

Enhancing Higher Education Accessibility Through Open Education and Prior Learning

Carolyn N. Stevenson
Purdue University Global, USA

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E-mail: cust@igi-global.com

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Chapter 1

Open by Degrees: Personalization at Degree and Module Level

Peter Geoffrey Taylor
The Open University, UK

Helen Cooke
The Open University, UK

Andy B. Lane
The Open University, UK

ABSTRACT

This chapter focuses on the history, development, and perceived value of The Open University UK's multidisciplinary 'open' qualifications at undergraduate and postgraduate level, together with the development of multidisciplinary 'open box' modules. It addresses the debate around the coherence and acceptance of such personalized programs of study. As well as identifying some of the challenges facing multidisciplinary learners, it describes how open educational resources (OERs) can be used by students to negotiate their own learning experience. The chapter concludes by outlining the benefits of introducing multidisciplinary modules based on OERs and other types of non-formal learning into the curriculum.

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INTRODUCTION

There is increasing evidence to suggest that real world problems do not fit into subject or discipline classifications, and that a multi-dimensional approach is required when knowledge is applied in the wider world. Cross-disciplinary solutions are increasingly being recognized as a way to address key global challenges, as highlighted in the UK government's research exploring the Future of Work and how jobs, and the skills needed in the workplace, will change by 2030 (UKCES, 2014). The provision of interdisciplinary learning and teaching provision is therefore becoming increasingly relevant for institutions to prepare students for a changing world.

Multidisciplinary 'open' qualifications, such as *The Open University UK's BA/BSc (Hons) Open degree (hereafter referred to as 'OUUK Open Degree')*, provide a valued alternative to subject-specific qualifications by offering students the opportunity to study a flexible, personalized qualification where they can choose the modules they wish to study, constrained only by the need to study a required number of credits at each level or stage of study¹ (Cooke et al, 2018). To this day, the OUUK Open Degree continues to allow students to construct a personalized qualification from a range of undergraduate modules across all faculties in the University, enabling them to choose a flexible study path within a specific stage of study which focuses on personal interests and/or career-related skills in a multidisciplinary way.

Allowing students to study across a range of chosen subjects sits at the very heart of the OU's original mission to provide, "*a broader type of education than that provided by a usual degree and an interdisciplinary one*" (Open University Planning Committee, 1969). The OUUK Open Degree has evolved throughout its history to meet changing circumstances, yet it is as relevant today as it was in the 1970s and remains unique within the UK higher education sector. From a single 'General BA' (as it was originally known), the OUUK Open Degree has more recently evolved into a full portfolio of multidisciplinary qualifications that enable students to graduate at undergraduate level with a Certificate of Higher Education Open, Diploma of Higher Education Open, a BA or BSc Open degree (with or without honours), a BSc (Hons) Combined STEM degree; and at postgraduate level, an MA or MSc Open degree. As such, the OUUK Open Degree has played a significant role in the history of The Open University and the delivery of its mission to be "open to people, places, methods and ideas"².

Historically, the modules available to students on these qualifications have been drawn from the full range of the OUUK's curriculum. Initially, there were few cognate modules in any discipline (most modules are 30 or 60 credits, where 360 credits are required for an undergraduate degree and 180 credits for a masters), but these have grown over time as named qualifications were introduced. This has meant there have been limited opportunities to make connections between the subjects

studied within the qualification structure, and it is often up to the student to make those connections in terms of the coherence of their multidisciplinary degree. This includes the value of such a degree to employers, although it is acknowledged that university-wide skills and employability frameworks do encourage some elements of integration. More recently, in response to the recognition of interdisciplinary learning and teaching provision in preparing students for a changing world, the OUUK has developed new models of qualification and module design for students choosing to study across subject boundaries, at both undergraduate and postgraduate level. These models build on a strong foundation of expertise in creating open educational resources, a history of recognizing the value of multi/interdisciplinary study within and across modules and a social mission that champions open access to education.

BACKGROUND

The Open University UK (OUUK) was granted its Royal Charter in 1969 and was established by the UK government to provide a 'second chance' to adults who, for whatever reason, were unable to attend a 'traditional university' (Weinbren, 2014). As the first ever 'open' university (Lane, 2015) it had many unique characteristics, including open entry (no prior qualifications needed), operating through distance learning and offered a single undergraduate degree qualification – the multidisciplinary OUUK Open Degree, which was available with and without honours.

The Open University's mission is to be "open to people, places, methods and ideas". The OUUK therefore has an open entry policy to students with no requirement for previous educational achievement. It is "open to places" in that anybody, anywhere in the world, can study with the University, including those in secure institutions and military establishments. It is "open to methods" in that it started life as a correspondence university where students studied primarily at home using written texts enhanced by radio and television broadcasting, with limited face to face contact at local tutorials and residential schools. As technology developed, the University incorporated new ways of making the curriculum more accessible, for example through VHS cassettes, optical discs and subsequently interactive CD-ROM based activities. Although online delivery of the curriculum started in the 1990s, it wasn't until the mid-2000s that all OUUK modules had their own virtual learning environment (VLE). This continual adaptation has resulted in the replacement of physical items (text books, DVDs, home experiment kits) with online versions, such as interactive texts, simulated experiments and augmented reality. The move towards more online provision has also provided the means for students to more readily communicate with each other and tutors, as well as providing access to a wealth of online resources beyond the module materials. As a result, the OUUK has

developed into one of the most internationally acclaimed e-universities, where all teaching, learning and personal interactions can be achieved online (Weinbren, 2014).

At the time the OUUK was founded, only around 10 percent of the UK population went to university and widening participation was very much part of the UK government's agenda. To this day, The Open University remains an important engine of social mobility in the UK, supporting a large proportion of the UK's part-time students who do not have the usual university entrance requirements, and around 40% of all UK part-time students with disabilities. The majority are also classified as being mature students; being aged 25 or over when starting their studies and predominantly in work (see Table 1). However, as the University is 'open' to all students, it has no prerequisite study requirements before students start studying towards one of its undergraduate qualifications, with the exception of some degrees recognized by professional bodies that have specific entry requirements.

Table 1. Facts and figures on Open University students, 2017/18³

Headline	Figure
Total number of directly registered students in 2015/16	125,719
OU's proportion of part-time undergraduates taught, in UK sector	41%
Percentage of directly registered OU students already in work	76%
OU undergraduates who had no previous higher education qualifications on entry	76%
OU UK undergraduates who live in the 25 percent most deprived areas	23%
New OU undergraduates aged under 25	34%
Students with declared disabilities	20%
Proportion of students with Credit transfer awards for prior study	5%

The creation of the OUUK's curriculum was strongly influenced by the 'Robbins Report' (Committee on Higher Education, 1963) that not only recommended immediate expansion of the number of universities and university students but also that, "*a higher proportion should be receiving a broader education for their first degrees.*" This suggestion was developed further by a UK government report that recommended a "*balance between specialized and more general studies in relation to career needs*" (Committee on Manpower Resources for Science and Technology, 1968). As a result, the Open University Planning Committee (1969) proposed that:

The degree of the Open University should, we considered, be a 'general degree' in the sense that it would embrace studies over a range of subjects rather than be confined to a single narrow speciality.

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The founders of the OUUK acknowledged the suggestion made in the Robbins Report that students should be allowed to postpone their choice of 'speciality' until the end of their first year. As a result, students were required to start their study at Stage 1 by taking two Foundation courses, which were offered in Arts, Mathematics, Science, Social Science and Technology, thereby introducing them to a mixture of subjects at the start of their studies.

In reflecting on his time as the OUUK's first Vice-Chancellor during the 1970s, Walter Perry (Figure 1) supported this multidisciplinary approach and the aims behind the 'General BA' (as the OUUK Open Degree was originally known) by stating that:

The usual criticism...is that a student who has a free choice of courses that [s]he can take credit for is liable to end up with what has been called 'a miscellaneous rag-bag of credits' – a second rate degree with no internal coherence. Such people argue strongly that teachers must determine the pattern of studies that is most suited to the individual student and that direction of this kind is of the essence of education. Opponents of this view, on the other hand, argue equally strongly that a student is the best judge of what [s]he wishes to learn and that [s]he should be given the maximum freedom of choice consistent with a coherent overall pattern. They hold that this is doubly true when one is dealing with adults who, after years of experience of life, ought to be in a better position to judge what precise studies they wish to undertake... We therefore determined to put an absolute minimum of constraint upon the individual student in his[her] choice of course. (Perry, 1976, p.61)

Perry also described how the earliest cohort of OUUK students responded to this multidisciplinary modular system and supported the reasoning behind an initial single award of the General BA by saying that:

In practice it is remarkable how conservative our student body has been and how coherent are the patterns of study that have been chosen. It is extremely uncommon for a student to take a set of credits which any academic could call a miscellaneous rag-bag. One can in fact trust adult students not to abuse their freedom of choice. (Perry, 1976, p.61)

The account above not only highlights The Open University's original aims to provide a flexible choice of curriculum leading to the award of a degree; it also highlights the difference between conventional students, who in many ways have limited life experience and where guidance through their degrees is important, and adult learners, who already have a range of skills, knowledge and life experiences, and for whom their choice of curriculum reinforces their personal interests and/or career aspirations.

Figure 1. Vice Chancellor Walter Perry (shown left) and Margaret Thatcher looking at Open University study materials, January 1973 © 2020 The Open University. Used with permission.



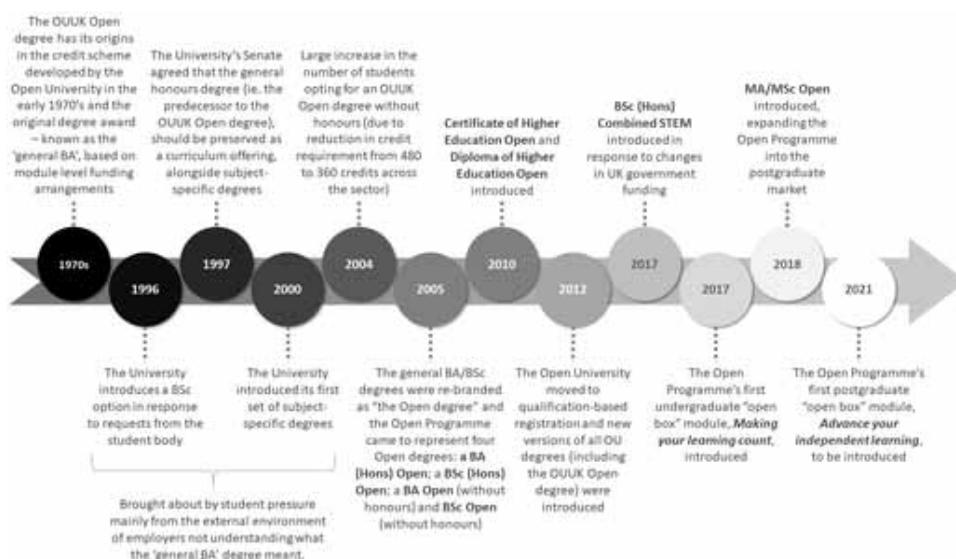
In recent years, students studying an OUUK Open Degree have accounted for around 20 percent of all OUUK students (almost 25 percent in some subject areas). The diversity of the OUUK Open Degree student body broadly reflects that of the University as a whole, but with slightly higher proportions of students with a disability and students with below-standard university entry qualifications. A greater number of OUUK students therefore graduate each year with an OUUK Open Degree compared to popular subject-focused degrees in disciplines such as psychology, humanities and social sciences and over 250,000 alumni have graduated with an OUUK Open Degree since 1971.

To this day, the OUUK Open Degree remains the University's largest degree in terms of student numbers and module choice, and has now been available for over 50 years, despite specialized named degrees being introduced in 2000, as shown in Figure 2. The tension between strictly managed subject-focused degrees and the flexibility of the OUUK's Open Degree has surfaced many times. The authors consider the

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prevalence of single-subject degrees to be a product of academic interests reflecting societal factors and, in particular, the professional classes. As professional bodies and learned societies have expanded in number, so has the emphasis on ‘narrower’ fields of study. This is reflected in the continued organization of education at all levels into subject-based silos. The OUUK acknowledged this tension with the introduction of named degrees in 2000. However, there continues to be a strong commitment to maintaining this multidisciplinary curriculum and to continue expanding the opportunities for students to create their own bespoke qualifications and, more recently, their own bespoke modules, as described later in this chapter.

Figure 2. History of the OUUK Open Degree © 2020 The Open University. Used with permission.



In 2018, the OUUK expanded its multidisciplinary curriculum into the postgraduate market, with the introduction of an MA/MSc Open (hereafter referred to as the ‘OUUK Open Masters’). Although the OUUK has offered masters level postgraduate qualifications for most of its lifetime, these have tended to specialize in specific subjects, unlike at undergraduate level.

However, over the last 20 or 30 years, the nature of masters degrees in the UK has changed as they have become more popular. Originally, they provided a student with the opportunity to study a particular subject in more depth or a specific aspect of a subject. The motivations of students to study for a masters degree were often to be able to continue with further research, such as study for a doctorate, or to

prepare them for a specific job where subject expertise was essential. Nowadays, there are so many undergraduates looking for employment, a masters degree is seen as providing an edge in the competitive job market. Some commentators have gone as far as to suggest that a masters degree has replaced the bachelors degree in terms of the 'expected' level of education that employers demand (Blagg 2018).

The introduction of the OUUK Open Masters was not only a result of increased interest from potential students, but also the fact that masters qualifications are becoming increasingly important to employers, some of whom are now increasingly looking for employees with broad- rather than narrow-focused subject knowledge. It is recognized that the OUUK Open Masters is not a substitute for specialized training, which often concentrates on a particular vocation; instead, it is intended for students with broader interests in several fields, or those whose career goals do not match fully with a single identifiable academic area or subject-specific degree. Emphasis is placed on a constantly changing society, where new career interests can extend across traditional discipline boundaries and specializations. The OUUK Open Masters therefore provides an opportunity for students wanting to study a postgraduate qualification that offers a breadth of skills and knowledge across traditional subject boundaries. The qualification is also relevant to graduates who have previously studied an interdisciplinary or multidisciplinary undergraduate degree (such as an OUUK Open Degree), and adult learners whose subject background may be different to their current planned career pathway.

However, unlike the undergraduate OUUK Open Degree, students do not have the freedom to choose any masters level modules from across the curriculum. Instead, postgraduate modules are arranged into a small number of cognate groups and students can study 180 credits within a group to complete the masters degree. Alternatively, students can choose to study 120 credits from within a group and take up to 60 credits from any other study area. Therefore, students can personalise their OUUK Open Masters to meet their vocational and personal interest needs. In summary, the OUUK's multidisciplinary 'open' qualifications continue to cater to a broad range of students at both undergraduate and postgraduate level, including:

- Students who want to start with more than one subject to see which ones they enjoy and wish to focus on at a higher level.
- Students who wish to combine a set of subjects not catered for by The Open University's subject-focused degrees.
- Students who want freedom from having to take some of the compulsory modules associated with existing subject-focused degrees.
- Students who started off with the intention of a subject-focused degree but in the course of their studies have decided they want more flexibility in their studies or wish to change their subject focus.

CHALLENGES FACING MULTIDISCIPLINARY LEARNERS

Subject Choice

An analysis of student choice within the OUUK Open Degree suggests there are no common pathways or combinations of modules, leading to a plethora of individual, personalized curricula. Whilst the study of a single-subject degree establishes a student's ability to study one subject in depth, institutional evidence suggests that almost half of OUUK Open Degree students study two, three, or even more subjects, which demonstrates flexibility and skills development across more than one subject. In any given academic year, over 300 different modules are studied by OUUK Open Degree students across all disciplines. Although this breadth of choice is one of the greatest strengths of the degree, creating a coherent set of modules may be considered a greater challenge for OUUK Open Degree students than those studying towards a pre-determined pathway of modules in a named degree. As described later in this chapter, incorporating Open Educational Resources (OERs) into more formal curriculum enables students to experience studying different topics before committing to a particular subject, as well as providing greater educational enrichment.

However, given the complexities around module choice and coherence, it is impossible for the OUUK to provide each student with detailed guidance relating to the similarities and differences of the specific combination of subjects they have studied or wish to study, although careers-based advice can provide some help to the student in navigating their way through the curriculum. Generic advice on what it means to be a multidisciplinary learner can be provided, along with strategies for coping with study in more than one subject. However, this still means that the onus is predominantly on the student to take responsibility for developing connections between the subjects they study. Rather than having a carefully guided pathway through a subject-specific degree with a small number of module options, each tailored to meet the needs of the core curriculum, multidisciplinary students have to navigate their own way through these different subject-specific practices and conventions, many of which have evolved to simply create an aura of subject expertise, therefore hindering a multidisciplinary student's learning.

At an undergraduate level, OUUK Open Degree student satisfaction results are generally in line with students on subject-specific qualifications, but feedback consistently suggests that a greater emphasis is required on providing better information, advice and guidance to OUUK Open Degree students around making informed study choices. This suggests that, although they value the opportunity to study a wide range of different subjects, they can often feel overwhelmed by the amount of choice available.

Depth of Knowledge and Understanding

Although the benefits of multidisciplinary study include a wider *breadth* of knowledge and understanding than students on subject-specific degrees, that breadth can often come at the expense of *depth* in a particular subject area. At the OUUK, there are no consistent patterns to suggest that multidisciplinary students perform better or worse on the same modules than students on subject-specific qualifications in terms of pass rates, which are monitored on an annual basis. In fact, not only do module pass rates appear to vary slightly between students on different qualifications taking the same modules, some marked differences have also been observed in terms of students choosing to start the same module at two different points in the academic year (i.e. in February and October), which further complicates analysis and interpretation of the data.

Nevertheless, there are small differences in level of achievement between multidisciplinary students and subject-specific students as shown by their degree classification distributions. This pattern of distribution is often observed across the UK higher education sector for students on multidisciplinary degrees and reflects the fact that the multidisciplinary learner does not always have the depth of study to rely on when undertaking higher level study.

Discourse and Language

One of the largest hurdles for multidisciplinary students is coping with the specific discourse used within different subjects, especially when they are in very different discipline areas. As this discourse reflects the way that knowledge is built within a subject – and the specific language that is used – it is up to the student to develop an understanding of this early on in their studies, albeit supported by their tutors. For multidisciplinary students, this can often become more challenging as the complexity of the discourse develops through higher levels of study, as they will not have as complete an understanding of an individual subject’s discourse as a student studying in one subject area.

Although gaps in the subject knowledge of multidisciplinary students can sometimes be addressed through providing additional material, the challenges around understanding discourse are often more problematical. One aspect of this is the use of specific language within a subject. Subject areas not only develop new words as a proxy for knowledge and ideas, but they also adopt existing words to take on a specific meaning within the context of the subject. The OUUK’s virtual learning environment (VLE), developed using Moodle, has a glossary function that allows the language that is used and developed within a module to be listed with relevant definitions. Access to such glossaries for multidisciplinary students provides one

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solution to tackling the problem of subject-specific language. However, other aspects of subject definitions can be linked to academic tradition, for example, a specific referencing style, rules for incorporating quotations and writing styles. Whilst it is important for all students to complete their degree with an understanding of what is required for the specific subjects they have studied, much of this detail can be introduced in the later stages of their studies. As a result, the OUUK uses common means of referencing and other academic traditions across all subject areas when students start their studies, so that students understand the need for the process before detailed variations are elaborated on later in their journey.

Assessment

Another challenge facing multidisciplinary students is the diverse range of assessment requirements across modules in different subjects. At the OUUK these include:

- Tutor-marked assignments during the study of the module.
- Computer-marked assignments during the study of the module, usually using a range of online quiz types (for example, multiple choice, drag-and-drop).
- End-of-module invigilated examinations.
- End-of-module extended assignments.

In each type of assignment, there is a wide breadth of different tasks that the student may be required to undertake. For example, there may be essay-based tasks of various lengths, mathematical manipulation tasks, reflective tasks and problem-solving tasks, to name but a few, and the nature of the task is specifically related to the subject-based learning outcomes of the module. In addition, there are also specific subject-based assessment types which require submission in a non-text format for some modules, such as audio in language modules and video or still images in design modules. As a result, multidisciplinary students may be disadvantaged by being exposed to a range of different assessment activities throughout their qualification, whereas students on subject-specific degrees may have had the opportunity to practice these assessment types in earlier modules.

To enable some coherence across the curriculum, the OUUK has a Levels Framework, which is an institutionally agreed set of qualification descriptors for each stage of study that aligns with external qualification and credit frameworks published by the UK Quality Assurance Agency for Higher Education (QAA) (including separate frameworks for England, Wales, Northern Ireland, Scotland and Europe). These descriptors outline the performance and achievements expected from all OUUK students on completion of their studies at each stage. The Levels

Framework also integrates additional skills championed by the University i.e., digital information literacy (DIL), employability and academic literacy and learning.

RECOGNIZING PRIOR Certificated LEARNING (RPCL) OF MULTIDISCIPLINARY STUDENTS

From the very beginning, the OUUK has operated an institutional credit transfer system, aligned to the national Credit Accumulation and Transfer Scheme (CATS) and the European Credit Transfer and Accumulation System (ECTS), where a student's previously earned certificated higher education credit is mapped onto OUUK modules to determine how much credit is valid for them to transfer into a particular qualification.

Since the OUUK Open Degree allows students to study modules from almost all areas of the University's undergraduate curriculum, it allows the greatest flexibility in the recognition of certificated credit obtained at other institutions, whether in the UK, Europe or even beyond. Similarly, the OUUK Open Masters degree allows the maximum amount of credit transfer permitted within a cognate subject group. In both cases, students may have started studying at a conventional university but found the subject chosen did not meet their expectations or found more traditional face-to-face education was not to their liking. As a result, they welcome the opportunity to study an OUUK qualification, as they can focus on a different subject and yet still have their initial study recognized as 'general exemption', meaning that they have been exempted from studying the specified amount of credit at the given academic level, rather than being exempted from specific OUUK module(s) (known as 'module exemption').

However, despite being a valuable opportunity for students to use previous certificated study towards an OUUK qualification, this traditional credit transfer system only recognizes the formal achievement of credits from a validated institution. In addition, there are now many models of informal or non-formal non-accredited study, or partly recognized study, that help prepare people for formal study and provide significant enrichment to their formal studies. Most of these opportunities are delivered as open educational resources (OERs) (Lane, 2013; Weller et al, 2017), and the OUUK delivers this through its own OER platform, OpenLearn⁴, and through its co-owned Massive Open Online Course (MOOC) platform, FutureLearn⁵.

These free courses include non-tutored Badged Open Courses (BOCs)⁶. Where the study undertaken can be accredited through specially designed taught modules, these free courses also deliver assessment for credit or recognition of prior learning (Law et al, 2015; Law, 2016). In some cases, these courses have been hosted on the University's community OER website, OpenLearn Create⁷ and developed with

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partner organizations (such as the Centre for Voluntary Sector Leadership), which are able to provide some study support to learners to gain the skills and confidence needed to go on to formal, accredited OUUK modules. As a result, free (and often online) courses provide an opportunity to add another layer of flexibility and personalization for OUUK students, with the study and completion of these courses detailed on their student record.

At undergraduate level, these free, non-formal courses are particularly helpful to OUUK Open Degree students, as they provide direct experience of the subject matter (and of online learning) of modules they may wish to study, to supplement the formal description in the online prospectus and to ‘extend’ the scope of their chosen pathway through their OUUK Open Degree. This also provides them with an additional opportunity to demonstrate to employers the benefits of studying across different disciplines (Cooke et al., 2018) and research undertaken at the OUUK shows that this transition from non-formal to formal learning can have a positive impact on students as they progress through their studies (Law, 2019).

At postgraduate level, learners have already achieved an undergraduate degree and are using OUUK courses from OpenLearn and FutureLearn, as well as external platforms such as Coursera and Canvas, to keep their professional development up to date, as well as learning for personal interest and enjoyment. These students are already familiar with the landscape of the OER world, are more confident online learners and may therefore be seeking an opportunity to study across different subjects at a more advanced level.

THE BENEFITS OF AN ‘OPEN BOX’ APPROACH

With the growth in free courses and benefits described above – and to address some of the challenges for multidisciplinary learners highlighted earlier in the chapter – the OUUK has developed a new model of ‘Open Box’ curriculum which provides students with an opportunity to draw on, and apply, knowledge and skills developed across multiple subjects and non-formal platforms towards formal, credit-bearing modules, including the recognition of prior experiential learning (RPEL). This also enables students to access higher education in a low risk way, by moving from the completion of non-formal learning to gaining credit, through following a program of formal assessment.

In October 2017, a new OUUK introductory undergraduate module was introduced, titled *Making your learning count*, which allows students to use OER study as the basis for a personalized, interdisciplinary module that, on successful completion of the module’s assessment criteria, can contribute 30 credits towards an OUUK Open Degree. Students can also include short credit-bearing modules, non-accredited

learning (NAL) modules and massive open online courses (MOOCs), providing they are appropriate to the level of study. Although the majority of study time is made up of a specified number of hours spent studying OER materials, the module also provides specific content relating to understanding the benefits and differences between multidisciplinary and interdisciplinary study, in addition to study skills development, employability skills and academic literacy.

The OUUK is now applying this model at postgraduate level, with a new 30 credit masters level module, *Advance your independent learning*, due to be launched in early 2021. This module will be part of the multidisciplinary OUUK Open Masters degree, where students are able to personalize their studies to align with their personal and professional development goals. *Advance your independent learning* will also provide a synoptic opportunity for students to consolidate their learning across different disciplines, where the student (in partnership with the tutor) can specify their field of study and manage the breadth and depth of the topics explored. To facilitate RPEL, in addition to OERs, MOOCs, non-accredited learning and continuing professional development (CPD) courses, this module will also allow students to count reading books, articles, journals and watching relevant visual/multimedia as hours of learning towards the module.

Breaking Down Discipline Boundaries

Although the modules can be adapted to suit a variety of student cohorts, partnership opportunities and specific disciplines, *Making your learning count* and *Advance your independent learning* were originally designed in response to the recognition that the provision of interdisciplinary learning and teaching is becoming increasingly relevant for institutions to prepare students for a changing world (Department for Education, 2017; Lyall et al, 2015; UKCES, 2014). As stated by Hannon et al (2018):

The move to break down traditional disciplinary boundaries reflects emerging forms of enquiry into knowledge that are less hegemonic and more distributed, and more tuned to its production, practices and the needs of its practitioners.

As described earlier in this chapter, multidisciplinary study enables students to apply skills and discourse developed in one subject area to another, which is not available to those students who study within a single subject. However, a lot more responsibility is placed on the students themselves who, particularly as adult learners, need to make sense of the skills and knowledge they develop across the whole curriculum and to use their previous experience to make intellectual connections between subjects and synthesize these skills and knowledge into a graduate experience.

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We need to develop learners who are skilled at personalising their learning, as the changing nature of knowledge means this is a fundamental skill for today's workforce. (Olsen, 2011)

Through the format of an Open Box model, students can curate their own curriculum across a range of topics, which can be adapted to their own contexts. This approach also allows students to experiment with studying different topics and identify which subjects suit, or motivate, them the most. As a result, students are encouraged to explore and articulate how different areas of knowledge can be combined, whilst recognizing the differences between disciplines in terms of style and language. This in turn reduces the likelihood of a student wanting to change their choice of study part-way through their qualification and therefore increases the likelihood of them completing their studies (Law, 2019).

Using virtual learning environments (VLEs) to deliver an Open Box module also provides course teams with an opportunity to provide 'curated pathways' of digital content focusing on specific themes (e.g. climate change, nutrition and volunteering). For example, in the case of *Making your learning count*, the module team can work with external partners to identify ways in which curriculum can be developed to cater for different markets and provide a potential solution for tailoring the module to meet the requirements of specific employers. Cannell (2017) supports this approach by stating that:

Well-structured and supported materials can be designed to fill gaps in the complex pathways that learners experience before they enrol for a formal qualification. Open licensing allows tried and tested material to be contextualised for specific contexts and brought together to form supported pathways appropriate to particular groups of learners.

Addressing the Need for Flexible Pedagogies

As the content of each student's learning journey is not defined by the institution, the concept of flexibility built into the Open Box model helps to inform pedagogic decisions during the curriculum design process and maximizes the opportunities for flexibility in terms of content choice and assessment, as well as the pace and order of individual learning activities.

The central focus of any module of learning is the scaffolding through focused activities that enable students to engage in making sense of the material. In short, content is not king. What learners do with this content to achieve outcomes is. (Armellini, 2019)

For example, *Making your learning count* is structured around a series of topics that focus primarily on the development of key skills, irrespective of the subjects studied. As well as focusing on skills related to the development of students as an online distance learner, the module teaches students communication skills and the importance and process of assessment. Similarly, *Advance your independent learning* will also incorporate new teaching material focused on auditing skills, academic literacy, knowledge abstraction and synthesis, research methodologies and communication skills. In both cases, as the pace and direction of each student's journey is unique, the aspiration in the assessment design is to maximize flexibility around the timing, order and/or format of the submission.

Applying Innovative Approaches to Assessment

In order to support multidisciplinary students at both undergraduate and postgraduate level, all assignments in all modules, irrespective of the level or stage of study, are required to provide clear instructions on what the student is being asked to do and what is expected of them. This is backed up by a clear description of how marks will be awarded, and a clear definition of the criteria used. However, the most important means of supporting students with assessment is through comprehensive feedback by skilled tutors. This personalized teaching will not only explain any gaps within the students' knowledge and skills, but also provides the student with advice on how they should answer questions in the subject and, importantly, how they should change their approach to responding to these assessment types in future.

The Open Box model encourages an innovative and well-planned patchwork approach to assessment (Jones-Devitt et al., 2016), which ensures that students are not only assessed to enable accreditation of their learning, but that assessment itself is seen as a learning process. For example, in addition to two formal assessment tasks at the start and end of *Making your learning count*, there is an informal assessment task at the end of each topic to consolidate learning and allow tutor feedback and support.

Technology, including the use of VLE tools, also offers new opportunities to enhance assessment practices, including the facilitation of feedback dialogue and improvements to the marking process. OU-designed assessment tools enable *Making your learning count* students to submit all assessment tasks online, allowing the tutor and module team to automatically track and record student engagement without the need for manual recording of this information.

The *Making your learning count* module team were also keen to ensure that peer assessment was included in the assessment strategy for the module, so that students were given opportunities to engage in and develop their skills in peer review and self-assessment by commenting on, and evaluating, each other's work (Chetwynd et

al, 2013; Langan and Wheeler, 2003). As a result, students are asked to share their outputs for two of the seven assessment tasks on a collaborative, content-sharing VLE space, and are encouraged to provide feedback on other students' contributions. A similar peer assessment task is also included in the postgraduate Open Box module, *Advance your independent learning*.

A Negotiated and Personalized Model of Student Support

The use of OERs provides an opportunity for students to construct their educational goals based on their prior experience of a particular industry or previous academic setting. However, the flexibility of this approach also enables students to experience studying different topics before committing to a particular subject at higher levels of study.

The role of the tutor in supporting students on Open Box modules is very different to the conventional model of student support, as their primary focus is to facilitate the learning rather than provide subject expertise. For example, tutors on *Making your learning count* are required to work with the student to plan their study and identify relevant OERs through a process of discussion and negotiation. To aid this process, the module has an interactive study planner which enables students to create their own personalized study plan, including identifying the order and dates when students will submit their formative assessments as well as the nature and the order of the OERs that the student will study during the course. This is a living document that is continuously reviewed throughout the course as the student develops their overall study goals.

In addition to the one-to-one support provided by tutors on *Making your learning count*, regular one-hour webinars (known as student/tutor 'hangouts') have also been spread across the whole assessment process, based on the student-centered nature of patchwork assessment. These informal sessions are hosted by each of the module tutors on a rotational basis and focus on module support (study choice, study skills, assessment etc.), rather than teaching of any content. Students have welcomed this opportunity to ask questions about the module (particularly the assessment) in an informal environment and have actively encouraged other students to participate in future sessions, providing another example of peer support between students on the module. However, the challenge for tutors to adapt their traditional teaching methods to be facilitative and negotiate learning should not be underestimated. This requires both skill and confidence on the part of the tutor to be able to facilitate learning across the whole curriculum and help the student make sense of potentially diverse topics.

Employability and Multidisciplinary Study

Research carried out with OUUK Open Degree students in 2012/13 showed that the majority of students in the sample were already employed and hoping to use their OUUK Open Degree to pursue a career change. This reflects the OUUK student population as a whole, as over 70 percent of students are typically already in work and many have support from their employer. Those in employment at the time of enquiry had a wide variety of roles in a variety of sectors, which again reflects the diversity of OUUK Open Degree choices and motivations. However, around one-third were looking to (re)enter a career, although it was not specified whether this would be as an employee or self-employed. In many ways, the maturity and life and work experiences of OUUK students is a bigger defining factor in the success of the OUUK Open Degree, which contrasts with the school leaver intake of most degrees. A green paper published by the UK government in January 2017 (UK Department for Education, 2017) also highlights the need to assist scale-ups and entrepreneurs, and support future talent for an innovative economy, which can also be enhanced by multidisciplinary study.

Although it is recognized that the degree subject is important for some sectors (such as manufacturing and engineering), the development of graduates with future-proof, non-discipline specific skills is becoming increasingly important for graduate recruiters. The CBI/Pearson Education and Skills Survey (Confederation of British Industry, 2016) highlights that businesses primarily look for graduates with the right attitudes and aptitudes to enable them to be effective in the workplace – above and beyond the degree subject(s) studied. The report goes on to suggest that 35 percent of businesses were not looking for graduates with a specific degree subject and 33 percent were not looking for graduates with relevant work experience.

William et al (2017) also suggest that more and more graduates might embrace a ‘boundaryless’ or ‘protean’ career, working across many rather than within a single organization or field of employment. In such cases a multidisciplinary background would support this flexibility, by providing graduates with a broad range of skills across many different areas, as well as the additional skill of using creativity to recognize this advantage.

“For example, a graduate may opt for a boundaryless career, driven by a change of interest during the HE studies... Alternatively, a student may wish to adopt a bounded career, but, on finding no job opportunities in their desired field, be forced to purs[u]e a boundaryless career... Boundaryless career orientation and protean career orientation are thus becoming increasingly prevalent in a globalised, technologically advanced, knowledge-based economy.” (William et al, 2017)

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Again, the fact that the majority of OUUK students are already in work is important here, as many of them already have personal experience of a ‘boundaryless’ career.. This is in contrast to most students studying for a higher education degree in the UK, who do so directly from school with only a discipline-based experience of how knowledge is constructed and little familiarity with the flexible structure of work.

Many careers are also inherently multidisciplinary in nature, for example business studies and languages are listed amongst the subjects which may be particularly relevant for a career in Human Resources, and a combination of politics and IT could open up a range of possibilities in the public sector. However, it isn’t only predetermined job opportunities that are an option for multidisciplinary graduates. Self-employment is increasing in the UK, with around 15 percent of all people in work now declaring themselves as self-employed (Office for National Statistics, 2017) and the student-led approach to curriculum design lends itself particularly well to those wanting to start their own business. For example, one graduate who rejected an offer from a traditional face-to-face institution to study film and television production, opted to study an OUUK Open Degree instead, in order to combine his studies and work experience at the same time. As a result, he was able to choose from a wide range of modules to suit his personal and professional needs and aspirations. This included web design – enabling him to fix a problem in-house which resulted in him getting more work from the company. He also studied modules in accounting, marketing and project management as part of his OUUK Open Degree and as a result, has been successful in setting up his own film production company and is now able to apply what he has learned through his studies in the day-to-day running of his business.

Recognizing Prior Experiential Learning

Not only does multidisciplinary study continue to be a popular choice for prospective and current students, but employers are increasingly seeking graduates with wide-ranging skills, knowledge and experience, rather than specifying subject-based knowledge for particular careers. Therefore, as well as using the Open Box model of curriculum to capture experiential learning, the OUUK is also looking at ways in which it can provide opportunities for students to count a wider range of flexible, work-based and experiential learning to be designed into the curriculum, in collaboration with internal and external partners to create bespoke degrees. This is still in its early stages and will often require individual negotiation, however, with the majority of OUUK students already in employment, this would provide a valuable opportunity for students to incorporate their ‘lived’ experiences into an academic setting.

CONCLUSION

Multidisciplinary curriculum at the OUUK has continuously evolved throughout its history to meet changing circumstances, but it has also, more recently, adapted in response to external pressures that have led to the introduction of subject-specific degrees of varying types alongside it. However, in essence, it still provides the freedom for students to design their own qualifications, and now modules, in response to their own personal and/or professional needs, whilst also expanding the range of learning and credit that they can count towards an undergraduate or postgraduate qualification (Figure 3).

Figure 3. Open University degree ceremony © 2020 The Open University. Used with permission.



The introduction of Open Box curriculum in recent years has also demonstrated that flexible pedagogies can be ‘designed-in’ to the learning experience at a module level, driven by a desire to empower learners who are choosing to study in an interdisciplinary way. This is achieved by allowing students to learn in a way that they can connect their own and others’ experiences of learning through guided activities and reflection (Butcher and Marr, 2018). As a result, these modules have provided an

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effective solution to test the application of innovative technologies and provides an opportunity to expand the platforms from which students can choose to study their required hours of learning. This includes other types of ‘flexible learning’ such as classroom- and employer-based learning. The challenge is to ensure that institutions are enabled to create policies and practices to accelerate the transformations required to contribute to, and benefit from, the global movement of OER provision to make this possible (McGill et al., 2013).

In summary, the development and presentation of Open Box modules at the OUUK has demonstrated the following benefits:

- Encouraging students to engage with cutting edge knowledge, underpinned by interdisciplinary approaches.
- Providing a way for students to receive credit for non-credit bearing courses.
- Providing a way for students to try out distance, credit bearing education having successfully experimented with OERs.
- Providing a way of testing new teaching innovations e.g. flexible study options, study pace, assessment and tutorial design.
- Exploring new opportunities for interdisciplinary study through curriculum which enables students to draw on and apply knowledge and skills developed across multiple subjects.
- Providing a way of recognizing learning through an expanded range of non-credit bearing courses and other products, which help students develop their skills, values and behaviors,
- Enabling the OUUK to be more agile in meeting employer needs (e.g. continuing professional development (CPD), professional qualifications and leisure learner markets).

Studying in a multidisciplinary way is far from being an ‘easy option’. In fact, the authors go so far as to argue that all multidisciplinary students are ‘brave’ learners; pushing the boundaries of traditional subject-focused education and using their own knowledge and experience to direct their course of study. Self-motivation and determination – as well as excellent tutor and institutional support – are therefore crucial to helping multidisciplinary students manage their studies and adapt to new disciplines or levels of study.

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KEY TERMS AND DEFINITIONS

Badged Open Courses (BOC): Free, online courses, developed in response to the needs of informal learners who are seeking access to study skills and have their learning recognized.

Interdisciplinary Learning: A type of learning that allows a student to make connections between ideas and concepts across different disciplinary boundaries.

Massive Open Online Course (MOOC): A model for delivering learning content online and providing open access via the internet.

Multidisciplinary Learning: A type of learning relating to, or making use of, several disciplines at once in order to enhance the overall scope and depth of learning.

Open Educational Resources (OERs): Free and openly licensed educational materials that can be used for teaching, learning, research and other purposes.

Open University (UK): The world's first successful distance teaching university, founded on the belief that communications technology could bring high quality degree-level learning to people who had not had the opportunity to attend traditional campus-based universities.

ENDNOTES

¹ In the UK, full-time study for a bachelors degree usually takes three years, which corresponds to one year's study at each stage or level.

² <http://www.open.ac.uk/about/main/mission>

³ http://www.open.ac.uk/about/main/strategy-and-policies/facts-and-figures_

⁴ www.open.edu/openlearn

⁵ www.futurelearn.com

⁶ <https://www.open.edu/openlearn/get-started/badges-come-openlearn>

⁷ www.open.edu/openlearncreate