individual and organizational creative development is supported. Prior knowledge of computer and information technologies is crucial to creative behaviour, but not enough for creativity in librarianship. Computer knowledge must be backed up by self-efficacy, which serves as a catalyst to generate ideas and new strategies for library services.

Creativity is important in librarianship. New and experienced librarians should look for self-efficacy training. This will help them to be effective in manipulating information technologies in the library to provide satisfactory service to clients. Additionally, library administrators should send new employees to creativity training. This will give them the ability to cope with the organizational reengineering process and ongoing developments in information technology.

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