
IS OPEN AND DISTANCE LEARNING THE TAYLORISM OF THE TWENTY-FIRST CENTURY? THE CHANGING ROLE OF ACADEMICS IN OPEN AND DISTANCE LEARNING ENVIRONMENTS

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Is Distance Learning fast becoming the ‘Taylorism’ of the twenty-first century?

Are Universities in the process of becoming degree ‘factories’? Such a claim carries with it some elements of sensationalism but it would be dangerous to dismiss it without serious consideration.

Taylorism

Frederick Winslow Taylor, born in 1856, created a system of factory production that became known as “Scientific Management”. He introduced the division of labour to minimise the amount of time and energy consumed by the production process. Instead of a single, skilled labourer producing the whole product, the production process was divided into a series of different tasks, each one given to a separate worker. This meant that unskilled workers could be used in almost all the labour processes and that production could be achieved without increasing workers’ hours. Taylor discovered that by exploiting the labourer’s labour power to its maximum, far more could be produced. He decided to increase the wages of those workers who were highly productive whilst ‘casualising’ the role of others.

With the advent of the assembly line and the division of labour, knowledge of production techniques passed from worker to management, as did the power such knowledge held. Management came to hold the monopoly over knowledge and workers became detached from their work - they were no longer required to understand what they were doing. Taylor created a factory working at a constant optimum speed – producing with great efficiency – but loss of quality. When a skilled craftsperson is turned into a labourer, the value that they see in the work they do is measured in the time taken to produce an object, not in the quality of what they have produced – this effectively turns a skilled worker into a clockwatcher.

Now the skilled worker was no longer irreplaceable – one worker was much the same as another. Segmentation of the time intervals during which productive activities could interleave and overlap were introduced - not requiring co-presence of expert artisans – expertise was embedded into the process itself and control of it placed in the hands of those managing the process, rather than the artisan/craftsperson.

The coming of “Scientific Management” brought about the end for the craftsperson as it did not require a worker to have a ‘real’ understanding of their work – all it required them to do was to follow management instructions exactly. Skilled workers experienced a lowering of status, a lowering of pay, and alienation from their task. This qualitative and quantitative shift in their experience is highlighted by the fact that all Taylor’s principles “had the specific purpose of increasing productivity”.

Distance Learning and Academic Roles – Division of Labour and Separation of Tasks

Considerable changes in the academic role have been brought about by the increasing use of ‘virtual’ and ‘managed’ online learning environments for the delivery of distance education. By contrast with a traditional “one lecturer – one course”, ‘tell-and-test’ method of course preparation and delivery, the context of distance learning shifts the focus away from teacher-centric towards learner-centric learning, and requires a variety of activities and roles being performed in specific ways at specific times. No one academic member of staff can perform all of those ‘roles’. Best practice, mixed mode, distance learning requires a managed team of individual specialists to generate and deliver a course module/degree programme.

This shift in tertiary-level educational practice is analogous to the early production of specialist motor cars compared to the manufacture of those produced for the masses:

The earliest Lotus motorcars were produced by a single, expert enthusiast carrying out all roles of production from design, procurement of materials, manufacture, to testing and marketing. The model T ford, however, was never produced in that way. It was a committee product, with different specialists - small cogs in a big machine - contributing different parts to the whole product, in a process controlled by managers of production.

Previously, every lecturer was an artisan who created their own courses – they are now the retailers or distributors of courses manufactured by a degree production team. With the availability of reusable learning objects, a course designer can build a course module by mixing and matching learning objects created elsewhere by others and made available for delivery by organisations like LTSN (Learning Technology Support Network - in the UK), OKI (the Open Knowledge Initiative), and by MIT (Massachusetts Institute of Technology - in the USA). These are learning materials that are presented on the web for anyone to use – (video lectures, powerpoint presentations, and readings) ready for the user to ‘pick and mix’ to fit their own syllabus.

The academic module deliverer is now not necessarily the module author, but may be responsible for maintaining and amending course material. The emerging module tutors for mixed mode, distance delivery, will be hired on the strength of their performance skills, not on the strength of their ability to produce high level research. In contrast, the research “five stars” of the UK University system will be hired on their research skills, and will teach less and less. This is the amplification of a process begun at the Department of Computer Science, QMUL over five years ago.

The module tutor will now have to be much more aware of the diversity of the student population. Traditional 18-21 year old students have very little expectation of University education, other than a continuation of what they experienced at school. They rarely question why they have to learn material given to them by their academic instructors, providing a traditional “tell and test” mode of delivery. A diversified student population, however, composed of mature part-timers, company managers, people with 30 years work experience, have a culture of learning that is very different from the school leaver. The academic tutor is now in a position where they will have to develop a repertoire that ‘sells’ the module, in that they must create the incentive for these 21st century students to learn – and they have to create multiple incentives as the market is so diverse. Tutors will also have to be aware of cost of their product, so that their courses are competitive in the open market. Lecturers have to give thought to acquiring skills in presentation and ‘marketing’ which previously they would not have had to consider.

This qualitative and quantitative shift in the lecturing role is analogous to a major shift (in the UK) that has taken place in staff training and workforce skilling since the 1970s, with the collapse of the “apprenticeship” schemes in manufacturing and other ‘productive’ (as opposed to ‘service’) industries. Large companies shifted training away from expert, shop floor mentors and craftspersons to specialist “trainers” who did not need to be experts in the training they gave – rather they were qualified Human Resource/Professional Development trainers.

If creativity and expertise in subject content are taken away from the teaching lecturer, where else can they excel? Where else can there be a difference in the margin between a good and bad course provider? It can only be in performance – the presentation and delivery of the course. For the University lecturer, what was previously connected, is now in the process of being split apart.

Dispersal of Academic Expertise and Lowering of Academic Status

With the advent of e-learning and management of e-learning systems for knowledge transfer, academic expertise in the creation and delivery of degree level courses is dispersed and the position and status of lecturing staff are devalued. The traditional role of the university lecturer is split with the separation of the content creation process from that of delivery. The content author is alienated from delivering their material while the course tutor is alienated from researching and development of their subject, resulting in a loss of specialist knowledge, a loss of ‘real’ understanding, and also possibly, a loss of motivation..... Without a research background in their repertoire, it is difficult for the course tutor to maintain high quality course material necessary for the continual improvement of teaching. It

is the research active academic, performing one of the roles of course author, who will be required to provide high quality material for maintenance of the course module.

In this model, it is easy to make an association with those “unskilled” workers employed in the scientifically-managed, factory system of the early 20th century; assembly line education requiring the efficiency of the division of labour, resulting in the passing of knowledge of production techniques from the skilled worker to management; and with it, the power and status that such knowledge holds. The teaching specific academic will not be required to have a deep understanding of what they are doing; the skilled academic of former times is no longer irreplaceable; non-research active, academic teaching staff will experience a lowering of status, a lowering of pay, an increase in ‘timetabled’ vs non-timetabled work, and alienation from their task. The separation of academic teaching from academic research also drives a wedge between the measures used to reward performance. Research is measured by “outputs” (publications, funded projects) which the research academic has control of, whereas teaching is measured by extrinsic measures (eg contact hours, pass rates), outside of the tutor’s control.

Transition from Traditional Academic to Tutor of Mixed Mode, Distance Learning Modules

The transition from the role of the traditional, teaching and research active, university lecturer, to that of tutor of a ‘mixed mode’, distance learning module, is a difficult transition to make. The tutor has to adapt to changes in the method of course delivery; they have to learn to work well in team contexts for development of course modules; they are required to produce exercises and activities that are student-centred – and which facilitate problem-based learning, discovery learning, and reflective practice devolved to the learner. Instead of standing at the front of a lecture hall and presenting their lecture, they will facilitate the transfer of information, learning and communication, online. Instead of working on one course, they will work on parts of different courses – with bits of one course plugging into another – possibly for delivery at another university. They will not write all of the course material; they will not necessarily be the teacher or the evaluator/assessor of learning. Their roles, therefore, have been segmented and fewer are under their direct control.

Many lecturing staff at traditional UK universities will not make this transition with ease.

Module authors will have to develop and write course material for presentation online, rather than working from notes or what is in their heads. They will have to learn to take instructions from online learning experts skilled in module development, and fashion their materials appropriately. Inevitably, whatever their enthusiasm for new teaching modes, they will tend to resist such apparent regulation of their flexibility.

Module teachers will need to shift the focus from themselves as teachers, and concentrate on how the student learns to learn. There is also the difficulty, as degrees become more vocationally focussed, of familiarising themselves with employers’ skills requirements and expectations of learning – an area which in the past has been something of an anathema to academic staff at UK universities.

When the module is delivered, tutors will have to share the teaching experience with other team members: the course mentor, and senior administrative staff, employed to ensure that the teams are adhering to “operational” guidelines.

All of these experiences will, for most academic staff from traditional universities, enforce a steep learning curve, and, for some perhaps, enforce a pathway that they feel ill equipped and/or are unwilling to tread. In addition, the acquisition of pedagogic skills has been under-valued in traditional UK universities. In the past, academic staff have not been required to take courses in teacher training – the prevalent assumption being that research-active staff acquire teaching skills through “osmosis” from senior academics. Whatever the traditional position, universities are now faced with the huge responsibility of provision of high-quality training programmes for course authors and course teaching staff about to be engaged in the development and delivery of mixed mode, distance learning programmes. In an effort to accommodate the increased pedagogic demands of widening participation and diversification of degree delivery requirements, there has been some recognition, in recent times, of professional development needs for academics, with the advent of teaching accreditation, TQA, PGCAP; and the relatively late introduction of national initiatives like ILT, HE Academy, LTSN.

In modern environments for provision of distance education at degree level, it is apparent that these roles cannot be carried out by academic staff acting alone. The skills and competencies required are simply unachievable by staff whose other duties require high profile, academic research combined with administration. An alternative model, however, has to locate these divisions of responsibility amongst staff involved in delivery of distance learning in ways which permit both efficient use of expensive staff resources, excellence in pedagogic practice and student support, and a structured career pathway for those engaged in those separate responsibilities.

This paper presents a model of change in academic practice which endeavours to ensure effective pedagogy for distance learners. It takes as its example, the delivery of distance learning modules to populations of workplace and home-based students, undertaking first-degree level studies, with infrequent, face-to-face tutor contact.

Beyond the benefits to distance learners of changes in academic tutor roles, there remains the question of how to make this an attractive model for the academic provider.

Adaptation of Academic Tutor Roles for the Delivery of Open and Distance Learning, Modular Degrees to Part-Time, Mature Students

With the shift from the craft to the industrial model of academic activity, we have the advent of Taylorism in Higher Education. Managers now negotiate with academics regarding how much time is spent on each of the distance learning roles. With the introduction of widening participation, the further increases in numbers of students at UK universities, and the introduction of mixed mode distance education provision, we have the sub-division of academic roles amongst a variety of specialist staff. Universities are able to produce degree programmes to the masses with greater efficiency, but the dangers, of course, are a lowering of higher educational standards, the lowering of academic tutor status, and the lowering of value of a degree qualification.

In the mixed mode, distance learning model currently employed at the ODL Unit, Queen Mary, the academic tutor roles are separated in the following ways:

The Academic as Instructional Designer:

The instructional designer role is performed by academics and module development teams. The content of a course module is most likely to be derived from the work of a research active academic staff member while the syllabus, learning objectives and forms of assessment are negotiated with the module development team. The learning objectives and forms of assessment are properly integrated into subject curricula, so that the requirements of academic input match the diverse modes of delivery and different learner populations taking the course module. The team has to ensure that assessment is both fair and discriminatory in relation to student performance; that achievement by students is suitably rewarded; that conceptual, technical and practical difficulties in fulfilling aims and objectives are circumvented in the delivery of learning modules, and that synchronous and asynchronous interaction between students and teaching staff compensates adequately for lack of face-to-face contact.

Instructional design now has to accommodate the constraints of distance and diversity in ways that the traditional “chalk and talk” methodology never did – eg our practice at the ODL Unit, QMUL, is to separate development of course modules from that of delivery, so that the original academic author perhaps delivers the module only once and, thereafter, it is managed and run by teaching specific staff (the content provider only being required when learning material and forms of assessment need to be updated and validated).

Module development team members refine the structure of course content provided by the research active academic so that it meets online design parameters; they refine activities and exercises; collate and check deliverables; mount prepared coursework. They also implement, test, and evaluate the module on selected mentors acting as module ‘guinea pigs’. They ensure that learning objects conform to IMS standards (Instructional Management Systems) and supply the evaluation data required for university level QA processes. To summarise: design, implementation and delivery are now separated into different roles; the academic specifies what, the implementers determine how, and the operational managers determine when.

The Academic as Tutor:

The tutoring role is performed by teaching staff but not in isolation. The success of the ODL teaching model is heavily reliant upon the support and cooperation of a variety of other staff members. Teaching assistants support the module tutor by covering the day-to-day monitoring of student discussion forums, and replying to student academic/technical queries. They are responsible for prompting students to draft responses to activity / discussion tasks and to post them online to mentors, via the discussion forums; they carry out the ‘first marking’ of coursework assignments, and share with the module tutor, responsibility for running several sessions for online questions/answers – tutorial-like sessions using ODL conferencing software set during critical points in the run of a module.

The module tutor, instead of the traditional “hands on” role of the university lecturer, acts more as a manager coordinating specific tasks during the module run. They have a student management role in that they monitor low student online activity, and co-ordinate with mentor support over student problems; they are required to check the digest of mentor reports identifying student activity and problems, and if corrective action is needed, they advise mentor support, identifying problem students / issues and action to be taken; they prepare and check coursework assignments before release on the VLE; they issue schedules of deliverable requirements to teaching assistants and the mentor support team; they allocate first pass marking of coursework submissions and marking schema to TAs and are responsible for producing coursework assessment descriptors; they check consistency of marks awarded, second check coursework marks, and then collate them.

Each course tutor provides a Lesson Plan giving details of topics and activities to be covered during the run of the module. This forms a week-by-week breakdown of classroom sessions referring to the online syllabus. The module tutor checks that coursework assignment guidelines are clear, and that the schedule of coursework deliverables does not clash with statutory holidays. The tutor is also responsible for providing Student Attendance Reports and Learning Development Proformas.

The latter ensures that the syllabus is covered; that the students’ online work matches with that described in the Lesson Plan; and that any problems the students may have had are identified.

The tutor makes recommendations to the module development team for improvements to module content, with a suggested deadline date. In addition, tutors and/or teaching assistant(s) run four, one-hour, online question/answer sessions which are set at critical points during the delivery of the module.

The Academic as Examiner:

The emerging practice of requiring tutors to take responsibility only for summative assessment, while formative assessment is to a greater extent devolved to peer review, self- evaluation and the inputs of mentors (monitoring/providing feedback) is yet another example of the advent of Taylorism in Higher Education.

Formative assessment not only provides feedback on performance to learners, it also provides guidance to the teacher as to how they might need to modify their lesson plans for the remainder of the module in order to accommodate any necessary adjustment to meet learner needs. Although assigned work is designed by academic staff who may not be heavily involved in teaching, its administration and some of its evaluation, is devolved to teaching-specific staff as those roles require pedagogic rather than subject-specific skills.

Summative assessment now has to meet external, professional development criteria. This requires the module examiner to take into consideration: skills mapping, learning outcomes, and the mapping of academic targets to professional requirements. It leads to quantitative performance measures which require finer-grained metrics of learner performance than traditional “final examinations”. It is not always the case that traditional academic staff are most able to map academic performance measures to professionally accredited requirements, and even when competent, many traditional academic staff find the task contrary to their academic goals for a course.

The Academic as Manager:

The academic as manager is one amongst a team of managers deciding what is being delivered, how it is being delivered, and when it is being delivered - eg repetitions of mixed mode, distance learning delivery may be decided by an Operations Manager, in consultation with a Technical Manager, and the academic as Module Manager.

The diversity of delivery methods and separation of roles places greater demands on the module provider (when they are both part of the module development process and also module tutor) to engage with development and delivery teams, so that class management at a distance is effective, and student support matches the requirements of the variety of target populations as far as is possible.

The Academic as Mentor:

Pastoral and advisory roles of academic staff have been diminishing in traditional universities owing to the massive increase in student numbers. In ODL programmes, we have separated out this role entirely, employing hourly paid, part-time mentors, to fulfill that aspect of the traditional lecturer's work.

Evaluation and Conclusion

The ODL programme at QMUL - a traditional college of the University of London, one of the big four colleges of the largest university in the UK - exists to try to satisfy two apparently contradictory objectives:-

- 1) To widen access to populations of students who would otherwise be unable to achieve degree level education.
- 2) To maintain the high quality and academic status of University of London degrees wherever in the world they are delivered.

These objectives conflict in so far as the traditional prestige of University of London degrees has rested upon the high calibre input of internationally renowned, research active, academic staff; yet as argued in this paper, such academics are, on the whole, neither prepared nor able to meet the needs of widely diverse, remote learners, in distance education contexts.

In separating out the differing roles of staff in preparation and delivery of learning opportunities to these diverse student populations, it is always a question of balancing between the competing objectives mentioned above. How well this balance can be achieved for a traditional university such as QMUL, may only be assessed in terms of the following material:

- 1) retention and progression of distance learners by comparison with traditional on campus students.
- 2) benefits to academic staff participating in development and delivery of distance learning modules.
- 3) reduction in cost to the university per capita.
- 4) comparison with gender, ethnicity, social and economic profiles of distance learning intakes, with traditional intakes to QMUL degree programmes.

This paper is not, however, the place to present this evaluative data.

In the above, I have explained the meaning of the process of Taylorisation and its relevance to the transition of the traditional academic role; I have demonstrated how that role has been sub-divided into a variety of differing specialist roles to accommodate the delivery of mixed mode, distance learning degree programmes; I have shown how academic expertise in the creation and delivery of degree level courses is being dispersed, and the position and status of lecturing staff devalued with the advent of e-learning and management of e-learning methodologies for knowledge transfer; I have explained how difficult the transition from the role of the traditional teaching and research active, university lecturer, to that of tutor 'of a mixed mode, distance learning module, is to make. I have also explained how the mixed mode, distance learning model currently employed at the ODL Unit, Queen Mary, separates out academic tutor roles.

Explanation of Terms

1. *Online Learning* is a generic term that can include Distance Learning, Blended Learning, and Online Instruction. It is mostly asynchronous; is not necessarily remote; and can be instructor or student-centred.
2. *Blended Learning* is a mixed methodology of traditional, face-to-face lab/classroom sessions, and distance learning sessions where material is made available to a student via a VLE. The face-to-face sessions are obviously co-present, mostly synchronous and can be either student-centred or instructor-led. The distance learning sessions are remote and mostly asynchronous.
3. *Distance Learning (interspersed with residential components)* is a mixed methodology of distance learning (see blended learning) and some intermittent residential components where face-to-face teaching sessions take place. The residential components are co-present, mostly synchronous and can be either student-centred or instructor-led.
4. *Synchronous Learning* (CSCL Computer Supported Collaborative Learning) mainly student-student interaction; *Synchronous Instruction* (CSCI) mainly a 'simulation' or replication of classroom contexts online (whiteboard, video, document projection).
5. *Distance Learning* is remote, mostly asynchronous and student-centred (ie learner managed and not instructor led). It does not have to take place online (eg distribution of work books and cds).
6. *Module* is a course unit, delivered online.

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