The Perceptions of Students and Staff towards Portfolio Assessments: The Case of Mangosuthu Technikon in Kwa Zulu-Natal Province South Africa

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Abstract

This study was designed to track students as they went through two types of portfolios, that is, the in-course portfolio assessment and the industry type portfolio assessment. The research into the perceptions of students, staff and laboratory supervisors was designed to investigate the potential of portfolios for students to better achieve the outcomes of Biomedical Technology. The findings of this study guided the researcher towards the conclusion that portfolio assessment contributes towards more effective performance in the work place. Students who have been exposed to portfolio assessment recognized the value of this method as it prepared them for more efficient application of knowledge in the workplace.

Keywords: *Biomedical Technology, Portfolio Assessment, Assessment Procedures, Teaching and Learning, Students, Mangosuthu Technikon.*

1. Background

Assessment is viewed by the researcher as an integral part of the teaching and learning process. Assessment procedures can take many forms and have many purposes. Traditionally, assessment has had a summative, accreditation function, which essentially judges the extent to which certain skills and knowledge have been mastered (Cox, 1996). The academic merit of this approach to assessment has been constantly questioned and in recent years there has been a general, worldwide shift in education practice, due to both external and internal pressures, towards integrating assessment with learning. There is thus a move away from the traditional, summative approach to assessment to one that tends to be more formative with an emphasis on integrating assessment with learning, which as a result has greater educational value.

Tests and examinations have been used at Mangosuthu Technikon continuously to assess whether students have passed the grade or not. The tests (formal and informal) that are determined by continuous evaluation of a student's achievements per semester or per year constitute the course mark (which is considered as formative assessment). A student has to obtain a final course mark of at least 50% in order to gain entrance to the examination (Mangosuthu Technikon Examination Manual, Section 15: 2002). The student is subjected to a sub-minimum of 40% in the examination mark.

This system has been followed within the institution since it was established 26 years ago. However the researcher believes that this type of assessment does not consider the diverse styles of learning for different students in different courses. The system has resulted in the majority of students developing a tendency to be only interested in learning what they think they need to know in order to pass a test or an examination and not in whether or not they understand the content of what has been taught and be able to apply it accordingly. A few days before the tests or examinations are written, the students have a tendency of asking lecturers the scope of the test or examination. Thus students eventually decide to memorize all that they feel might come out of the test or examination within the scope supplied. This type of learning is viewed by the researcher as being extrinsically motivated and follows a superficial learning approach since it does not allow students to reflect on what they have learnt and apply this knowledge according to their understanding.

It is within this context that there exists a need to adopt a student-centered approach to assessment which will enable students to exercise a reasonable degree of responsibility for managing their own learning programme. Herman

(1992) states that good assessment is built on current theories of learning and cognition and is grounded in views of what skills and capacities students will need for future success. Since tests and examinations intend to summarize student attainment at a particular time, it is viewed as a summative form of assessment by higher education institutions and employers. However, most importantly, lecturers need to decide whether the assessment implemented actually does facilitate the learning process.

Based on the above discussion, the researcher decided to look at how assessment practices within the department of Biomedical Technology assist students in their learning so that the students who graduate will possess the workplace's expected competencies. Through the researcher's experience as a lecturer, the researcher has identified the following problem areas in the Department of Biomedical Technology:

- The existing traditional methods seem to be insufficient in assessing the students' abilities to relate theory with practices in the workplace.
- The traditional methods of assessment do not assist the students in learning medical concepts with understanding. This does not allow them to apply the knowledge in real-life situations.
- Feedback from assessments needs to be more thorough, as well as timeously implemented, for effective student learning.
- Students are not made aware of the assessment criteria.
- Apart from students being perceived as not workplace competent, the throughput rate in the department is low.

It was in this context that this study was undertaken in order to determine students' and staff members' perceptions regarding assessment in the Department of Biomedical Technology at Mangosuthu Technikon. The focus was on the introduction of the portfolio assessment method as an alternative assessment method which can be more informative in comparison to traditional assessment methods namely, tests and examinations that take a more summative approach to assessment.

2. The Present Study

2.1 Objectives of the Study

The objectives of the study were to analyze attitudes and perceptions of students and staff in the Department of Biomedical Technology at Mangosuthu Technikon regarding assessment for the purpose of gauging the possibility of introducing portfolio assessment as a means of enhancing what students learn at the Technikon and their awareness of what is required of them in the workplace. The study also aimed at establishing whether the existing traditional methods of assessment that were used actually assisted students in their learning.

3. Conceptual Framework

Assessment is fundamental to the way in which students learn. It places a premium on what is to be learnt, is signaling that lecturers should place value on what is being assessed. The form that assessment takes also dictates the way in which students approach the assessment task (Laurillard, 1984). The design of the assessment task is then central to the way in which students approach learning.

The deep learning approach usually entails discussion, reading and reflection, resulting in a broad understanding of the subject. Learning in this case involves meaning and understanding, and it is the student who constructs the knowledge rather than a lecturer.

The third approach is the strategic approach where a learner transpires when the main motivation is achievement of high grades and revolves around optimizing effort and time to achieve this end.

3.1 Assessment and feedback

A very important function of assessment, which often does not receive adequate attention in higher education, is that assessment should provide feedback to students in order to assist them in rectifying and consolidating their learning. Rowntree (1987) considers feedback so vital that he calls it "life-blood of learning". However, only constructive feedback can be the life-blood of learning. There are several requirements if feedback is to be constructive. Constructive feedback is mainly consistent with the assessment criteria which were communicated to students and should thus reward what is valued in a course, it should identify areas of strength and weakness clearly. (Brookfield, 1990).

When providing feedback, it is essential to consider students' present understandings. Brown and Knight (1994) highlight this issue as follows: feedback, ideally, ought to involve the interplay of the lecturer's understanding with that of the student". A dialogue is also essential, and it should focus on typical strengths and weaknesses and should be initiated in such a way that students will perceive the exchange as supportive of their learning processes. However, after supplying general feedback to students in class, students should also be encouraged to discuss their progress personally with the lecturer.

3.2 *Why portfolio assessment?*

The aim of this research was to apply the concept of continuous improvement to students' learning by enhancing the best methods of assessing students formatively in the course, thus addressing the lack of performance of students in the workplace. Most academic departments of the institution engage in periodic self-reviews as part of institution's three-year program review process. The reviews have also required that the department should come up with the assessment plan that will balance the student's theoretical performance with practical expertise.

In general terms, portfolios provide a means by which students can record their learning activities and achievements in a comprehensive manner that encourages individuality. In summary, a portfolio in this respect is described as a summary of students' accomplishments, self-reflective statements which describe the students' learning practices and also as a collection of information and materials which provide a record of the range and quality of teaching and learning activities. Portfolios may be compiled to include both formative and summative assessments. Students and lecturers may use portfolios for self-development purposes, in which the focus is on the improvement of teaching and learning practices, i.e. formative assessment. Portfolios can also be used as an evidence-based document describing a student's development and accomplishments. Feedback is in the form of identifying each student's weaknesses and strengths and also offering alternative, corrective measures to ensure that deep learning takes place.

4. Research Method

Participants in the study were 20 (n=20). This consisted of students, staff and employers at Mongosuthu Technikon. The students participated willingly and constructively during the interviews. The mere fact that the students had been exposed to both Technikon education and experiential training informed their judgments on the issues of assessment methods. It was sometimes difficult to contact the participants during their experiential training, but the strategy to visit them in the workplace, explain the whole process and wait for them to respond to the questionnaire made a high turnover of responses. The questionnaire was constructed in order to establish if participants would be against or in favour of the introduction of portfolio assessment as an alternative method to the existing method employed in the Department of Biomedical Technology. Data was collected using closed ended and open ended questions. We used frequency distribution curves and tables to analyze data.

The rationale for choosing close ended questions is that:

1. Answers to questions are standard for every respondent.
2. Coding of answers is easier to analyse.
3. The meaning of the question is often clearer to the respondent (Bailey, 1994).

In addition, open ended questions were used when all of the possible answers to categories were not known, or when the investigator wished to see what the respondent viewed as appropriate answer categories. Open ended questions allow respondents to answer adequately, in all the detail he or she liked. (Bailey, 1994).

5. Results

5.1 *Students*

The gender and age range of participating students (Section A, Q3 & Q4) is presented in figure 1 below:

Figure 1: Gender and age range of students

Figure 1 above indicates that the majority of students in Biomedical Science for the year 2006 were females in the age group above 22 years. The psychometric test (Section A Q6) was done by 85 % of the students. Psychometric testing is one of the criteria for students' selection but the Head of the Department may also use his own discretion if a student with very good matriculation symbols wishes to enrol after the psychometric test has been written. One with an A Standard Grade and B Higher Grade symbols in Mathematics and one with a B Standard Grade in Mathematics and a B Standard Grade in Physical Science were admitted.

Section A Q7 revealed that 50% of the students had been exposed to a science laboratory before they came to Mangosuthu Technikon whereas 50% saw a science laboratory for the first time when they arrive at the institution. This is viewed by the researcher as a problem that needs to be rectified in high schools rather than in a higher education institution. Students need to have basic knowledge of laboratory equipment and apparatus before coming to the institution if they have been doing Physical Science as a subject at school.

The Department of Biomedical Technology at Mangosuthu Technikon selects its students based on four subjects namely, Mathematics, Physical Science and Biology with the minimum requirement of an E Higher Grade or a D Standard Grade. The findings obtained based on their matriculation results were as follows:

Figure 2: Distribution of Matriculation results of the participants

According to the above figure, it was envisaged that the matriculation results would be compared with the students' performance in the psychometric test but this was beyond the scope of this study. The researcher also felt that it is also important to note the subjects that are frequently repeated by students in their 3-year duration of the course, hence table 1 below:

Table 1: Most frequently repeated subjects by students (Section A Q8)

Subjects	Number of students
Pathophysiology II	4
Cellular Pathology II	4
Anatomy & Physiology	3
Physics I	3
Haematology II	2
Microbiology I	2
Microbiology II	2
Biochemistry II	1
Blood Transfusion II	1
Chemistry I	1
Cellular Pathology III	1
Chemical Pathology III	1

The above table aims at identifying which subjects were repeated the most by the students in an effort to find the root of the problem. The department experiences problems in this regard because some of these subjects that are repeated are pre-requisite subjects that enable a student to proceed to the next level. From the table above, it becomes clear that students find Pathophysiology II and Cellular Pathology II most difficult to pass. The reason for this could not be determined but may be it can in another study as a comparison between achievement in subjects, and between matriculation achievement and tertiary education achievement. This comparison was beyond the scope of this study.

Table 2: Activities that motivate students in the classroom

Activity	Number of students
Practical sessions	11
Group discussions	8
Presentations	6
Feedback from lecturer after assessment	5
Positive comments from the lecturer	3
Tutorials	3
When given a chance to correct errors	2
Peer discussions	2
Individual study	1
Portfolio discussion	1
Being asked probing questions	1
Assignments	1

Figure 3: Students Preferences in classroom

Figure 4: Activities that make students increase their performance

Table 3: Students' rating of important statements

Important Statements	Number of Students
When learning I focus on understanding the subject matter	14
I learn to get employment at the end of my academic year	11
I learn to understand the content taught.	10
If I have an assessment due, it limits my concentration of understanding other content in class	7
When learning I concentrate on what I think will come out of the test or examination	6
I compete with my peers in the classroom	5
I learn to pass a test or examination	4

The table above shows that the three most important statements to the students when they are learning are firstly, to focus on understanding the subject matter, secondly, to get employment at the end of the academic year and finally, to understand the content of what has been taught.

Table 4: Students' ratings of what they consider when learning

Statements	Strongly Agree	Agree	Not Sure	Disagree	Strongly disagree
1 I try to learn facts to understand what they mean	12	9	0	0	0
2 I try to learn facts to understand how they are related	9	10	2	0	0
3 I learn by memorizing the facts even if they do not fit into a coherent body of knowledge	6	6	5	3	1
4 I do find out what the lecturer wants and deliver it	8	7	5	0	0
5 Tests help me find out how well I have learnt	13	6	1	1	0
6 The mark that I obtain on the test always reflects what I understood of the sections	5	7	4	4	0
7 Using a variety of assessment methods may help me to learn more.	12	5	3	0	0
8 Assessment allows me to understand practicals better	10	4	5	1	0

According to Table 4 above it was revealed that students strongly agree with the fact that they learn facts to understand their meaning (12 students). Tests also help them find out how well they have learnt (13 students) They prefer using a variety of assessment methods (12 students) and they also agree with the fact that assessment allows them to understand practicals better (12 students) Only (1 student) of students strongly disagreed with the statement that they learn by memorizing the facts even if they do not fit into a coherent body of knowledge. Five (5) students strongly agreed with the fact that the mark that they obtain on the test always reflects what they understood of the sections. This shows they can gauge how much learning has taken place when writing a test but there are areas of serious shortcomings when considering only tests and examinations as the form of assessing students' knowledge of facts and content because they feel the mark is not a good reflection of what they know.

KEYS for figure 5 above

- 1 = I try to learn facts to understand what they mean.
- 2 = I try to learn facts to understand how they are related.
- 3 = I learn by memorizing the facts even if they do not fit into a coherent body of knowledge.
- 4 = I do find out what the lecturer wants and deliver it.
- 5 = Tests help me find out how well I have learnt.
- 6 = The mark that I obtain in the test always reflects what I understood of the sections.
- 7 = Using a variety of assessment methods may help me to learn more.
- 8 = Assessment allows me to understand practicals better.

Figure 5: Bar graph showing the highest percentage of students agreeing with certain statements

Table 5: Students indicating the extent to which they believe teaching in the programme has assisted them [Section B (3)]

Statements	Great deal	Fair amount	Little	None at all	No opinion
Communicate scientific concepts accurately	13	5	1	0	0
Write effectively	11	7	1	0	0
Relate principle concepts to real-world applications	11	5	3	0	0
Think creatively	9	7	1	2	0

The students indicated that they were taught a great deal of how to communicate scientific concepts accurately, but 2 students felt that they were not taught to think creatively at all. This feeling might be caused by the fact that there is no assessment method that allows them as individuals to express their knowledge at their own pace. Only 11 students felt they could write effectively and relate principle concepts to real-world applications a great deal.

Table 6: Students' comparison between the traditional assessment method and portfolio assessment method

	TRADITIONAL ASSESSMENT	PORTFOLIO ASSESSMENT
a) Gives students equal opportunities to succeed	0	20
b) No individual is disadvantaged	2	18
c) Provide adequate feedback to allow me to work on my weaknesses	10	10
d) Feedback is continuous and will thus help me learn.	10	10
e) It gives me an opportunity to re-do if something goes wrong.	3	17

Section C of the questionnaire requested students' opinions when comparing traditional assessment methods (tests and examinations) to the portfolio assessment method. This group of students understood what portfolio assessment entails because they did the in-course portfolio as well as the work-based/ experiential training portfolio. The fact that portfolio assessment offers students an opportunity to re-do what went wrong made 85% of students prefer this form of assessment.

All students in table 9 above believed that portfolio assessment would give students equal opportunities to

succeed. 18 of 20 students indicated that no students were disadvantaged by portfolio assessment. This ties very well with the first answer because of the variety of activities that are performed using portfolio assessment as evidence to demonstrate students' understanding of the subject content. 50% of the students believed that both traditional and portfolio assessment methods provided adequate feedback to allow them to work on their weaknesses, and that the continuous nature of providing feedback allowed them to learn. Therefore based on this analysis the researcher believes that the students believe that portfolio assessment method can also be used with other traditional assessment methods. They felt that the in-course portfolio assessment assisted them to understand and follow guidelines that were laid forward to them for the experiential training portfolio.

The responses provided by the lecturers on this question about the existing methods at Mangosuthu Technikon showed the following concerns:

- They are very much prescriptive to the lecturers.
- They lack assessment of other types of intelligence, for example, verbal expression, emotional skills, practical skills, etc.
- They encourage students to learn only when they are about to write to be assessed
- They encourage the students to memorize their work in order to be able to answer questions.
- They do not encourage students to work on the feedback provided by lecturers.
- They are not formative in terms of allowing the lecturer enough time to observe the growth or improvement of students in time for remedial action to be put in place, should anything go wrong.

There was a recommendation to re-look into the existing assessment methods to see if they really produce the type of future Medical Technologists that are required in the workplace and globally.

5.2 Employers

A questionnaire was also sent to employers where Biomedical students were sent to do their experiential learning and the responses were demonstrated in themes as below:

Table 7: Employers' rating of students' skills

Skill/ Ability	Rating scale	%
1. Adherence to safety procedures	Good Excellent	83 17
2. Thorough check on specimens' suitability before Analysis	Satisfactory Good	50 50
3. Knowledge of handling different types of Chemicals	Satisfactory Good	50 50
4. Store chemicals according to the laboratory Rules	Excellent Satisfactory	67 13
5. Criteria for specimen rejection	Good Satisfactory	83 17
6. Quality control concepts	Good Satisfactory	33 67
7. Knowledge of quality control procedures	Good Satisfactory	33 67
8. Solution preparation	Poor Unsatisfactory Satisfactory	17 17 66
9. Appropriate sample dilution when needed	Unsatisfactory Satisfactory	83 17
10. Action to be taken into account when receiving urgent specimens	Satisfactory Good	33 67
11. Action to be taken on feedback	Unsatisfactory Satisfactory Good	33 50 27
12. Willingness to take on extra tasks assigned to Them	Unsatisfactory Satisfactory Good	33 50 27
13. Communicate effectively	Unsatisfactory	33

	Satisfactory	50
	Good	27
14. Compile a required portfolio of evidence	Satisfactory	33
	Good	67
15. Write effectively	Satisfactory	33
	Good	67
16. Identify and solve problems independently	Unsatisfactory	33
	Satisfactory	33
	Good	17
	Not sure	17
17. Organise and manage themselves appropriately	Unsatisfactory	33
	Satisfactory	33
	Good	17
	Assistance required	17
18. Work with others as a team	Satisfactory	33
	Good	67
19. Relate theory done at the Technikon with Practice	Unsatisfactory	17
	Satisfactory	67
	Good	16
20. Their work performance relates well with their performance at Mangosuthu	Poor	50
	Unsatisfactory	17
	Satisfactory	33
21. Any other skills/abilities you would like to Include	Satisfactory on computer skill	67
22. These students did not identify any other skill/ability that they would like to include		33

The two open-ended questions (Q2 – 3) allowed the laboratory supervisors to express their recommendations on how the industry portfolio could be improved. They also had to give their opinions on whether the portfolio could be used in Biomedical Technology to determine students' competencies.

Question 2 was answered as follows:

- *Portfolio should allow for more hands on (concentrate more on practicals) than asking the depth of knowledge.*
- *Portfolios should allow students to work in the laboratory but not to observe.*
- *Portfolio should not ask theory questions but rather concentrate on practicals only.*
- *Portfolios should have more problems on solution preparations and laboratory statistics.*
- *Portfolio should decrease theory and test more practicals that they are expected to do in the laboratory.*
- *Portfolios are too long; there is a need to revise the specified outcomes.*

Question 3 looked at comparing the way 2005 students handled the portfolio assessment to the 2006 students. This was done because 2006 students had not been exposed to the in-course portfolio at the Technikon like the 2005 group of students. Based on the responses below, it was concluded that the in-course portfolio assisted students a lot. Its official implementation would assist in improving the performances of students in the workplace.

The responses were as follows:

- *2005 students understood portfolio assessment better than 2006 students.*
- *2005 did most of their work without assistance whereas 2006 students were very unsure of what was going on.*
- *2005 students did not need much attention on portfolio compilation.*
- *2005 students seemed to understand and manage their portfolios well.*
- *There was a remarkable improvement in the 2005 group of students- they did not need more assistance from me when working with their portfolios. A lot of work was needed in the last group.*
- *More emphasis should be placed on solution preparation and calculations – 2005 students were much better in this module.*

Question 4 was a 'Yes' or 'No' question where they had to indicate whether portfolios could be used as means of determining the students' competencies. All supervisors felt that portfolio assessment can be used and one of them even went as far as explaining that it will be much better if they started with portfolios from the beginning of their studies at the Technikon. I think they felt this way because portfolios can also assist them in looking at the developmental stages during their years of study at the Technikon.

6. Discussion

6.1 Key question 1

Staff members' and students' perceptions regarding the existing traditional methods of assessment (Sub-problem 1:13)

In this study the staff members agreed that these traditional methods made their lives easy in terms of marking and providing feedback but the majority of staff felt that this method when used exclusively might ignore the assessment of other types of intelligence and skills. They felt that this method failed to provide formative assessment of student because it is done at a very late stage of student's learning when there was very little that could be done to assist the student to improve. Staff members believed that students were also interested in getting a better mark that really did not show their strengths. Another lecturer felt that the existing methods that were used to assess students failed to assist students' learning to such an extent that the majority failed to integrate their knowledge with the practical work.

The vast majority of students felt that assessments in the Department of Biomedical Technology were based only on tests and examinations and they viewed this as an unfair practice, implying that there was a need to change to continuous assessment so that they would have an opportunity to identify their weaknesses and address them in time before commencing with examinations. When traditional methods were compared with the portfolio assessment method (Table 7), 10 students indicated that traditional assessment provided adequate feedback to allow them to work on their weaknesses as well as providing help for them to learn. This finding is a good indicator that traditional methods do disadvantage some of the students. The same table indicates that only 3 students believed that traditional assessment method gave them opportunity to re- do the work if something went wrong.

6.2 Key question 2

Staff members 'and Students' perceptions regarding the existing assessment methods with reference to the requirements for good laboratory practices (Sub-problem 2:13)

This discussion is centred around the assessment practices in order to address the outcry about the performance of our students in the workplace. An assessment of the workplace may reveal that leaning should include components such as competence, attitudes, practical skills, application of theoretical knowledge, as well as personal development and experience (Mathews, 1995; Cuthberth, 1996; FEU, 1994). These are the requirements for good laboratory practice. However, when we look at look at the laboratory supervisors, the most important view about in connection with the set of components indicates that assessment of 'experience' is in particularly problematic because "mere activity" at the workplace does not constitute actual experience (Dewey, 1933). Other assessors in the workplace require students to develop experience with immediate effect, without taking into consideration that experience is a long-term process. This is indicated by their responses about the skills that they expect from the students when they come to them for experiential training.

Unfortunately it seems very difficult to instil a deep learning approach in students, apart from the way that you assess them. This is the approach that seems to address all the concerns in Biomedical Technology, since students are required to apply their theoretical knowledge that they gained more at the institution, than what they are expected to do in the workplace.

Staff members' responses clearly indicated that they viewed assessment as a way to find out whether students have understood what lecturers have taught them, thereby determining whether or not they are in the position to move to the next level. One lecturer said that assessment played a major role in her teaching because it informed her how each and every student performed, but it failed to inform her to what extent each student understood issues that had been discussed. The main constraint is the large number of students that each lecturer has to attend to as well as time constraints.

6.3 Key question 3:

To determine the students' perception of portfolio assessment as a formative type of assessment in order to improve their learning (Sub-problem 3:13)

This question was found to be a very easy for students to answer because they were engaged with portfolio assessment both in industry and in Chemical Pathology III course. Students were quite clear on portfolios used formatively to improve their learning. Students felt that if the purpose of the portfolio is clearly defined, (for example, as was the case in the in-course portfolio and the experiential training portfolios that students had been exposed to) they would enjoy using portfolio assessment as it reflects their own work and capabilities.

6.4 Key question 4:

To determine the perception of staff in using portfolio assessment to reinforce their teaching in order to improve the capacity of students to integrate what they learn in the Technikon and what they are expected to do at the workplace (Sub-problem 4:13).

As indicated in the responses of staff, there were different opinions about portfolio assessment. The majority of staff members seem to reject hypothesis two. For example, one lecturer also admitted that he thought portfolio compilation was largely an administrative exercise of collecting papers/certificates of achievement which were difficult to evaluate in terms of their significance / relevance. The main constraint observed in their responses is that staff members' lack of motivation and understanding of using this tool. This may be addressed by organizing a workshop on portfolio assessment where the concept can be dissected in such a way that everybody understands the main objective of opting for type of portfolio assessment as a formative type of assessment.

6.5 Key question 5:

To determine how employers rate our students' skills at an experiential training level (Sub-problem 5:13)

The employers' responses clearly indicated their expectations in terms of skills and knowledge from students who are at experiential training level. These findings may assist lecturers when reviewing the curriculum and also improve on the way they (lecturers) impact knowledge to students in order to address the workplace requirements. The 2005 group of students who had been exposed to the in-course portfolio assessment methods were found competent by the laboratory supervisors than the 2006 group of students in terms of skills that they demonstrated during their experiential training, as well as their portfolio presentations.

7. Conclusion

This study was designed to track students as they went through two types of portfolios, that is, the in-course portfolio assessment and the industry type portfolio assessment. What transpired from the research findings was that a measurement of outcome was achieved. For example, the fact that the student groups (2005 and 2006) were assessed differently actually facilitated comparison of their performances in the workplace. Employers' comments clearly favoured the students from the group that had been exposed to the in-course portfolio assessment. This finding alone guided the researcher towards the conclusion that portfolio assessment contributes towards more effective performance in the workplace. Students who have been exposed to portfolio assessment recognized the value of this method as it prepared them for more efficient application of knowledge in the workplace. The findings in this study indicate that the assessment practices that would assist students in their learning are when feedback is provided promptly and timeously.

8. Recommendations

Students and staff have to discuss the purpose and outcome of assessment before its implementation. There definitely should be the conceptualization of assessment as part of a student's work, which can be produced as evidence of what has been understood when learning. Flexibility and individual consultations should be encouraged in order to accommodate the diversity of students' approaches to learning. It is important that a lecturer should ensure that assessment informs the instructions to help them improve their teaching and also address the way students apply their knowledge in real life situations. The use of more than one measuring tool to assess students' learning has also been encouraged in this study. An investigation into other novel and creative form of assessment can be undertaken in the future studies, either by this researcher or other academics in the field. Assessment strategies should also be explored in other departments as holistic approach to teaching and learning in the institution.

References

- Advisory Board Meeting Minutes, August 2004.
Bailey, K.D. 1994. *Methods of Social Research*. 4th Ed. New York: The Free Press.
Brown, S. & Knight, P. 1994. *Assessing learners in Higher Education*. London: Kogan Page.
Consumer Guide, 1993
Cox, B., 1996. *Practical pointers for university teachers*. London: Kogan Page.

- Crooks, T., 1998. The impact of classroom evaluation practices on students. *Review of Educational Research*. 15(1): 438-481.
- Herman, J.L., 1992. What research tells us about good assessment. *Educational Leadership*. 24: 74-78.
- Rowntree, D., 1987. *Assessing students: how shall we know them?* London: Kogan Page.
- Stobart, G. & Gipps, C. 1997 *Assessment – a Teacher' Guide to the Issues*. London: Hodder & Stoughton.
- Sunday Times, 2000: An article "Alarming drop-out rate"
- Torrance, H. & Pryor, J. 1999. Investigating formative assessment: *Teaching, Learning and Assessment in the Classroom*. Buckingham: Open University Press.
- Trigwell, K., & Prosser, M., 1991. Improving the quality of student learning: the influence of learning context and student approaches to learning on learning outcomes. *Higher Education*, 22, 251-266.