

A Diploma in Professional Development*

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The Brunel Diploma in Professional Development was introduced to assess learning in the workplace during 'sandwich course placement'. This paper reports the outcomes of two pilots of the Diploma, run within the Department of Electrical Engineering and Electronics, Brunel University. Student induction was essential to the effective running of the pilots and an overview is given of a study commentary that supported a six-hour induction course. The paper identifies effective assessment procedures for learning in the workplace.

INTRODUCTION

THE Brunel Diploma in Professional Development is an award which recognises learning in the workplace over two 'thin sandwich placements' or one 'thick sandwich placement'. A thick sandwich placement is a one-year industrial placement that takes place after two years of undergraduate study. A thin sandwich placement is an industrial placement of at least six months' duration. A student on a thin sandwich degree normally undertakes one industrial placement after one year of academic study. The student then returns to university to complete a further year of academic study before undertaking a second industrial placement. The Diploma is an additional qualification to the bachelor's degree awarded on successful completion of three years of academic study. It recognises the contribution made by learning in the workplace to a student's professional development.

Two pilot schemes of the Brunel Diploma in Professional Development ran within the Department of Electrical Engineering and Electronics during the academic years 1993–95 and thirteen students of the department received the award. The regulations for the award of the diploma are common to all departments of the University. However, subject to approval by the University's Degrees Committee the assessment procedures are at the discretion of the individual department. The University regulations for the award of the diploma and the assessment procedures for the two pilots or trials are given in this paper together with an overview of the teaching material generated to support the running of the pilots. The workload imposed on students and academic staff by the pilots is discussed.

THE DIPLOMA REGULATIONS

In order to be eligible for the award of the Brunel Diploma in Professional Development a student shall be required to:

- be registered for a programme of study for which period(s) of work experience are an integral part;
- be eligible for the award of a degree, having satisfactorily completed the taught components of the programme of study;
- complete to a satisfactory standard the period(s) of supervised work experience specified in the scheme of studies for the programme;
- present to the examiners: learning agreement(s); portfolio of work; record of achievement, prepared by the student at the end of the placement, evaluating and analysing the programme of work undertaken and the student's achievement of the learning objectives.

In determining the student's eligibility for the award, the examiners will consider:

- the portfolio of the student's work together with the record of achievement;
- the written comments of the workplace supervisor on the student's performance, where available; and shall assess the work undertaken as distinction, pass, or fail.

In order to be eligible for the award of the diploma a student must have achieved an assessment grade of distinction or pass. A student who is deemed to have failed may, at the discretion of the Board of Examiners:

- subject to the maximum period of registration, be permitted to repeat their industrial training on one further occasion only. No student may be permitted to repeat the industrial training more than once;
- be permitted to complete the scheme of studies for the degree, but shall not be eligible for the award of the diploma.

No award may be made to a student who is in debt to the university.

TEACHING MATERIAL

Guidance notes for students undertaking the diploma were prepared. These notes address the

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issue of co-operation from the training company and describe how diploma submissions are assessed.

Student induction was essential to the effective running of the pilots. A study commentary for the diploma was developed by the diploma assessor (the author) to support a six-hour induction course. In the study commentary it is shown that concepts are introduced through the diploma that will be met later in programmes of continuing professional development [1, 2]. The techniques by which the diploma enables the structuring of the student learning experience during sandwich placement are introduced [3]. The learning agreement technique, the foundation of the diploma framework for structuring the learning experience, is considered in depth [4]. The diploma requires students to manage their own learning. To manage their own learning students must be aware of how they learn. An established model of reflection in learning is presented in the study commentary that provides the student with a framework for learning how to learn [5, 6].

ASSESSMENT BY THE DEPARTMENT

The assessment criteria for the pilots run by the department were those which distinction candidates for a United Kingdom General National Vocational Qualification (GNVQ) at level 3 are expected to meet. Level 3 GNVQ's provide a route into Higher Education. The three themes applied in assessing the portfolio at GNVQ level 3 are evidence of:

- (1) *Planning*: the way in which the candidate lays down how s/he will approach and monitor tasks /activities undertaken during a period of learning.
- (2) *Information seeking and information handling*: the way the candidate identifies and uses information sources; and checks and establishes the validity of the information obtained from these sources.
- (3) *Evaluation*: the way the candidate retrospectively reviews the activities undertaken; the decisions taken during the course of the work; examination of alternative courses of action which they might have adopted; and the examination of the implications of particular courses of action.

A distinction candidate at GNVQ level 3 shows ability in dealing with complex activities in the following manner:

- (1) Plans action independently; monitors and revises action plans independently.
- (2) Independently identifies, accesses, collects information from a range of sources; independently selects methods and checks validity.
- (3) Judges outcomes, applies a range of alternative criteria; justifies approaches pointing out advantages and disadvantages.

A graduate of the department who was also a successful diploma candidate will have shown ability in dealing with suitably complex activities in the workplace in the above manner.

The diploma submissions resulting from the two pilots run within the Department were each two to three hundred pages long. An assessment report, typically of just over 300 words in length, was written on each submission by the diploma assessor according to the assessment criteria.

The department required all diploma candidates to attend a 15-minute interview. The interview panels consisted of the diploma assessor, the student's personal tutor and visiting tutor. The visiting tutor being the member of academic staff who had visited the student in the workplace. If more than one of these roles was filled by one member of staff, a senior member of the Department's academic staff joined the panel. Having an interview panel composed of three members of academic staff ensured that unconscious bias on the part of any one panel member was moderated by the other members of the panel. The interview was not an examination generating a grade. The purpose of the interview was to provide a check on the assessment report prepared by the diploma assessor. Integral to this check, the interview was intended to provide an opportunity for 'the further assessment of work previously submitted in order to check that the candidate is the author of the submitted work, to explore particular questions in more depth and to explore understanding further by raising new questions' [7, p.93]. There was a need for a common structure for the conduct of the interviews: 'If large numbers of students are to be interviewed it is important to maintain the same structure both cognitively and effectively in each interview' [8, p.256]. It was part of the diploma assessor's role to ensure, as far as possible, that each student was asked questions equivalent in content and difficulty. The key questions to be asked of a particular student were agreed by the members of the panel before the interview.

Students awarded the diploma graduated with all classes of honours degree showing that the assessment procedures used were suitable for students across the range of academic ability. All students who submitted for the diploma were successful suggesting that students understood the assessment procedures.

Department and industry involvement

Seventeen members of the department's academic staff were involved in the two pilots of the diploma as visiting or personal tutors.

The companies that the students on the two pilots of the diploma did their industrial training with were: Aspex Microsystems, British Gas, British Telecom, British Telecom (Marine), Ford, IBM Havant, Jaguar Cars, London Underground, Network South East, Philips Telecom, Rover Group, Thorn EMI, and Ericsson Fatme SpA. Of these companies only Ericsson Fatme SpA

was unsupportive of their student's work towards the diploma.

Workload

The diploma imposed a significant workload on the students on the two pilots. This workload is difficult to quantify because it took the form of additional work carried out on placement. It is worth noting that all those who completed the diploma expressed the view that they had benefited from it. However, the workload deterred many students from attempting the diploma.

The approval of a learning agreement by a visiting tutor typically only took one hour as the diploma students had attended the induction course. Once the teaching material for the diploma had been prepared the major workload imposed on academic staff was that associated with the preparation of the assessment reports by the diploma assessor. A typical assessment report took half a day to complete. The department's academic staff were required to give up half an hour to the interviewing of those candidates that they either visited in industry or were personal tutor to and this was not seen as onerous. The arranging of the interviews took the diploma assessor 10 hours.

Quality control and academic equivalence

The Department's external examiners for its undergraduate courses endorsed the diploma awards made by the department.

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has agreed that instead of taking the diploma a successful diploma candidate can take 40 credits towards the 120 credits required for an MEng.

CONCLUSIONS

The main success of the two pilot schemes was the use of assessment procedures which resulted in the department's external examiners endorsing the diploma awards made. The main difficulty associated with the diploma was the extra workload it imposed. Due to the workload on students only thirteen students completed the two pilots and as a result of the workload on academic staff the diploma was suspended. Therefore, it can be argued that the pilots were effective but not efficient. The major concern about the workload imposed on academic staff was that it fell largely upon staff convinced of the benefits of sandwich degrees. A pre-requisite of efficient assessment of work-based learning by a university engineering department is a balancing of load imposed between the academic staff of the department.

The key point is that the assessment of learning in the workplace can be effective. The question to be answered is how efficient can effective assessment of learning in the workplace be.

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