ABSTRACT

Vocational education today includes, as it always has courses and programmes which teach important and valuable skills to a very high standard. Currently Further Education colleges are still using the most traditional methods of assessing Learners for the right course such as diagnostic testing. However Colleges retention rates are measured while the student's progress through various stages and levels within a program. The most frequently measured and publicly reported levels are retention and achievement which can be gauged after completing an academic year. The primary focus of this paper will be to investigate and focus on Engineering - Work Based Learning (WBL) on Adult courses.

It is evident that research has shown according to Finney et al (2009) that this is just the tip of the “iceberg” the underlying problems seems to be apparent that the learners are not quite up to the mark during the assessment processes for a course hence who don't succeed. Clearly organisations continuing to ignore this will have a financial implications and not finding suitable solutions for action for this growing concern.

KEYWORDS: Retention, Engagement, Further education, Work Based Learning.

Introduction

Currently within education the lenses have changed and the outlook of the further education is rapidly changing. This change among others is due to demands placed by funding bodies as well as student's requirements. It can also be seen as students' progression further into their educational programs, they often identify additional motivators for continuing their education, including moral, emotional and quality of family life for preparation in their future occupation.

According to McEllory (2008) colleges prepare current students for future opportunities and compete for potential incoming students, they are being challenged to quantifiably identify whether students are engaging in educational practices that are preparing them for an increasingly diverse world of work. Astin (1985) and Kuh et al (2005) looked at various motivational tactics used to ensure students attended college, however this case study research has identified that there are a number of reasons that typically motivate students to devote the considerable personal and financial resources necessary to obtain a college qualification.

This particular research is based on a platform which identifies major sources of student departure on a course, these being: Student engagement, Student environment and Student esteem.

Method

It can also be argued that the theory would not be solely applicable as learner’s attitudes and perceptions change. It is felt that it can be a direct result to mind-set of an individual and what makes an individual change can be nurtured by the correct guidance and support. The author feels that clearly retention can exist within all learning environments be it a school, college, training centre or university. It has been found by the author that within a college environment student retention is based on three common factors:

- Engagement, engage the learner in the subject,
- Contextualise curriculum
- Tutor, acts in a pivotal role

In addition to the above to be able to identify the suitability and the characteristics of a learner for the right course additional research and further analysis will be carried out on completion of the project. A generic model (scoring system) that can be applied to learners to assess key attributes for a course, in particular this will focus on results found from WBL and identifying the suitability of candidates for the right courses, are the right students enrolled on the right course?

Why a student decides to leave mid-way through a course.

Reason why a student may leave?

According to Strauss et al (2004) when asked directly, students are not likely to say that they dropped out because of “lack of engagement”. In a summary of the literature, Grayson et al (2003) found that there are so many difference between institutions it is difficult to generalise findings across research studies. Nonetheless, students will often cite both financial and academic reasons for leaving an institution.

According to Grayson (2003) studies they had found that there were several reasons for leaving such as, loss of interest in studies, lack of goals or motivation, dis-
Developing the Learners

Instructional strategies are a planned set of activities that are utilized to achieve an identified result. Williford et al. (2008) maintain that instructional strategies benefit both the learner and the tutor, both reliant on each other. The tutors' role is to engage the learners to be able to identify the learner's needs in relation to learning styles prior to creating the instruction to ensure that appropriate materials are prepared to meet the educational objective. It is believed based on this theory that this proposed research will address three types of instructional strategies; Tutor, Engagement, and Curriculum.

Implement Strategy

This study was set up so that the student's demonstrated engagement to a topic, the learner must at least attempt to provide the solution step or could not continue. Once the final steps for an example are shown, the next whole solution will be provided and the process begins again. Upon moving to the next page, feedback was provided on the correctness of the learner's problem-solving attempts. Each set of problems consisted of four student tasks or steps.

- The students who were engaged were first presented with a completely worked-out example.
- Their second task presented the worked-out example with the first solution step intentionally missing.
- The third task presented the worked-out example with the second solution step intentionally missing.
- The fourth task presented the worked-out example with all three of the solutions steps missing.
- The students in the problem-based group were provided with a completely worked-out example followed by a problem-solving task.

Participants in this study were provided an instructional text on basic principles of engineering calculations. After reading this instructional text, participants were instructed to study the worked-out examples or problems provided.

Strange et al. (2001) study, a pre-test consisting of nine simple problems was used to assess prior knowledge. The learning outcomes of the study were assessed by a pre-test that included 13 problems. Although not statistical significant, there were a difference within the groups pre-test scores in favour of the example-problem group. Other findings include no significant differences to time on task.

Discussion

Findings within this case study

During development of the Triangulation Model, it was soon realised that teaching and learning will play a vital role. It is felt that to understand the basics the student must at least attempt to provide the solution step or could not continue. Once the final steps for an example are shown, the next whole solution will be provided and the process begins again. Upon moving to the next page, feedback was provided on the correctness of the learner's problem-solving attempts. Each set of problems consisted of four student tasks or steps.

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With respect to pre-test differences, this study found a substantially higher means were a difference within the groups pre-test scores in favour of the example-problem group. Other findings include no significant differences to time on task.

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