GENERIC SKILLS DEVELOPMENT AMONG FIRST YEAR STUDENTS AT THE UNIVERSITY OF BOTSWANA

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Abstract

This study explores the development of generic skills among first year students at the University of Botswana (UB). Two-hundred randomly sampled first year students at UB completed a questionnaire. Findings reveal that first year students at UB consider generic skills very important and are largely aware of the concept of generic skills. However, the students appear to believe that their content courses can better help them develop generic skills through student-centred learning. Changes suggested by respondents include: creating a balance between theory and practice; increasing student participation in class; more practical work, group work and oral presentations. Future research should be broadened to include students across all departments and years of study.

1.0 Introduction

In various parts of the world, there is a general outcry regarding the quality of graduates universities are producing. In North America, Australia, Europe, and Africa, employers continue to demand that universities begin to produce graduates who possess both vocational and generic skills. In Botswana, newspapers have reported the frustrations employers feel having to deal with graduate employees who lack the graduate attributes needed for success in the workplace. For example, the public outcry about unemployable graduates from the University of Botswana is based on lack of workplace skills rather than content knowledge (Botswana Guardian, 2007).

Today's employers seek to employ well-rounded graduates; the need to pay attention to both vocation-specific skills and general skills. These general skills which are expected to be part of the attributes of graduates are known as generic skills. They are also referred to as lifelong learning skills. "Generic skills" appears to be the most commonly used term. Other labels used for generic skills in various countries include: core skills, key skills, common skills (UK); key competencies, employability skills (Australia); basic skills, necessary skills, workplace know-how (US); essential skills (New Zealand); employability skills (Canada); trans-disciplinary goals (Switzerland) (NCVER, 2003); and generic/graduate competencies, lifelong learning skills, graduate skills, workplace skills, and life skills (Southern Africa).

Generic skills have been defined in several ways. For example, Petty (2004) defines generic skills as any skills used over and over again. This is a definition that is so open that it leaves room for all sorts of interpretation. Providing a more precise definition, NCVER (2003) defines generic skills as skills that apply across a variety of life contexts, e.g. education and jobs. Even more specific is the definition of generic skills as qualities, skills, and abilities that are valued in study, social situations and employment (University

of Sydney, 2008). Over all, these definitions show that generic skills are transferable, multi-functional and multi-dimensional. They contribute to success at school and at the workplace. Examples of generic skills

include: communication, problem solving, teamwork, critical thinking, self-management, computing, and research. Generic skills are essentially transferable across multiple settings, although they take on different meanings in different contexts, often related to disciplines. For example, in mathematics problem solving will mean something different from problem solving in linguistics.

Generic skills development is important right from the first year of university for a number of reasons. Firstly, first year at university is a time when most programmes offer courses for students to learn basic skills, such as numeracy, academic literacy, and IT (Khoa & Tam, 2008:359). Also, as The University of Western Australia (1996:11) advises, "As these are skills required in all spheres of life, their development at the earliest stage of education should be given the greatest encouragement." Further to that, the South African Council for Higher Education (2004:114) observes that "These skills, viewed as transferable, relate both to the academic sphere, and also to the world of work." Since they are useful for, not only work, but also study purposes, it is important that students are helped to begin to develop them from their first year of study.

This widely agreed importance of generic skills in the first year makes the current study relevant. Other reasons for this study include:

- Widespread concern that schools are failing to impart the kinds of skills that employers need (Botswana Guardian, 2007; Stasz, 2001);
- Establishing a baseline for future research in generic skills at the University of Botswana;
- Obtaining students' feedback on aspects of generic skills
- Raising students' awareness.

In this paper, a survey of generic skills is used to tap into first year students' view of their generic skills development, the importance of particular generic skills, their level of awareness of the concept of generic skills, and changes they want made in their departments in order to improve their development of generic skills.

2.0 Generic Skills At The University Of Botswana

In February, 2008, the University of Botswana (UB) Senate approved the Learning and Teaching (L & T) Policy, making it an official document of the university. Contained in that policy document is the following list of the desired graduate attributes:

- Information and communication technology knowledge and skills
- Self-directed, lifelong learning skills
- Critical and creative thinking skills
- Problem-solving skills
- Communication skills
- Entrepreneurship and employability skills
- Organisational and teamwork skills
- Research skills and information literacy
- Social responsibility and leadership skills

- Interpersonal skills
- Cross-cultural fluency
- Accountability and ethical standards (p.5)

Before the approval of this document, the university's Teaching and Learning Unit (TLU) had regularly organised induction courses for newly employed staff. During these courses, lecturers are "inducted" into international academic best practices, e.g. use of innovative student centered and flexible instructional methods like collaborative learning, problem based learning, e-learning (use of the SMART classroom) and so on. In addition to the induction courses, the TLU conducts workshops to further enlighten academic staff on up-to-date classroom practices such as effective assessment methods, use of IT in teaching and learning. As might be expected, some lecturers have resisted change and are reluctant to adapt their teaching approaches. However, TLU is committed, especially with the L & T policy now in place, to continuing to introduce new ways of improving teaching and learning at the University of Botswana – not only to enable students to develop generic skills but also to acquire content/vocational knowledge or skills. This is in line with its mandate to provide academic support, planning, and quality assurance within the university.

Nyirenda (2004) reports that the Botswana Association of Business Executives (ABE) and Leeds Metropolitan University plan to introduce a type of qualification to provide the vocational and life skills increasingly demanded by employers; noting that the trend in the UK is to move away from the traditional theory-based education to practical subjects that have immediate relevance and application in the work place. The above suggests that there is a need for work-based degrees in Botswana, just as in other places in the world.

At the University of Botswana, some departments and lecturers have begun to employ learner-centred methodologies even before the Learning and Teaching Policy was approved and promulgated. For example, collaborative learning and problem based learning are widely used in the Communication and Study Skills Unit, Social Work, and in some departments with large classes. Now there is a call, not for the abrogation of the lecture method, but for a collective adoption of student-centered methodologies to facilitate students' development of generic skills and related graduate attributes.

Moreover, there is a great demand by government, employers, and the public for greater accountability from the University of Botswana in the area of producing graduates who are employable. Consequently the university is taking a number of steps to ensure that the university's graduate attributes are integrated into curriculum design and assessment. Monitoring the successful implementation of the L and T policy is vital because as Nunan (1999) aptly puts it:

> Many academics take these (graduate) attributes for granted and assume their implicit acquisition by students over the period of their undergraduate studies. Because the skills can be diffused over many disciplines, the danger is that no one department will take responsibility for their implementation.

This explains why the University of Botswana's L and T policy clearly states that "All academic programmes will be required to demonstrate how these graduate attributes will be integrated into curriculum design and assessment" p.5.

3.0 Research Questions

The following research questions guided the study:

1. Which generic skills do students think they have developed through their content courses?
2. How important is each generic skill to students?
3. When did students discover the concept of generic skills?
4. What do students think their departments could do to enhance generic skills?

4.0 Method

Two-hundred first year students in the faculties of Humanities, Science (and Engineering), Social Sciences, Business, and Education at the University of Botswana were randomly sampled. A questionnaire was administered to the participants towards the end of the second semester when they had been in school for an academic year so that they can better assess their skills. Fourteen generic skills were listed in two sections of the questionnaire and space was provided for students to add others. No additional skill was added by the respondents. The measure was adapted from The University of Western Australia, 1996. The original instrument was used for a university funded project on generic skills development at The University of Western Australia and involved students in all departments and years of study. Since the present study focuses on only first year students in various faculties at UB, the instrument was modified accordingly. One hundred and ninety-two fully completed questionnaires were analysed, representing 97 females and 95 males.

5.0 Results

Table 1 shows students reported development of generic skills through their content courses. The mean scores indicate that the skills the students believe their content courses have helped them develop most are: a) collect, analyse and organise information (86.39); b) think and reason logically (82.18); c) work with minimum supervision (78.96), and d) communicate in writing (78.66). The least developed skills are: a) question accepted wisdom (57.36); b) communicate orally (65.07), and c) be open to new ideas and possibilities (67.10). Over all, the students claim that their content courses are helping them develop all the stated generic skill, although in varying degrees.

1. Which generic skills do students think they have developed through their content courses?

Table 1: Development of generic skills through content courses

Generic Skill	Social Sciences (n=37)	Sciences (n=39)	Education (n=40)	Business (n=38)	Humanities (n=38)	Mean
Communicate orally	54.05	64.10	65.00	78.95	63.16	65.05
Communicate in writing	78.38	82.05	75.00	57.89	100.00	78.66
Work in team	62.16	82.05	85.00	63.16	68.42	72.16
Make decisions	62.16	76.92	80.00	52.63	68.42	68.03
Solve problems	67.57	64.10	70.00	65.79	57.89	65.07
Work with minimum supervision	72.97	89.74	90.00	73.68	68.42	78.96
Adapt knowledge to new situations	81.08	71.79	75.00	73.68	78.95	76.10
Question accepted wisdom	56.76	69.23	45.00	52.63	63.16	57.36
Be open to new ideas and possibilities	51.35	61.54	70.00	63.16	89.47	67.10
Think and reason logically	75.68	82.05	90.00	78.95	84.21	82.18
Think creatively	67.57	76.92	85.00	68.42	84.21	76.42
Collect, analyse, and organise information	83.78	89.74	90.00	78.95	89.47	86.39
Manage the use of time and resources	62.16	87.18	80.00	52.63	57.89	67.97
Use of technological tools	56.76	76.92	65.00	78.95	68.42	69.21

As shown in Table 2, the students believe that the most important skills are: a) communicate in writing (98.85); b) think creatively (94.73); c) collect, analyse, and organise information (94.33); d) think and reason logically (94.21); e) adapt knowledge to new situations (91.71); f) be open to new ideas and possibilities (91.62); g) work in team (91.09); h) communicate orally (90.56); and manage the use of time and resources (90.01). The least important skill, according to the participants, is question accepted wisdom (78.18) b). Overall, the students consider all skills important, reporting a lowest score of 78.18 mean.

2. How important is each generic skill to the students?

Table 2: Level of importance attached to each generic skill by students

Generic Skill	Social Sciences (n=37)	Sciences (n=39)	Education (n=40)	Business (n=38)	Humanities (n=38)	Mean
Communicate orally	89.19	92.31	95.00	97.37	78.95	90.56
Communicate in writing	94.59	92.31	95.00	97.37	100.00	95.85
Work in team	91.89	94.87	95.00	89.47	84.21	91.09
Make decisions	83.78	94.87	92.50	89.47	78.95	87.92
Solve problems	83.78	87.18	85.00	94.74	89.47	88.03
Work with minimum supervision	81.08	92.31	85.00	89.47	78.95	85.36
Adapt knowledge to new situations	94.59	89.74	90.00	94.74	89.47	91.71
Question accepted wisdom	83.78	89.74	70.00	78.95	68.42	78.18
Be open to new ideas and possibilities	91.89	94.87	95.00	86.84	89.47	91.62
Think and reason logically	89.19	100.00	95.00	92.11	94.74	94.21
Think creatively	89.19	100.00	95.00	94.74	94.74	94.73
Collect, analyse, and organise information	91.89	100.00	85.00	100.00	94.74	94.33
Manage the use of time and resources	83.78	92.31	95.00	89.47	89.47	90.01
Use of technological tools	86.49	92.31	85.00	92.11	89.47	89.07

3. When did students discover the concept of generic skills?

Table 3 presents students' reported awareness of generic skills. Data reveals that 52.1% of the students became aware of generic skills during their first semester at the University of Botswana; 22.4% became aware of generic skills in the second semester; and 22.4% became aware of generic skills as a result of this study. Only 3.1% claim to have been aware of generic skills before coming to the University of Botswana. In terms of differences based on faculties, it would appear that there is no significant difference.

Table 3: Awareness of Generic Skills

Faculty	1st Semester	2nd Semester	Through this survey	Other	Total
Social Science	17(46)	8(21.6)	10(27)	2(5.4)	37
Humanities	19(50)	8(21.1)	10(27)	1(2.6)	38
Education	21(52.5)	13(32.5)	6(15)	0(0)	40
Business	21(55.2)	6(15.8)	8(21)	3(3.8)	38
Science	22(56.4)	8(20.5)	9(23)	0(0)	39
Total	100(52.1)	43(22.4)	43(22.4)	6(3.1)	192(100)

Percentages are in brackets
*Others – reported they were aware of generic skills before coming to UB

4. What do students think their departments should do to enhance generic skills?

Suggested changes to improve generic skills development (Unedited):

- Introduce field work and attachments so we can learn from practicals and not just theory all the time.
- Some courses are more theoretical than practical. I wish the courses would combine the two.
- There should be full student participation in class to help us acquire confidence and high self-esteem.
- More group work to improve team work and decision making skills.
- More room for discussions.
- Lecturers in the department should be more interactive.
- The department should go beyond solving illogical problems and present real life situations, just as a way of applying the acquired knowledge.
- Some assessments should be through group work where students are required to investigate some practical examples to theoretical topics.
- Oral presentations should be included so that students become confident talking to a large number of people.
- Include more group discussions on lecture topics instead of the lecturer coming to class and leaving without our contribution.
- Shift from emphasis on theory.
- We are completely excluded in courses like **** and ****. Lecturers just give notes without interaction with students. No short quizzes to test our level of understanding.
- Students should be encouraged to participate in class even when they have wrong answers, as we know people learn from mistakes. This will help us have confidence.
- We should be taught how to work effectively in teams and our studies made student based.
- Some topics should be debated in class to see the positive and negative points.

6.0   Discussion

Results obtained from this survey show some clear trends. Over all, the participants believe that all generic skills are important and their content courses are helping them develop generic skills, although to varying degrees. The least developed skills are 'question accepted wisdom' (57.36), 'communicate orally' (65.07), and 'be open to new ideas and possibilities' (67.10) point to classrooms where the learners are passive; thus suggesting that the students are not being helped to acquire critical thinking and independent learning skills. It is not surprising then that the students consider 'question accepted wisdom' to be the least important skill.

An overview of changes students want in their departments to facilitate their development of generic skills indicates that majority of the comments focus on student-centred instruction. The comments may be grouped into the following areas of need:

- Reduced focus on theory and increased emphasis on practice
- Oral presentations
- Group/Class discussions and team work
- Interaction between students and lecturers

These changes recommended by our students suggest that classes at UB are still teacher-centered, not learner-centered. All the results obtained in this survey point to the need for student-centred methodologies in order to improve the students' development of generic skills.

The finding in this study that oral communication is not being well developed through the students' content courses corroborates similar findings at The University of Western Australia (1996). This line of argument is further strengthened by the participants' suggested changes to improve generic skills development. Like the University of Botswana students, the students at The University of Western Australia cite oral presentations and team/group work as areas they would want increased (1996:12), in addition to citing oral and written communication as well as teamwork as very important.

The awareness level of generic skills among first year students at UB is commendable. However, that 22.4% of the students only became aware of generic skills as a result of this study is worrying. This implies that there is need for educators and administrators at the secondary school and university to do more. It is also possible that students may have been developing generic skills without an awareness of what the concept means. However, the significant number of students who became aware of generic skills as a result of this study underscores the importance of this study.

7.0 Conclusion & Recommendations

Results obtained in this survey lead to the conclusion that the University of Botswana students are largely aware of generic skills and do consider them very important. However, the students appear to believe that their content courses can better help them develop generic skills through student-centred learning. The students are able to coherently identify their areas of need and these needs revolve around increased students' participation in the learning process. It may be concluded, based on students' reported dissatisfaction with current classroom practices, that many classrooms are 'cold' and need to be heated up

through more active participation of students. Consequently, students should be given opportunity for self-directed learning. Even first year students can do research and discover things for themselves. Also, there is a need to employ a variety of methods in the classroom to cater for the learning styles of all the students.

The awareness level of generic skills among participants in this study as shown in Table 3 while encouraging, also indicates that a significant number (22.4%) of first year students at UB only became aware of generic skills because of this study. It is, therefore, vital that first year orientations include more focus on generic skills – awareness, knowledge and development. In addition, each department should build on what is done during the students' orientation programme. There is a need to integrate generic skills development in the core syllabus regardless of discipline and year of study. An example worthy of emulation is the University of Sydney, Chemistry Department's statement that: "Titrations, which students often perform during their chemistry course, aren't only about volumetric analysis." In other words, they are saying that as students perform experiments they not only acquire content knowledge but also generic skills. They then add this in the students' course material: "You will probably find that your future employer will be more concerned with your generic skills than your knowledge of the third law of thermodynamics." (University of Sydney, 2008).

Findings in this research, as earlier mentioned, reveal that students are calling for learner-centred instruction. Collaborative learning and problem based learning, for instance, offer opportunities for indirect and direct instruction in generic skills development. In a recent study, Brown (2008) investigated students' views on the effectiveness of collaborative learning strategies in the EAP courses they had completed. Findings showed that 70% of the subjects report that such strategies fostered their development of generic skills (e.g. problem solving; critical thinking; greater responsibility for self and the group; communication skills; teamwork).

Tasks that allow for skills practice, e.g. oral presentations and class discussions are indeed useful, as suggested by the participants in this survey. As Nunan (2004:16) advises: "Few curricula will ever be totally subject-centred or totally learner-centred. However, even in institutions in which teachers and learners have minimal input into the curriculum development process, it is possible to introduce elements of learner-centred instruction." In other words, you may not have control over what you teach but you do have control over how you teach.

There is still much to be learned in the area of generic skill development and its application in education, training, and workplace contexts. Further research is suggested in the following areas: a) an evaluation of the implementation of the UB L/T Policy; b) an exploration of results from all departments and levels (or years) of study to see whether they yield significant results; c) final year students' ranking on the university's graduate attributes; and d) a study of teachers' and employers' perspectives on different aspects of generic skills.

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