

The Logbook: Gaps Perceived in Assessing Students on 'On the Job Education and Training'.

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Abstract

This article investigated the problems surrounding the assessment of students on 'On the Job Education and Training'. The study adopted a cross sectional descriptive survey approach and targeted a selected polytechnic college. Questionnaires were used to collect data from 22 company mentors, 32 lecturers and 56 students. Document analysis was done to validate data gathered through questionnaires. The research revealed that all the stakeholders did not fully understand the assessment instrument (the logbook). Findings further indicated that the college did not induct company mentors timeously resulting in companies coming up with different interpretations of the assessment instrument. The study recommended that workshops be held for lecturers and company mentors on the use of the logbook. The Higher Education Examination Council needs to streamline guidelines for assessment to ensure standardisation of the logbook use. In addition personnel delegated to assess students on 'On the Job Education and Training' should be adequately trained so that they assess students competently. In this regard, regular workshops should be mounted to staff develop assessors.

Keywords: on the job training education; assessment; skills development; technical/vocational; Zimbabwe; real life working environment.

INTRODUCTION

Technical/Vocational (Tech/Voc) programmes have an Industrial Attachment (IA) component generally referred to as 'On the Job Training and Education' (OJET) in Zimbabwe. OJET is a period in which trainees undergo skills training away from the classroom or workshop (Cole, 1993). Students are attached to industries to experience real-life working environments. This gives students an opportunity to apply knowledge learnt in the classroom, to learn new skills and to acquaint themselves with current industrial technologies. It also ensures a market-driven approach to skills training that emphasizes entrepreneurship. Chikunda (2005) views OJET as a necessary cog, which strengthens the partnership between learning institutions and industries. The assumption is that OJET provides feedback on students' performance which is used to improve programmes so that they are relevant to industry and commerce.

The Tech/Voc departments at the college facilitate placement of students and students are also encouraged to look for their own attachment places. Once students are attached, the college is expected to visit companies to communicate its expectations in terms of assessment and general welfare of students. Lecturers are also expected to discuss with immediate company mentors in order to get clear and precise information about the adequacy of facilities and to

induct mentors on the use of the assessment instrument (the logbook).

In a policy document on OJET (2006) Higher Education Examination Council (HEXCO) resolved that a grade be awarded for OJET. The mandate to carry out the assessments was entirely given to industrialists. HEXCO is a Zimbabwean examination board whose mandate is to facilitate and regulate Tech/Voc education through the provision of relevant and responsive curricula, valid and reliable examinations and trade tests.

The only assessment instrument recognized for grading purposes according to a circular on OJET (2006) was the logbook. Workshops were conducted at the inception of the log book to conscientise stakeholders on the use of the log book. The workshops were attended by technical college representatives who were in turn, expected to staff-develop industrial supervisors. Ideally, company supervisors are expected to be inducted by college lecturers at the beginning of the OJET. The company supervisors are in turn expected to induct company based mentors.

HEXCO external assessors' reports from all examination centres expressed concern over the variations in the way in which students' performance was assessed by industrial mentors. Such variations

like incomplete sections, unusually high marks in all cases, nature of skills assessed, self rating by students and inconsistencies in the weighting of skills were cited (HEXCO Center Coordinator, personal communication, November 16, 2011). Informal discussions with lecturers revealed that a substantial number were ignorant of the demands of the assessment instrument and let alone what was expected of them when they got to companies. It was against this broad background that the researchers decided to investigate the problems surrounding the assessment of students on OJET using the log book.

STATEMENT OF THE PROBLEM

The policy of assessing students on OJET using the log book brought about mixed attitudinal outcomes among lecturers, company mentors and students with regards to academic standards. The discrepancies which characterize the assessments have prompted stakeholders to question the validity and reliability of the assessment instrument. The study therefore sought to investigate problems surrounding the assessment of students on OJET using log books.

OBJECTIVES

The objectives of the study were to:

1. identify the problems surrounding the use of a logbook as an assessment instrument for students on OJET.
2. establish the competence of stakeholders on the use of a logbook.

SIGNIFICANCE OF THE STUDY

The study of this nature provides information that enlightens both lecturers, and placement providers on effective methods of assessing students on OJET. It provides research based information on the applicability of selected alternative methods of assessment to match the requirements of stakeholders. This inevitably increases relevancy of courses offered which ensures that graduates are easily accepted by the industries. Assessment problems that are faced by students during OJET will be addressed, thus increasing validity and reliability of the logbook as an assessment instrument.

The study also contributes towards a better understanding of the logbook as an assessment instrument for students on OJET. Curriculum developers in technical subjects may be prompted to design valid and reliable assessment instruments which promote high quality decision making.

LIMITATIONS

This study used participants from one college (students and Lecturers) and company supervisors from one city which to some extent was not representative enough. A larger sample representative of all tertiary institutes in the country would be recommended.

LITERATURE REVIEW

The trend the world over is that Tech/Voc students spend substantial periods on OJET. Goldstein and Ford (2001) define industrial attachment as a scheme in which people experience work tasks in work environments but without taking full identity of a worker. It is thus a period in which trainees learn to put knowledge and skills into practice. The same sentiments were echoed by Donkor, Nsoh, and Mithual (2009) when they claim that OJET gives students the opportunity to relate theory to practice and prepare them well for the period after completion. The underlying philosophy of OJET is therefore to tie the education system to the needs of industry and to be responsive to national needs to make Tech/Voc education the engine for economic growth. Fee (2011) believes that this gives students the necessary coaching which improves skills development and overall competence in industry. OJET therefore provides fertile ground for comprehensive training in which students should link the theory learnt at college and the practice in industries. It also presents an opportunity to move away from individualism to teamwork and collectivism which prevail in industries after graduating (Otto and De Vries, 2003).

According to Mudavanhu (2005) assessment refers to the collection of data to describe or better understand an issue. In the context of this study assessment refers to a systematic process of collecting data to establish the truest picture about a student's ability. With OJET, assessment is done to ensure that graduates produced match standards or expectations of industry. Lauglo and Lillis (1988) suggest that although assessment of practical skills is problematic, it must be used as a force for standardization. While supporting the same view, Bosch and Charest (2009) assert that assessment should be viewed positively as a learning curve rather than simply as a way of allocating grades or marks. Assessment of students on OJET should be accorded the importance it deserves so that graduates produced are regarded highly by industrialists.

According to Shiu (2008) assessment tools and techniques that are currently being used to assess students on OJET include: written submissions of personal learning goals and objectives, reflective journals, portfolios accompanied by a report from the student and collaborative assessment. Collaborative assessment entails that the organization in the industry (host mentor), the provider of education and training (lecturer) and the student are involved in the assessment. The final grade in this assessment is the result of a negotiation of the individual assessments done by the student, the host mentor and the academic supervisor. However from the researchers' observation, this is not the prevailing situation in Zimbabwe as the company mentors is given the

mandate to do most of the assessment work with the lecturer coming in as the moderator. The student also comes in by streamlining the specific skills which should be assessed by the company mentors. Eraut (2002) recommends that there should be flexibility in assessment systems so as to accommodate the different views of the stakeholders involved.

The quality and accuracy of assessments depend upon the expertise of those who have constructed the instrument, the competencies and extent to which the stakeholders (company mentors, lecturer and students) have been able to relate the assessment to the purpose and objectives of the programme (Bliss, 2001). Shiu (2008) makes the same observations when he notes that the accuracy of the assessments depends not only on the tools and techniques used, but also on the qualifications and experience of supervisors. He further asserts that company mentors with relevant qualifications are able to guide the students better while those that do not rely on the student and the academic supervisor for the successful completion of the work experience. Although assessment is an integral part of any learning activity, it would be a mistake to assume that all assessors are equally proficient at it. This calls for quality control mechanisms to be put in place to enable the system to ascertain that undeserving students are weeded out before they are delivered into the field.

According to the Judicial Studies Board (2010) comprehensive efforts to enhance product quality should be everybody's business if success is to be realized. The important question that can be asked now is whether HEXCO puts checks and balances to ensure that the graduates produced are the right material in terms of quality and credibility. Perhaps HEXCO can learn from the experiences of other countries which are heavily involved in skills training. Countries such as Japan, Britain, Kenya and Cuba have vibrant assessment programmes which are thorough and characterized by a strong inclination towards production of high quality graduates (Otto and De Vries, 2003).

METHODOLOGY

The study employed a cross-sectional descriptive survey. This approach allowed the researchers an opportunity to concentrate on a specific instance in some detail in a limited time scale. In the view of Newby (2010), survey research owes its continued popularity to its versatility, efficiency, and generalisability.

Population and Sample

The population of the study comprised of 135 third year students returning from OJET, 37 Tech/Voc lecturers and 27 company mentors. Company mentors were delimited to companies, in Harare, that provided OJET to students in 2011. The student

population of 135, who had gone through the OJET program in 2011, was spread among the following programmes: Building Technology & Design; Clothing and Textile Design; Mechanical Engineering; Technical Graphics and Wood Technology & Design.

From the population 5 students, 5 company mentors and 2 lecturers participated in the pilot study. Stratified random sampling was used to select 56 students who participated in the study. The stratification was based on programmes offered at the institution. This sample was weighted in order to reflect the population configuration in the sections. Within each section, names of students were assigned numbers which were then used as the sampling units to come up with the final list of respondents. Thus, 41% of the students were selected for the study. This is in line with the suggestion of Newby (2010) that if the population is few hundreds, a 40% or more sample size will suffice. No sampling was done for both lecturers and company mentors thus 35 lecturers and 22 company mentors were asked to participate in the study. Only those companies which had offered placements for the 2011 students took part in the study.

Data Collection Instrument

Self completion questionnaires were the main instruments used for the three groups of respondents namely Tech/Voc lecturers, company mentors and students. The questionnaires included closed and open ended questions to allow respondents to buttress some of their responses. The questionnaires elicited demographic data and data on aspects of the attachment program relating to assessment of students using the log book. Content validity was determined by a panel of experts from the Faculty of Education, University of Zimbabwe.

A pilot study was conducted to ensure validity and reliability of the questionnaires and to identify any needs for revision. The pilot study involved administration of the questionnaires to 5 company mentors and 5 students representing the 5 programmes offered at the college. Two Tech/Voc lecturers, one from the Engineering courses and another from Applied Arts were also part of the pilot study. All pilot study participants were not considered as respondents in the main study. The questionnaires were distributed and collected personally. A 100% response rate was recorded for students and supervisors while 91.4% was recorded for lecturers. The data gathered were categorised into structural and operational themes and analysed using descriptive statistics.

FINDINGS AND DISCUSSIONS

The principal aim of the study was to establish the problems surrounding the use of a log book as an

assessment instrument for students on OJET. For convenience, the discussion of the log book as an assessment instrument was categorised into two specific themes namely structural and operational issues.

To give more meaning to the findings, it was imperative to understand the demographic data of respondents so as to depict literacy levels. All student and company mentor respondents had at least a four year secondary school certificate while all lecturers had a university qualification. In addition, all mentors had varied professional qualifications which were in line with the jobs they were doing in their work places. Professional qualifications were a vital tool in mentoring and assessing a protégée. It was therefore evident from the results that all mentors and lecturers who took part in this study were adequately qualified to mentor and supervise students on OJET respectively.

Company mentors were asked to indicate what they perceived as problems of assessing students on OJET using the log book. Table 1 is a summary of the problems of assessment which they highlighted.

Table 1: Problems of assessment as perceived by company mentors. (n=22)

Problem	%
Late induction on how to assess students using the log book.	100
Guidelines for assessment not clear	100
Using rating scales to allocate marks is subjective.	82
Log book demands a lot of clerical work	68
Assessment was not done in time because of tight schedules within the company	50

These statistics show that most company mentors had problems with both the structural and operational issues of the assessment instrument. The mentors seemed more worried about the structural issues as opposed to operational issues. In particular mentors found guidelines not clear and rating scales in the log book difficult to interpret. This could have easily resulted in subjective assessment. With such lack of clarity, mentors were bound to overrate or underrate students on OJET.

Hodges (2011) believes that the experience and approach of the mentors in providing accurate assessment feedback is central to the effectiveness, relevance, value and impact of the OJET experience. Therefore, inducting mentors prior to field work placement of students is essential in the provision of accurate and relevant assessment. Company mentors were therefore asked how timeous the induction on the use of the log book had been. All mentors indicated that the induction was done late. In addition some mentors indicated that their tight work schedules and too much clerical work in the logbook delayed the assessment. This delay in assessment

implies that assessments were done in retrospect with mentors relying on recall of activities. One wonders whether these assessments portrayed a true picture of protégées' performance. The problems cited by the mentors could have compromised the validity and reliability of the assessment procedures resulting in erroneous outputs.

Lecturers were also asked to indicate what they perceived as the structural and operational problems affecting the assessment of students on OJET using a log book. Table 2 summarises the problems.

Table 2: Problems of assessment using the log book as perceived by lecturers. (n=32)

Problem	%
Guidelines for assessment not clear	81
The logbook demands a lot of clerical work	71
Marks given were not tallying with comments	24
Mentors completed the log books in retrospect	71
lack of proper induction	100

Findings seem to indicate that lecturers agreed with company mentors that the log book was difficult to interpret and demanded a lot of clerical work. They also indicated lack of proper induction on the use of the log book. The implications are that both lecturers and mentors were not conversant with the requirements of the assessment instrument. Such a situation could give the supervisors the latitude to interpret the assessment instrument according to their own understanding, which was obviously different because of varying levels of education. Otto and De Vries, (2003) assert that when stakeholders are not adequately oriented the quality of assessments is compromised.

In addition lecturers observed that log books were being filled in retrospect. This is in agreement with 50% of company mentors who indicated that assessment was not done on time because of tight schedules. However most lecturers observed that marks awarded to students tallied with overall comments as only 24% confirmed that marks given were not tallying with comments. The fact that the majority (76%) suggested that comments tallied with marks does not mean that assessment was done genuinely as it was mostly done in retrospect. This presents significant challenges for quality assurance and validity of the assessment process. Problems pertaining the use of a logbook were also sought from the students. Table 3 highlights the problems.

Table 3 reflects that a majority of the students indicated that mentors were not given sufficient guidelines on how to assess students using the log book. Fewer students indicated that they were asked to assess themselves implying that in most cases mentors did the assessment.

Table 3: Problems highlighted by students on the use of a log book during assessments. (n=56)

Problem	%
Mentors were not given sufficient guidelines on how to assess students using the log book	70
Company mentors asked to assess themselves	20
Assessment was not skill oriented, but based on meeting production targets	60
Lack of proper student induction on the use of the log book	100
There is no uniform criterion set for the assessment of students	100
Assessment using the log book is subjective	100

Assessment was misinterpreted in the sense that mentors based it on meeting production targets as opposed to mastery of skills and quality of artifacts produced. The need to fulfill commercial imperatives seemed to reign supreme at the expense of training needs of the students. This kind of approach differs distinctively with the situation that obtains in developed countries like Britain and Germany where according to Lauglo and Lillis (1988) the involvement of industry in skills training is well coordinated.

Findings further revealed that student induction on the use of the log book was not properly carried out by the parent college. This could imply that the students were not competent enough to cascade guidelines on completion of the log book to the mentors. Absence of proper induction of students before deployment could have resulted in a variety of manmade problems which could have affected the fluidity of the assessment exercise.

Finally, students lamented the absence of clearly outlined generic skills that needed to be assessed as all of them indicated that there was no uniform criterion set for assessment. This problem is not peculiar to Zimbabwe alone as it was also confirmed in other studies elsewhere (Hodges, 2011, Bates, 2003 and Yorke, 2011).

CONCLUSION

While OJET provides the opportunity for students to perform in the work place is valuable, the assessment strategy employed should be clear to all stakeholders. This study has established that the use of the logbook as the only assessment instrument in OJET could be defective as it may not yield valid and reliable results.

RECOMMENDATION

Based on the results of this study, several recommendations for policy, practice and future research are proposed.

- The personnel delegated to assess students on OJET should be adequately trained so that they assess students competently. In this regard, workshops should be mounted to staff develop assessors.

- The skills which are assessed should be clearly spelt out in the logbooks to avoid repetition and to ensure that the bases of assessment are uniform. This therefore calls for designing different logbooks for different subject areas.
- Guidelines for assessment should be clearly articulated to ensure that the instrument is user friendly.

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