Hands-On Knowledge within the University's Training Curriculum: A Study of Push-and Pull Factors among the Students at the University of Dar Es Salaam, Tanzania

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ABSTRACT

The focus of this research was to explore what motivational factors that push or pull university students to join practical knowledge programs. The study employed a qualitative method to collect data from 100 third-year students at the School of Journalism and Mass Communication (SJMC) of the University of Dar Es Salaam. The study found that both pushandpull trigger pointsare motivational factors for students to join a knowledge program that incorporates strong practical components.The implication is that to ensure that graduates can face the requirements of today's job markets the university must balance theoretical knowledge withopportunities for practical experience.Thus, as the university revises its curriculum it is essential to give careful considerations to both push and pull factors as critical elements to enhance the university's educational objectives. This studyprovides a first look at push-pull factorsand its associated intervening factors that motivate students to advance their learning. As such it provides a model for necessary subsequent studies to be conducted for other University faculties to identify what push-and-pull factors impact students in their respective disciplines. In addition, further research is warranted into motivational variances that may exist between male and female students.

Key Words: *Education, Motivation, push-pull theory, curriculum development*

1. The Purpose of the Study

The vision of the University of Dar Es Salaam for the School of Journalism is to prepare students to work competently with media inside and outside of Tanzania. To this end, the University established three major practical support components: Mlimani Television, Mlimani Radio and the print Hill Observer. These entities were set up to facilitate the creation of programs to provide students with opportunities to acquire practical, hands-on production experience that would integrate with their theoreticalclassroom learning.However, the initial scan conducted at the beginning of this study revealed that this is not happening.In fact, between 2012 and 2015onlya disappointing 16 percent of students have actively participated in aproduction of a radio or television programor worked on the newspaper. This finding motivated the study to explore what push-pull factors motivate students to participate in activities that offer practical knowledge and experience.

The question investigated in this study is whether both ends of push-pull theory are applicable to an academic setting and if so, what positive and negative motives drive students to participate in or ignore practical knowledge programs. An equally important issue is how successfully the university can utilize these factors to strengthen it curricula to meets the aspirations, expectations and real needs of the students.

2. An Over-view of the Educational Outlook in Tanzania

Tanzania's 2025 development visionenvisages the establishment of a learning society, equipped with requisite knowledge, skills and values that trigger creativity, innovation and entrepreneurship. Forthis to become a reality, the nation's educational system was put in place with an intention of preparing young people at all levels to develop a competitive mindset to help citizens to find solutions from domestic resources to drive equitable social-economic and democratic growth in a rapidly changing world (United Republic of Tanzania (URT), 2012; Ministry of Education and Culture, 2000).

In recent years, Tanzania has registered improvements in the implementation of formal and non-formal education programs. The records show that since 2005 approximately half a million of school children and youth have completed Complimentary Basic Education in Tanzania (COBET) programs. The establishment of programs such as Integrated Community-Based Adult Education (ICBAE) and Open and Distant Learning (ODL) has stimulated learning amongst both urban and rural populations. Enrolment in those programs has increased from 675,000 in 2005 to 957, 289 in 2009. The participation of adults in those programs increased from 6,782 in 2005 to 38,036 in 2009 (International Monetary Fund (IMF), 2011). Overall, both public and private training institutions have improved in terms of enrolments, facilities, and qualified personnel.

Notwithstanding this advancement, learning institutions still face inadequate financial resources to provide the skills required to meet emerging economic and technological demands. Monitoring and evaluation systems to ensure the delivery of education results are ineffective. The quality of education continues to deterioratethanks to insufficient physical infrastructure (facilities, electricity), poor incentive structures, inexperienced instructors, out-of-date curricula and the lack of emphasis on practical courses. Integration of Information, Computer and Technology (ICT) is still a difficult task at

all levelsof educational institutions. These institutions also lack the capacity to coordinate policies, enforce legislations, or empower citizens to demand accountability. (Msolla, n.d.; MKUKUTA Annual Implementation Report (MAIR), 2010).

Furthermore, The Government Tanzania in its reports shows that national mind-set is more barriers than enablers (URT, 2005).Throughout Tanzanian society customary and traditional beliefs discourage a culture of reading, competitiveness, and providing equal gender opportunities. While informal and formal vocational training programs are established close to many communities around the countryoffering young people hands-on experience and alternative skills for applications, an evaluation report showed that these programs are seen as intended for boys and girls who have not done well in primary school. With respect to gender inequality in education, the total number of female students in the public universities was only 32.1 percent in 2008/9 compared to 32 percent in 2006. Moreover, as recently as 2000, approximately 19.1 percent of women aged between 15 and 49 years of agehad no formal education compared to 9.5 percent for men (Ministry of Education and Culture, 2000).

3. Theoretical Framework

The study utilized push-and-pull theory to explore motivational attributes for university students to participate actively in practical knowledge programs. At the end of the 19th Century, Ravenstein established push-and pull factors as one of the laws of immigration. Ravenstein introduced the neo-classical equilibrium perspective to study aspects of eighteenth century rural-urban immigration, hypothesizing that the push of adverse conditions such as poverty was as important a factor causing peasants to move from their agricultural homes to industrialized centers as the "pull" of a more promising life with a better wage (Grigg, 1977).

Various theorists such as Sjaastad (1962), Todaro (1969), Lee (1966), Zimmermann and Bauer (2000) have used pull-and-push theory to study motivational factors among immigrants. Like Ravenstein, they reached the same conclusion, arguing that push factors (usually hostile conditions) force people to leave their countries while pull factors (normally better potential situations) lead people to alien countries. Push factors, among others, include, lack of decent jobs, scarce land, religious persecution, political unrest, primitive condition, insecurity, and poverty (Lee, 1966). According to Xiangjing (2009), factors that pull people to relocate to a new country include the desire to explore new job opportunities, freedom of speech or movement, hope for a new life, better working environment, greater enjoyment, security and better education.

Accordingly, factors that push and pull are found at both end of the spectrum and immigrants move like a pendulum between those two ends. Migration occurswhen unfavorable circumstances push people out oftheir country of origin and favorable remedies and antipodes pull them into a destination country (Lee, 1966). In the eyes of Angelina and Blagojce (n.d), factors that trigger people either to move from the country of origin or stay in the alien country are all positive and equal motives.

4. Practical Knowledge in Higher Learning Institutions

Higher education institutions in general are challenged to strike a balance between theoretical training and practical knowledge to motivate students to embrace of the fullest possible knowledge experience (Bereiter and Scardamalia, 1993). Studies reveal that the integration of theoretical and practical knowledge is a time-consuming process that requires the application of multiple skills and extensive experience (Benner et al. (1995). In fact, most institutions of higher learning place more emphasis on theoretical knowledge rather than on offering professional training (Eraut, 1994; Marsick, 1987).

In developing countries, practical knowledge programs in universities suffer fromout-dated curricula, inadequate financial, insufficient human capacities, inappropriate technology, and poor physical infrastructure. Furthermore, abnormalities in course content and format, inexperienced instructors, lack of professional support and an absence of motivation or direction hamper students' participation in practical programs. Also, students' attitudes toward learning andweaknesses in their previous learning experiences reduce their ability to recognize the importance of practical knowledge (Business Research, 2013). Maina (2011) observes that while initiating a practical program in most universities has been easy, managing and developing the rewards faces many challenges.

Regardless of these challenges, theoretical and practical knowledge are two faces of the same coin; both are essential if students are tobe successful in future careers (Bereiter and Scardamalia, 1993; Lave, 1993). Theoretical learning occurs in a prescribed learning framework under the supervision of an instructor (Eraut, 2000). Practical learning is the acquisition of explicit,"know-how"knowledge acquired under the guidance ofspecialists who have practical skillsetsideally combined with strong creativity (Watkins and Marsick, 1992; Lave, 1996).

Practical knowledge enhances the capacity of students to think critically and positively towards other people and issues (Bereiter and Scardamalia, 1993). Such training also fosters strategic process planning, decision-making, and problem-solving (Eraut et al., 2000). A study by Katajavuor et al., (2006) on the impact of practical knowledge among 47 pharmaceutical students revealed that in addition to acquiring skills, experience and linkages with a community of professionals, students were able to understand better theories covered in class, and test a real field of their areas of focus. Practical and theoretical knowledge combined increase students' competence and creativity. Students' participation in both theoretical and practical programs enables them to transfer effectively from classroom to boardroom (Tynja¨la¨ et al., 2003) and develops practical skill-sets for real jobs in the actual industries for which they are preparing─ especially whenuniversities partner with companies and organizations to ensure the practical training is relevant to students' needs and the job market demand.

The reviewed extant literatures registered factors impeded the effectiveness of practical knowledge in the overall university academic system. The intersect of practical knowledge and theoretical knowledge have a comparative advantage to students during and after their academic training.While this scholarly work provides a framework to examine pull and push factors among the students, the remaining question whether are other intervening factors that serve as conditions for realization of pull or push factors?

Methodology

The study applied a qualitative method. This method is particularly pertinent for this study because motivational factors relating topractical knowledge are not well advanced theoretically (Edmondson and McManus, 2007). Using this method allowed students in their own terms to construct factors that push and pull them into apractical knowledge program that is not linked to academic requirements for graduation. The unit of analysis is students, currently enrolled in any of the programs that offer practical skills at the School of Journalism and Mass Communications (SJMC) at the University of Dar es Salaam. The sample size emerged from the official registration list of the third-year students. A simple random sampling (SRS) procedure was employed to ensure that each student had an equal chance of being selected. Following Yu and Teddlie's (2007) procedure, each student on the list was assigned a number, and each number was drawn out of the box to determine a sample size of 100 students. The participants were arranged groups of ten.

The study utilized *think-aloud* techniques to collect oral accounts on protocol cases, which were drawn from Ravenstein's push-pull hypothesis. The oral account method is closely linked with the qualitative method and recognized as a reliable and valid means of gathering participants' perspectives and views (Kail and Bisanz, 1982; Pressley and Afflerbach, 1995). Participants were asked to cite from their real-life experience the motivationbehind their joining a practical knowledge program (Taylor and Dionee, 2000). The study employed a conventional method (Ericsson and Simon 1993) to collect data systematically. Informants participated in a brief training session to familiarize themselves with the topic and procedures. For ten minutes, every participant thought about the scenarios in the protocol and discussed them aloud. The discussion took about two hours. All sessions were audio taped with the participants' consent. At the end of each session, participants verified the accuracy and completeness through a summary discussion.

Audio tapes and notes from the *think-aloud* session were transcribed within twenty-four hours. The data on the participants' perception and opinion was analyzed using a simple manual content analysis. According to Babbie and Mouton (2008) this method of analysis is a perfect fit for qualitative design; asit examines and interprets attitudes and opinions within the premises of the informants. The data from each session were coded systematically by sentences and paragraphs as well as transcriptions maintained participants' verbal nuances and tones of the informants (Ericsson and Simon, 1993; Pressley and Afflerbach, 1995). Specific characteristics were noted and compared across sessions to identify themes that seemed significantto the participants. Inferences were objectively made on the primary push and pull factors. Issues of transferability and reliability were considered. Documentation and audiotaping was done systematically to maintain the same pattern of data from all sessions. Inter-code agreement was assessed to identify the themes that frequently occurred across the sessions (Silverman, 2000).

5. Analysis

Push Factors

As shown in Table 1, two key push factors are identified: dissatisfaction over the current school curriculum and Uncertainty in securing the decent job upon the graduation. These factors create hostile

learning conditions that do not prepare students for any real occupationsorhelp develop meaningfulcreative and innovative capacity.Curriculum dissatisfaction featured strongly among the respondents. Students expressed displeasure with methodologies used in teaching and complained that curriculums put too much emphasis on theory compared to practical skills. Studentsparticipated felt that are half-baked and feared to leave the institution without tangible skills necessary forthe job market. Whether teaching methods prepare students for competitiveness in the market,the respondents pointed out thatteaching methodspromotememorization and the reproductionof materials covered in classesor in the textbooks. Studentsasserted thatmemorization does not help them becomecreative or innovative to meet the challenges in the marketplace. Furthermore, students complained that theories taught in class and examples used are too often foreign and do not properly align with or adequately apply to the cultural and socioeconomic circumstances of Tanzania.

There is also fear among the respondents of either staying unemployed for a long a time or end up doing dead-end or menial jobs.The evidence from surveyed studentswould live the institution without proper skills to compete with other graduates from other graduates. They indicated that most of well-paying jobs in the private sector in Tanzania is being taken by graduates from Kenya or any other country in the East Africa Community. Students' experience in job search shows that they employees are looking for the candidates whose curriculum vitae are strong in practical skills. Students also fear that curriculum has not been reviewed for a while; hence it may offer courses that are no longer in the market or incompatible with the current changes in the communication landscape.

Table 1: Factors that push students into practical knowledge program

Factor	Incidences	Example quotes of students explaining push factors
Curriculum dissatisfaction	46	Many courses offered are more theories than practical. We wonder if we would be able to secure a job without relevant practicalskills related to our fields
		The theories covered in class were developed outside the Tanzanian context. We are worried if education we are having will be help us fit into be effective into current Tanzania job market.
		Emphasis is placed more onfinal examinations. We memorize topass for exams instead of beinginnovative and creative.
Uncertainty in securing the decent jobupon the graduation	54	Our CVs will look flimsy and unattractive to employers. We are being informed that employers are looking candidates with more experience.
		Limited exposure about the field. We only have contacts with lecturers who have limited practical knowledge on the courses they teach and less awareness of opportunities available in the related field.
		Tanzania is not immune from East Africa Community. It is becoming tougherfor Tanzanian graduates to compete in the job market with other students graduated from other universities in East African countries.
		Graduate with practical skills. We fear that without any practical knowledge we will likely secure intern positions rather than getting actual employment.
Total push incidences	100	Mismatch between coursesand new job demands. Our curriculum has never been reviewed. So, the training we receive is outdated.

Pull Factors

As illustrated in Table 2, four categories were found to be important factors "pulling" the students into practical training programs. Professional enhancement and career building appear most frequently. Also, regularly expressed was the desire to join practical knowledge programs to acquire competence in areas of their specialization, to gain commitment to deliver according to job assignment and to learn to work in a team. Besides hoping to strengthen professional growth, students also indicated they were looking to gain confidence to be able to work with minimum supervision and some anticipated that developing teamwork skills would help them accomplish an assignment.

Preparing for a career was a prevalent factor pulling students into practical knowledge programs; with many of them anticipating that gaining practical knowledge would help them get job experience in areas in which they were specializing. In addition to theoretical classroom learning, students expressed

their enthusiasm to acquire experience (i.e. technical know-how) in order to meet employers' demands. Network building is another factor pulling students to join practical knowledge programs; through such involvement they expect to expand their networks and develop contacts outside the campus to leverage social capital for job opportunities.

Results showed that students participating in practical programs often presume that by doing so they will develop a better understanding of theories and that the acquired practical knowledge will add value to their academic performance. Furthermore, they expressed optimism about securing a job upon graduation because their resumes will include both experience and technical skills.

Table 2: Factors that pull students into practical knowledge programs

Factors	Incidences	Example quotes of students experiencing pull factors
Professional Enhancement	59	I want to develop competence in areas of concentration.
		I will learn to be a committed person to delivering the assigned task.
		I want to develop confidence in whatever I do or say relating to areas.
		I will be become more creative and develop innovative ways and solutions.
		I want to develop teamwork skills so that I can accomplish more with others.
Carrier-Building	22	I want to gain experience in my area of focus.
		I want to create a network with experts in my areas of interests.
Success	19	I want to have a strong CV that combines technical skills and experience.
		Through practical knowledge program, I will combine and apply theories being covered in class; hence I should perform well in the exams.
Total pull incidences	100	

Intervening Factors

The data further shows that there are factors that could reverse either pull or push factors. If the students are exactly aware that practical knowledge is highly demanded by job markets, the students are likely to participate in the practical knowledge program regardless of existing conditions. Another most likely push that perpetuates pull is those who graduate with combination of both practical and theoretical training easily and quickly secure employment compared to those who have theoretical training. The emphasis placed onpractical knowledge by the university curriculummay overshadowthe above-mentioned push factorsand compel students to participate into practical training.

Despite the registered push factors in the figure 2 above, the following factors could affect their motivations to join the practical programs. Studentsshow the current practical knowledge programs being offered at the university dilute the seriousness of students to join the program. For one thing, the fact that opportunities to obtain practical experience only seem to exist outside the primary academic program is disruptive as the schedules of the practical knowledge programs available collide with the rest of University timetable. Students who wish to participate in practical learning experiences have difficulty trying to balance both timetables. Furthermore, these practical programs are not recognized for academic achievement and no course credits are given. In fact, even costs associated with participating, for example, travel to locations; interviews, etc. have to be borne by the students themselves. Although all students seemed to have push factors, limited quality of the programs, suitability of technology and insufficient required expertise among the mentors or leaders of the programs pulled back from participating in practical knowledge programs.

Figure 3: Intervening Push and Pull Factors

Enforcement on and tangible outcome of practical knowledge	10	When it is crystal clear that practical knowledge is demanded by job markets the existing conditions do matter.
	15	If former students with practical knowledge secure jobs easily than those who graduated without it.
	10	If practical knowledge in enforced in university curriculum; this leaves students without option but to join the program
Unattractive practical program	10	The Practical knowledge program is not a part of a part of school timetable.
	10	The Practical knowledge program is not factored into the GPA.
	20	Practical knowledge program faces inadequate technology.
	10	Practical knowledge program does not have sufficiently qualified experts.
	15	Students must meet costs such as transport for fieldwork related to practical knowledge program,
Total incidences of interlay ofpush-pull factors	100	

6. Discussion on Key Findings and Implications

The study underscored the motivational factors for academic achievement that exist in push-pull theory.It identified trigger points that push and pull studentsinto practical training programs. Earlier studies on push-pull factors in entrepreneurship indicated variance between women and men. Whereas Orhan and Scott (2001) argue that push factors motivate mainly women to join entrepreneurship. Amit and Muller (1995) state that pull factors primarily drive men into entrepreneurship. This study did not consider any differences related to push-and-pull factors based on gender. However, exploration of possible motivation variances between male and female students may offerworthwhile opportunities foradditional study.

The study recorded sufficient evidence that both pushandpull factors are motivational factors contributing to students joining practical knowledge programs. On the one hand, shortfalls in the university's current curriculum and anticipated frustration upon graduation strongly pushed students to search for practical learning alternatives outside the curriculum. On the other hand, students indicated they were pulled into these programs because they felt the need to acquire skills that will contribute to professional advancement and help them succeed in obtaining a decent job.

This study distinguishes itself from studies, which argue that pullandpush factors are separate and disjointed motivational traits. The study agrees with Kirkwood's (2009) hypothesis, which views pushandpull factors as inseparable stimuli that spur people to pursue an alternative possibility. The finding implies that push and pull factors combined are critical elements to establish student-focusedcurricula. Clearly there is a need to carry out further research toestablish and utilize comprehensive push and pull factors when developing a solid curriculum.

It was also noted that intervening factors supersede the registered pull-push factors. These intervening factors place conditions for students to join practical knowledge programs. Push-pull factors can only motivation students when the program image and reputation are ranked highly among students and if the university enforces the practical knowledge programs. In this case, the facilities must be equipped with modern technology, staff must be well-trained professionals, and students must realize tangible benefits from participating in the programs.

The work of Maina (2011) confirms that people are not motivated unless they believe in the value of acting to achieve their goals and aspirations. The implication of this conclusion is that there is a correlation between motivation and an environment in which students actually learn. A significantly improved enabling environment can be a crucial factor that pulls students into practical knowledge programs. The study concurs with other studies on push-factors on immigration. The country of destination usually has characteristics of better opportunity, hope, prosperity, and capacity to offer alternatives that the country of origin cannot provide (Xiangjing, 2009). Similarly, the ideal practical knowledge programs provide critical elements that are missing in the current curricular.

8. Conclusion

Overall, the study has revealed that push-and-pull theory can be useful in understanding the motivational factors that trigger university students to engage in practical knowledge programs. This in turn can help the learning institutionsfocus on students' needs (both theoretical and practical foundations) in an increasingly complex society such as is evolving in Tanzania. The study recognizes that pushandpull factors areinseparablyintertwined andconcludes that the university develop intervening factorsto enhance and strengthenpractical knowledge curriculum for the students to befit from participating in the programs.

The results were drawn from a limited sample size largely drawn from one faculty. Therefore, it is recommended that subsequent larger studies be conducted in other faculties to understand what push-and-pull factors are operative within them. It is equally important to explore motivational variances between male and female students to establish focused-gender curricula.

7. Implications for the Development of a Student-focused Curriculum

In the course of the study separate but integrally related motivational factors are all-important components to enhance the current traditional academic knowledge programming. Equally important the study exposed strong student opinions and concerns about the quality of the education – both theoretical and practical. The study provide clear messages that to remain relevant in supporting Tanzania's Vision 2025, university curricula should be re-evaluated and revamped with greater focus on developing well-rounded education that prepare students enter and contribute to the nation's society. The study clearly reveals several important considerations for improving the university curricula:

- The curriculum should paid attention to both push and pull factors as the real needs of the students to meet the marketplace demands and become creative to respond to a real socioeconomic development;
- Practical programs should be offered as part of the curriculum with appropriate credits towards the degrees being offered;
- These practical courses should be directly linked with the theoretical courses offered in the different divisions of the school;
- For the practical programs to be of any real pedagogical use, equipment and facilities must be of professional standard, the instructors must be skilled professionals and the hands-on opportunities must be real;
- Timetables must be integrated to incorporate opportunities for students to participate fully in professional development (i.e. practical programs).

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