Abstract
Brunel University currently has four distance learning MSc courses, with over 500 students registered, and one undergraduate distance learning course. Some have been running for over five years, and well-established practices have been developed and provide a basis of support for the university. Quality assurance in the university has always been considered in three, equally important, ways: the curriculum and its assessment; the handling of coursework and assignments; and the liaison with students. The lesson we have learned is that a distance learning programme must be based on an existing full-time MSc programme, which is the gold standard for curriculum and its assessment, and where possible, common examinations and assessment be used. This can be further assured by scrutinisation by the associated research council. This is going to become ever more important with the increasing scrutiny by overseas governments on the academic quality of distance learning courses, which seek assurance on the comparability and quality of degrees. Quality assurance for the handling of coursework and assignments must be secure and demands a high overhead of paperwork. Detailed feedback to students on their assignments is essential, but this can, at the same time, form a quality assurance check for later progression decisions. We also copy and retain approximately 10% of the assignments for the same purpose. Rapid turnaround is essential if feedback is to be timely and therefore useful, and quality checks on processing time should be standard. Quality assurance for the procedures for liaison with distance learning students are somewhat harder to measure quantitatively. The mark of good distance learning must be its tutorial support. This demands good communications. Our own course, entitled Data Communications Systems, benefits from the high proportion of use of electronic communications, namely email, which allows fast turn-
Introduction
Higher education in the UK has experienced a number of significant changes in the last few years that have altered the traditional model entirely. The recent government drive to increase the numbers in higher education has awakened the interest of far more potential students than was anticipated. However, it is not only that the bricks and mortar campus can no longer cope with the numbers, but that the new age student is often mature and has commitments that prevent attending full time. To meet this need, new modes have been developed, and we have seen an explosion of part-time and distance learning courses being offered. However, riding on the back of this success, we are seeing an increasing number of courses of low standard being offered, and it is right that we, the providers, should look to both the quality of our courses and its assurance if we are to survive the criticism that is being levelled in a non-targeted manner.

However, quality assurance is not specific to distance learning, and we are all subject to the scrutiny of the Higher Education Quality Committee (HEQC) in each area of teaching. Formal audit of departments is standard practice, and there is now monitoring and audit of overseas collaborative provision (HEQC, 1996). It is right, therefore, that we concern ourselves in the third area of delivery. The codes of practice developed for these assessments are valuable, and form a fruitful basis on which to also assess the quality of distance learning courses.

However, there are inevitable differences between courses where the student is present and those where all communication takes place at a distance. The most significant difference is time. This single factor overrides all other considerations, and can be seen as being responsible for all of the procedures developed specifically for distance learning.

Quality assurance
It is important that quality assurance of all aspects of a distance learning course is considered. We have identified three, equally important, areas:

- Curriculum and its assessment
- Handling of coursework and assignments
- Liaison with the students

It is possible to have variants of distance learning, such as the use of agents overseas for marketing and for providing tutorial support. Should this be the case, these would need to be considered separately. In this paper we concentrate on the three named areas and where possible, report on our best practice or practice of choice, indicating where we would prefer to see improvements to be closer to the ideal.
Curriculum and its assessment

Curriculum

It is to be expected that the curriculum, syllabi and course structure of any course would be developed according to a university’s standard practice, and that all aspects be subjected to the scrutiny of the relevant department’s board of study (or equivalent) in the first instance and validated and independently scrutinised by the university’s degrees committee. The course would also be monitored by external examiners for standard. In principle, these checks should be sufficient, but where third parties are involved in delivery or assessment, it is not always possible to assure the integrity of all procedures. It is also possible for one’s enthusiasm to permit corners to be cut in the name of expediency during the difficult stages of setting up such courses.

It is therefore our recommendation, and others’ (HEQC, 1996), that any distance learning course should be established on the syllabus of an existing full-time course. This entails the following significant benefits:

- Material can be tested for suitability of level and presentation
- Immediate feedback of problems by students allows revision
- Course can be subjected to established accreditation system (eg, the Engineering and Physical Sciences Research Council)

Assessment

Assessment is an integral part of any degree, and its role and how it is carried out must be considered very carefully in respect of distance learning. Assessment at a distance is problematic, and it is tempting to modify procedures to ease the administrative burden. Unfortunately this can only be to the detriment of objectivity and standard. Once again, an established equivalent full-time course provides the gold standard and simplifies matters considerably, as it will be closely scrutinised by existing university procedures. Such a course will also provide a measure by which to compare the distance learning students, so long as the identical assessment procedures are used. It is our opinion that this system also provides an absolute standard, such that students in the distance learning course may be awarded the same degree as the full-time students, making no distinction to the mode of delivery, and thus overcome the stigma of being awarded a degree by distance learning (and in some cases the fact that governments will not recognise such degrees).

Where no equivalent full-time degree exists, extra vigilance must be exercised to ensure high standard, as it is only too easy to adopt assessment procedures that are simple to administer. This might include a high percentage of coursework, with not only its inherent dangers of plagiarism, but also the high average and low standard deviation normally found in this type of assessment. Our working practice is to permit only up to 50% of marks to be achieved through coursework, with at least 50% being assessed by examination.

There must be confidence in examination procedures. Fortunately the British Council is sufficiently widespread as to make it reasonably possible for almost everyone to attend one of their centres to take examinations under high-quality invigilation. It is also possible to make use of good universities to undertake invigilation.

**Handling of coursework and assignments**

Coursework needs to be handled effectively to satisfy two main requirements:

- Checks against copying and cheating
- Effective and timely feedback to students

We guard against plagiarism by asking students to submit two copies of all work, one of which is retained for later inspection in suspected cases. We also copy 10% of the marked assignments for quality assurance of the marking procedures and to monitor the quality of feedback to students.

Each piece of coursework is accompanied by a submission form, filled in and signed by the student. The form includes:

- Date the work was posted
- Date the work was received
- Date the work was given to the marker
- Date the work was returned from the marker
- Date the work was returned to the student

We have found that each of these checks is essential for monitoring the quality of service being provided to distance learning students, as the only means of feedback is through the comments made on their assignments. The submission form also includes a declaration that the work is their own, so that they are made aware of the penalty of plagiarism. The submission form is used to record the student’s mark and the overall comments of the marker on the work. A copy of the form is retained, and the top copy is returned to the student. Detailed, worthwhile feedback should be included in the assignment itself, which is also returned.

It is advantageous if the same marker can be used for full-time and distance learning courses, but the burden can be significant. Accordingly procedures must then be introduced to ensure a consistent marking standard between markers. We would also recommend a second reading of assignments where the contribution of a single assignment is significant.

We also give each assignment a 'shelf life', beyond which date any student who has not submitted an assignment must undertake a different assignment. This prevents students from being able to take advantage of copying another’s work, as well as benefiting from any feedback that may have been given.
Liaison with students

The quality of liaison with students cannot be measured objectively as might be the case for the previous categories. However, it does affect the perceived quality of any course and its reputation, thus it is an important factor to consider. The problems are clear—students are situated in widespread geographic locations which prohibits travel to meet fellow students or tutors (assuming a truly distance learning course). There are two main areas that should be scrutinised for quality, the turnaround time of queries and audit trails on correspondence. Other factors would include support services for students, such as facilitating the setting up of self-help groups.

Turnaround time for queries

Distance learning students are totally reliant on a prompt response to queries and this cannot be overemphasised. It is essential, therefore, that a well-managed communications network is established to direct queries to the right person and to be responsible for ensuring there has been a timely response. The method of communication is unimportant, though clearly some forms are more suited to fast communications. Within Brunel University, the communication methods used were mainly phone, fax and email, with almost no communication by letter. Most courses still rely almost entirely on phone and fax, though not surprisingly, virtually only email was used by students in the Data Communications Systems course.

Our experience is that email is the most effective form of communication. Several of its features make it ideal for dealing with student queries:

- It is brief
- It is off-line
- It is quick to send and receive
- It is direct in delivery
- It can be collected anywhere
- It is cheap

Email has evolved into a communication technique with a style of brevity, which is valuable for answering student problems—no time-consuming polite formalities are required. As an off-line service, it can be answered at one’s convenience, without the disruption of a phone call, nor the irritation of not being able to find the person, nor the difference between the time when the student is working and when the tutor is available. Email is quick to send and receive, since the receiver need not necessarily be there to receive it at the time it is sent. It also has immediate delivery, which makes it possible to send a quick suggestion for an answer, but with an invitation for further clarification. Other significant advantages are that email can be directed to its recipient, it need not wait around in post rooms as might be the case with faxes, and many people with email have automatic notification of receipt. Email can also be collected from anywhere that has Internet or modem access, which makes it easy for staff to deal with email enquiries from home, or even if they are away from the university. It is also cheap; for many it can effectively be free, or at the most, the cost of a local call. Fax, on the other hand, requires a rather more organised system to ensure timely response.
Audit trails
It is good practice to retain hard copies of all student queries and their responses. Copies of faxes should also be kept. These records can serve several purposes: common questions can be identified and a frequently asked question (FAQ) or ‘support’ sheet produced or notes modified to clarify difficult points. Evidence is also retained for considering the results of border-line students.

Support and self-help groups
Although support and self-help groups are difficult to quantify in terms of quality assurance, they do affect the perceived quality of a course significantly and should be given high priority. Ultimately support will affect the success of individual students.

Peer support is as important to students as tutor support. Unfortunately the distance learning student does not have easy access to peers, and we recommend steps to encourage students to contact each other. It is important to remember that some students may wish to retain their anonymity, and permission to circulate personal information should be sought. Phone, fax and email addresses can easily be distributed, and we have found it useful to encourage students to socialise after examinations in centres where there are several taking an examination.

We are conducting a pilot trial of using low bit rate videoconferencing with our students to encourage peer-to-peer and tutor communication. For many of them it is also an instructive introduction to the practical problems of networking. Results to date have shown that the students are absorbed in the technology and performance rather than using it to help with problems they are having with their work or assignments. We anticipate it will take many months for the transition to occur.

Internet technology has many other roles to play in supporting the distance learning course. World Wide Web tools can be used to set up a FAQ page that can be constructed automatically from email queries and responses. Newsgroups can be used for students to help each other.

Other factors
It is pertinent to note other contributing factors to the quality of a distance learning course, and these would include the motivation of staff and support by administration.

Motivation of staff
It goes without saying that better work is produced by highly motivated staff. However, it is important to remember that a distance learning course will often be run in a department more used to undergraduate and postgraduate full-time courses. In such an environment, it is common for colleagues not involved in distance learning not to appreciate the time involved in these activities as no time is allocated formally and there are no students to see. Often, the outcome is that staff involved in distance learning are given the same workload and expected to cope with their other work without reward. This is highly demotivating. There can be no prescribed remedy, but staff devoting their time

must be rewarded accordingly, either with pro-rata reduction of other teaching activity or with financial compensation.

**Support**
Distance learning has its own peculiar problems brought about by the remoteness of the students. The most essential element to consider in supporting the distance learning activities of a department is time. However, most of the services of a university are optimised to deal with students on campus, an arrangement which normally functions on a much shorter time scale. The problem is not simply how to deal with administration, but also the damage that poor service can cause. For example, examination results may be withheld because there was a delay in sending an invoice and not because of unwillingness to pay tuition fees.

**Conclusion**
There is no one area of distance learning that can be singled out as the most important in terms of quality assurance. As providers we need to address all aspects of the course, if we, ourselves, are going to be satisfied that we have done a good job. There is a complex interplay between the separate elements that go together to make a course, and ignoring one will affect the others regardless.

We do have to pay particular attention to the quality as perceived by others, since this may have direct impact. But at the same time, we need to ensure quality of service to the students if a university’s reputation is to be maintained.

**References**