Self-efficacy in the Information Seeking Behaviour of State University of Zanzibar Students: A case study

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ABSTRACT
Self-efficacy is concerned with the one’s belief in his/her ability to influence the activities that affect one’s life. The predominant gadgets used and development of information technology raised the self-efficacy to many university students in their information seeking behaviour. The present study examines the existing behaviour that students make judgments of abilities in seeking the required information. The study is based on Bandura’s four sources of self-efficacy information: past performance (mastery experiences), vicarious experiences of observing experiences of others, social feedback and emotional states. This study aims to investigate the perceived self-efficacy of students of State University of Zanzibar (SUZA), Tanzania in their information seeking behaviour. The study also shows that how the mastery experiences, vicarious experiences, social feedback and emotional states influence the student’s information seeking behavior at the State University of Zanzibar.

Key Terms: Information seeking, Information behavior, Self-efficacy, Social feedback, State University of Zanzibar, Motivation, Emotional

INTRODUCTION
Self-efficacy is the one’s belief in one’s ability to successfully perform required information seeking. There are several reasons that are behind information seeking by an individual e.g. to broaden knowledge; to know about the world around him/her or even to achieve their professional and personal goals. Self-efficacy refers to “beliefs in one’s capabilities to organize, and execute the courses of action required to produce given statements”. These beliefs determine people feelings, thoughts, behaviours and motivations. The success in performing a task is not only based on the possession of the necessary skills but it requires the confidence to use these skills efficiently and effectively. Obviously there is a significant difference between possessing a set of skills and one’s ability to use them successfully under different circumstances as per the requirement. Self-efficacy also determines the individuals’ perseverance and resilience in the face of problems and the amount of effort that will be invested to accomplish the academic task.

The earlier studies were concentrated on the information seeking processes which were almost cognitive studies, but the present studies are more mixture between cognitive process, emotions and perceptions. These studies focused on the emotional component that influences information seeking behaviour'. In general view of information seeking process the first models to add emotional components to physical and cognitive dominions described in earlier cognitive oriented models. Nahl found that emotional component of information search behaviour can regulate cognitive processing through a hierarchical organizational goal'. Chatman showed that emotional states such as alienation, information avoidance and disinterest have strong impact on information seeking behaviour in everyday contexts'. The function of self-beliefs can create the type of self-fulfillment insights in which one achieves what he/she believes can achieve.

LITERATURE REVIEW
The self-efficacy study is important because it influences people’s thinking patterns, actions and emotions as in totality the human behavior. Self-efficacy is central to human behaviour because it touches virtually every aspect of human life, wellbeing and personality. This is the reason that self-efficacy has produced research in different areas like health management, computer
Science, business, mathematics, web-based learning and so on. Flavian-Blanco et al. suggested that searching for information is more than mastering a set of techniques or following certain rules or principles to achieve desired outcomes. The study revealed that emotional states or emotions experienced during the search can influence the nature and performance of the search.

- **Four Sources of Self-Efficacy**

According to Bandura the knowledge regarding one’s self-efficacy is based on four sources i.e. information knowledge of past performance or mastery experiences; vicarious experiences of observing the experiences of others; verbal persuasion or social feedback and affective or psychological states. Bandura found that mastery experiences are the most influential sources of information about self-efficacy because it is based on trial and error along with individual's enactive attainments. Normally in such situation, successful experiences raise self-efficacy appraisals while failures lower them. It depends on the nature and strength of existing self-efficacy perception that can interpret new experiences that to be incorporated. The study conducted by Bates & Khasawneh revealed that the interpretation of one’s own performance is the most influential source of self-efficacy information behavior.

The self-efficacy is sometimes influenced partially by watching other students’ performance, success or failure in a particular task. The observing other students’ experiences can build a self-confidence that the task can be obtained as other succeeded or failed which somewhat performance competition. By this competition students can convince themselves that they are capable or incapable of performing that task similarly without instruction. The study conducted by Chan & Lam revealed that the effects of competition through vicarious experiences are one of the most important factors of self-efficacy beliefs.

Verbal persuasion or social feedback is mostly used by the students to believe that they are capable of achieving a certain task and ultimately have an effect on self-efficacy beliefs. Students can be convinced to believe that they have or lack the necessary capabilities to perform a task or to achieve certain goal. Social feedback alone might have little influence to increase self-efficacy but can contribute to a successful performance.

Psychological or emotional states are also used by students as source of efficacy information. Students with low self-efficacy can interpret tensions or stress as susceptible to failure whereby students with high self-efficacy can interpret stimulated states as energizing and leading to success. Pajares et al. found that students can estimate their degree of confidence by the way they feel as they anticipate an academic task. Tenopir et al. in their study “Academic user’s interactions with Science Direct in search tasks: affective and cognitive behavior” found that positive feelings were associated with thoughts and negative feelings were associated with the system. Savolainen investigated the motivational factors in information seeking behaviour revealed that the stronger the sense of pleasantness, the more ready is the actor to start seeking for information. The study further revealed that self-efficacy can be a strong motivational factor in information seeking behavior having both cognitive and emotional attributes. Many studies that investigated the role of self-efficacy perceptions have different contexts of information seeking. For instance Bronstein & Tzivian investigated the perceived self-efficacy of LIS professionals found that men and women were more susceptible to frustration while women were more affected by emotional states. The study further depicts that the students would be better able in gradually developing higher self-efficacy in the use of online library resources through assignment, projects and reports.

**Methodology**

An online survey was used to collect data of students enrolled in the State University of Zanzibar in the Departments of Natural Sciences and Computer Science & Information Technology. The questionnaire had been sent to students through their personal e-mails. The response was very slow as the author has no personal contacts with the students and the students were free to respond as they have spare time. The questionnaire was sent to 200 students. 180 (90%) students have responded to the questionnaire but the 171 (85.5%) questionnaire received have been found in order for the analysis from both the departments. The online questionnaire was straight forward, very short and simple in order to avoid any drawbacks. It was anonymous so that no real persons were targeted in the research. The questions were randomly assorted in order to ensure that participants were far from reserving responses to questions. The questionnaire consists of 13 items on self-efficacy of students’ information seeking behavior. Each item was measured by 5 point Likert scale from 1 strongly disagree to 5 strongly agree. Bandura's model of self-efficacy was used to measure the following four variables:

1. **Mastery experiences:** including past success and failures in search, amount of efforts used, task difficulty, task persistence.
2. **Vicarious experiences:** referring to a judgment of one’s capabilities in comparison to others performing the same.
3. **Social feedback:** verbal and social feedback received when searching for information.
4. **Emotional states:** perceptions of psychological states while searching for information.

The data collected from the respondents have been analyzed using SPSS-20 (Statistical Package for Social Sciences).

**Data Analysis**

The responses received from the 171 students have been analyzed. The analysis consists of 100 students from Natural Sciences Departments and 71 students from Department of Computer Science & Information technology enrolled in undergraduate programmes. 58% female students 42% male students responded to the questionnaire. The majority of students are native speakers of Swahili, but the survey was conducted in English being the language of studies at university in order to simplify communication and avoid misinterpretation of some

### Table 1: Descriptive Statistical Analysis of Reliability

<table>
<thead>
<tr>
<th>Sources of Information</th>
<th>Mean</th>
<th>N</th>
<th>SD</th>
<th>SD Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery experiences</td>
<td>119.49</td>
<td>170</td>
<td>87.62</td>
<td>1.571</td>
</tr>
<tr>
<td>Vicarious experiences</td>
<td>36.203</td>
<td>171</td>
<td>39.81</td>
<td>2.522</td>
</tr>
<tr>
<td>Emotional states</td>
<td>83.39</td>
<td>171</td>
<td>75.89</td>
<td>1.811</td>
</tr>
<tr>
<td>Social feedback</td>
<td>120.45</td>
<td>159</td>
<td>80.89</td>
<td>2.004</td>
</tr>
</tbody>
</table>
Swahili terms. It is clear from the analysis that the mean age of participants is 23.58, which ranges between 21-25 years, SD 2.06 years.

The finding of the descriptive statistical analysis shows that the sources of information variables are closely to maximal value. The table 1 shows that highest rating given to mastery experiences, followed by vicarious experiences and emotional states, while least is social feedback. The reliability of the each source is high as shown 0.086 and higher as shown in the Cronbach’s alpha (α) score and less error predicted which is less <0.05.

In order to understand the self-efficacy beliefs of the students in reference to their information seeking behaviour, the correlation between the four sources of information using Pearson Correlation Coefficient as given below:

Table 2: Correlation between Sources of Self-Efficacy

<table>
<thead>
<tr>
<th>Sources of Information</th>
<th>Mastery experiences (r)</th>
<th>Vicarious experiences (r)</th>
<th>Emotional experiences (r)</th>
<th>Social feedback (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery experiences</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vicarious experiences</td>
<td>0.52 (&lt;.001)</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional states</td>
<td>0.80 (&lt;.001)</td>
<td>0.51 (&lt;.001)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Social feedback</td>
<td>0.62 (&lt;.001)</td>
<td>0.57 (&lt;.001)</td>
<td>0.58 (&lt;.001)</td>
<td>1</td>
</tr>
</tbody>
</table>

The analysis shows that there is significant difference between students at the different study levels and department wise (F (8,300)=2.47, p=0.15). The analysis shows that the senior students have high self-efficacy as compared to the junior students (freshmen & first year). The students from the Department of Computers Science & Information Technology have high self-efficacy as compared to the students of the Department of Natural Science. Accordingly ANOVA test was performed to know the degree of difference between mastery experiences; social feedback and emotional states. The analysis shows that mastery experiences, emotional states and social feedback have more impact on senior students from 2nd year of study and above. The freshmen are mostly impacted with vicarious experiences, emotional states and social feedback and less impact on mastery experiences from 0–1 year of study at the University.

The Spearman correlation coefficient test was performed between age and four information sources shows that there is significant correlations between three out of four (i.e. mastery experiences, emotional experiences and social feedback).

The Kruskal-Wallis test, shows that freshmen have lower level of self-efficacy than seniors and Computer Science students have higher level of self-efficacy that their counterparts of Natural Sciences. For instance in responding to question about “I am confident of the quality of information of my search results and I can choose proper ones” freshmen students shows that they are less confident and frequently consult instructor or friend about the matter, (m=3.92 SD=1.02) whereas the senior students have high self-efficacy than freshmen as (m=4.50 SD 0.052). The findings also shows that students of Natural Sciences department are less affected by emotional states as (m=3.39 SD=1.0530) as compared to Computer Science students as (m=4.13 SD=0.931).

**DISCUSSION**

Recent development of telecommunications and technology in Tanzania as a whole and Zanzibar in particular providing access of internet at smart phones, gadgets and homes (5.62m users = 12% of population as per 2012, Internet World Statistics) had provided academic benefits to students, as they can play online games, watch videos and search information through trial and error or friend’s feedback. When the internet was not pervasive, only universities and colleges were providing internet access to its community. This means that instructional searches were performed as all freshmen were fully loaded by library information literacy programmes. Today, internet access is available at homes, schools, Internet cafes and even in smart phones which make adolescents the most vulnerable group of self-efficacy. The social networks penetration rate to population is around 1.5% and most of the users are adolescents.

Understanding self-efficacy in information seeking behaviour is important, because as defined before according to Bandura that self-efficacy is judgment of ability of performing a specific task or activity with a particular domain, so understanding self-efficacy perceptions regarding information seeking skills can be value research in information seeking behaviour6. The results showed that mastery experiences followed by social feedback and emotional states impact students’ self-efficacy beliefs. This finding supports Milliari et al. & Bronstein studies that found LIS students’ IT self-efficacy and perceived computer competence were positively related to frequency of use and previous experience8,15. The vulnerability of adolescents to internet through smart phone played great role of mastery experiences to these students. Remarkably vicarious experiences of observing the behaviour of others didn’t show any significant source of self-efficacy in information seeking except in freshmen first year students who were mostly vulnerable of seeking social feedback and follow others performances. Pajares in explaining this finding claimed that vicarious experiences become important in creating self-efficacy beliefs when people are uncertain of their abilities10. May be by this reason that young men being exposed to internet in pre-university level, they don’t need to observe others seeking behaviour to build self-confidence of their information seeking. The same finding reported by Chan & Lam in their study that vicarious learning experiences didn’t contribute to an increase in self-efficacy of students12.

The first strong correlation was found between mastery experiences and emotional states (r = 0.80) which might mean that past experiences and emotions play great role in information seeking behaviour and subsequently self-efficacy. The second strong correlation was found between mastery experiences and social feedback (r = 0.78) which might mean that evaluation of the past performances are strongly affected by social feedback student received at the time. Social feedback here cannot only include parents, instructors and friends, but includes librarians too. The present day library development of online “ask librarian”feature which allows patrons to chat directly with reference librarian while performing search either on library databases or other search engines, has decreased degree of shyness, fear, conservativeness and interpersonal communications. By these reasons a third strong correlation was found between mastery experiences and emotional states (r = 0.61) which might mean that past experiences evaluation is
strongly affected by the emotions that students experiences during information seeking process. Students’ feelings and emotions are significant source of information seeking behaviour. These findings repeat of Flavian Blanco et al. conclusion that the outcomes of information search can be influenced by different structures of perceptions, emotional states felt during the search and by Savolainen claimed that a user will be more ready to start an information search if she/he can relate this task to positive feelings. As this study has used homogenous sample of participants, there is no significant differences in gender in relation to self-efficacy information sources. This study has only one limitation, as for the survey, the students were asked to report their own information seeking behaviour, and doesn’t necessarily mean that their answers reflect exactly their behaviour. It is natural for some participants to hide some behaviour in any survey in order to show better behaviour.

CONCLUSION

Self-efficacy is not a universal phenomenon that can be applied to all situations, but it depends on an individual who may have high level of self-efficacy in one domain and low level of self-efficacy in other domain. The students being exposed to internet in pre-university level have changed their information seeking behaviour in general and self-efficacy in particular. Many participants in this survey stated that they have accounts in social networks such as Facebook, tweeter, linked in and blogs. This might mean that they are exposed to learn from others experiences through social networks. It would be suggested that information literacy skills to be embedded in university curriculum to uptake librarians and media specialist role in guiding students to quality information and high performances of information seeking behaviour. Finally longitudinal studies should be carried out to explore the effectiveness of self-efficacy in getting quality information or using.

REFERENCES