The future of 'subjects' and 'disciplines' in higher education

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How is knowledge best divided for the purpose of systematically acquiring more of it bit by bit? Should such a discrete 'body of knowledge' be recognised as a 'subject' or 'discipline'. The terms seem interchangeable with both definable as 'branches of knowledge'. May a body of knowledge be 'interdisciplinary', potentially forming a new recognised body of knowledge, or even a 'multi-disciplinary' study in which the subjects or disciplines involved remain separate?

Until the nineteenth century *scientia* simply meant 'knowledge'. The beginnings of what became its modern content were at first treated as 'Natural Philosophy'. The requirement for a degree evolved from the sixteenth century into the study of certain classical texts in Oxford and the study principally of 'mathematics' in Cambridge (adjusted by the introduction of a 'classical tripos' in 1822). In Oxford specific subjects were recognised with the appointment of a Regius Professor of Modern History in 1724; undergraduate examinations in the subject began in 1850. Cambridge introduced a Tripos in the 'natural sciences' in the 1860s. 'Science' as a label for what are now regarded as 'scientific' subjects came only with the addition of additional subjects to the syllabuses of Oxford and Cambridge in the nineteenth century.

There was longstanding tradition to be replaced or added to in naming new subjects. In classical Greece and Rome a free man's education was designed to make him powerful as an orator. To provide him with the material he would need for illustration or argument in speeches he was expected to have some familiarity with the *artes liberales*. These were seven, with grammar, logic and rhetoric forming 'three ways' (the *trivium*), and arithmetic, music, geometry and astronomy making four more (the *quadrivium*).

These early academic 'subjects' were studied by commentary on set books. The marginal notes in surviving copies of Donatus' fourth-century *Ars Grammatica* show that it attracted numerous explanatory commentaries. For logic Boethius' early sixth-century Latin commentary made Aristotle's *De interpretatione* accessible to twelfth-century scholars, few of whom had any Greek, with a raft of new texbooks on aspects of the subject produced during the later medieval centuries. The classical study of rhetoric fell into abeyance when the fall of the Roman Empire left few occasions for panegyric, but towards the end of the eleventh century there was a growing need for letter-writing among bishops, kings and emperors. That prompted the creation of numerous handbooks to the 'art of letter-writing' (*ars dictandi*) which made use of earlier rhetorical texts in their introductions.

In the less-studied 'mathematical' *quadrivium* arithmetic and music were studied using Boethius' *De arithmetica* and his *De musica,* his Latin translations of the Greek textbooks of Nicomachus of Gerasa. These were considered to be textbooks on 'number'. Geometry and astronomy were seen as concerned with the measurement of space or area ('still' or 'in motion' respectively). Tentatively, Euclid's *Elements* were relied on for geometry and 'astronomy' made use of some recent Islamic study.

Other subjects were recognised in medieval Oxford and Cambridge in the award of 'doctorates', in the disciplines of divinity, medicine and law and later also music. Doctorates in 'letters' and 'science' were added at the turn of the twentieth century.
A research doctorate in 'philosophy', the D.Phil. (Oxford) or Ph.D. (Cambridge) was created in the second decade of the twentieth century partly to meet the complaints of American would-be graduate students that no doctorate was available to them if they came to study at Oxford. The award of such a doctorate requires a thesis on a stated 'subject', but this may be approved with any title defining it as the appropriate size for three years' original research. The old doctorates were retained by Oxford and Cambridge but recognised as 'higher doctorates', keeping their subject-titles, to be awarded to mature scholars rather than recent postgraduates.

Elsewhere it is customary to describe a Ph.D. as 'in' a stated subject, which may be a tiny part of the area of study covered by a discipline. For example Anglia Ruskin University offers Ph.D.s in History in a dozen 'project' areas, such as 'the British

Labour Party since 1900'.[1] The range of options offered by the University depends on the availability of supervisors qualified in the relevant area of research expertise.

Against this background admission to universities has become subject-based, with recognition that subjects or disciplines are many. A would-be student normally applies to study a chosen subject and a relevant qualification is regarded as a helpful indicator in deciding whether to admit him or her. From 1965 students have chosen named 'subjects' for the examination taken at 15 or sixteen; then for A-level examinations.

In recent years Oxford and Cambridge have variously adjusted their requirements in designing courses for their students, often to include the 'interdisciplinary'. That may put some stress on existing governance arrangements involving subject-based 'faculties' or 'departments' and academic staff appointed to teach specific subjects. Oxford, which has Departments, Faculties and Divisions, offers interdisciplinary studies on 'war and peace'[2] and a number of 'interdisciplinary Masters degrees'.[3] 'Celtic Studies', for example, involves 'Celtic languages and their associated literatures', and also 'related fields such as history, archaeology or law'.[4] There is an MSc in Digital Scholarship which includes a 'subject-specific option, 'chosen by the student from a selected list of existing Master's papers' offered by Faculties.[5]

Cambridge, with its Departments, Faculties and Schools, has made room for interdisciplinary study too, including 'Interdisciplinary Research Centres' which 'extend the research priorities and strategies of the individual Schools by tackling cross-disciplinary challenges and creating a shared cross-School vision in key

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[1] https://www.aru.ac.uk/arts-humanities-education-and-social-sciences/research/postgraduate-research/phd-project-opportunities/history

[2] https://www.warandpeace.ox.ac.uk/faculties-and-departments/sias

[3] https://www.humanities.ox.ac.uk/interdisciplinary-masters-degrees

[4] https://www.humanities.ox.ac.uk/mphil/mst-in-celtic-studies-0

[5] https://www.humanities.ox.ac.uk/mscdigsch

thematic areas'. [6] Such a Centre has several 'aims', including 'to address large-scale multi-disciplinary research challenges' and 'to strengthen research collaborations and knowledge transfer across disciplines'.[7]

In May 2024 Cambridge's General Board discussed the 'governance of interdisciplinary programmes' in its 'School of Arts and Humanities'. The proposal was to 'establish a body with responsibilities for interdisciplinary programmes'. These responsibilities would be 'aligned with those of a Faculty Board' and it would have its own 'Degree Committee under that body'. This recognised that existing bodies 'did not have the capacity, nor expertise to oversee the range of new interdisciplinary programmes' in development by 'interdisciplinary research centres'.

The need to align study with teaching and lectures and research organised in relation to a discipline was recognised in this discussion. The proposals were to be defined as 'cross-School initiatives' and must have 'demonstrated a critical mass of academic support in at least three Schools and have the explicit endorsement of the University's Research Policy Committee'. 'They extend the research priorities and strategies of the individual Schools by tackling cross-disciplinary challenges and creating a shared cross-School vision in key thematic areas' and 'generally build[s] on the aims and achievements developed by a Strategic Research Initiative over a period of six years'. [8]

In other providers of higher education assumptions have begun to change. Since 2015 degree-level qualifications include the 'degree apprenticeship', which

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[6] https://www.cam.ac.uk/research/research-at-cambridge/interdisciplinary-research-centres

[7] https://www.cam.ac.uk/research/research-at-cambridge/strategic-research-initiatives-network

[8] https://www.cam.ac.uk/research/research-at-cambridge/interdisciplinary-research-centres

assesses work in employment as well as study. [9] Government approves. The Department of Education launched a *Curriculum and Assessment Review* in July 2024, calling for 'core subjects of reading, writing and maths to be studied in schools with a broader curriculum including 'subjects such as music, art, sport and drama, as well as vocational subjects'.[10] As well as the 'vocational' the 'professional' and 'technical' have joined the familiar 'academic' subjects. This has been encouraged with the establishment of 'Skills England' which is to have 'partnership' with 'employers at its heart'. [11]

The attractiveness of degrees in subjects likely to lead to related and well-paid employment is now actively discussed.[12] Concerns are expressed that this may affect the provision of courses in certain traditional subjects:

> if you want a job in finance, you study finance or economics; if you want to be a publisher, you study English, and so on. The idea that someone who studies History can enter finance, or that a historian can be an economist, seems both unlikely and optimistic.

That, it is suggested, may contribute 'to the devaluation of what are seen as "non-essential" or "Mickey Mouse" degrees, namely, the arts and humanities'. [13] Such 'classroom-based' courses are much cheaper to provide than those which need laboratory provision, such as the 'science', 'technology' and 'engineering' listed with

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[9] https://www.hepi.ac.uk/2025/01/30/degree-apprenticeships-in-england-what-can-we-learn-from-the-experiences-of-apprentices-employers-and-education-and-training-providers/

[10] https://assets.publishing.service.gov.uk/media/6699698f49b9c0597fdb0010/Curriculum_and_assessment_review_-_aims_terms_of_reference_and_working_principles.pdf

[11] https://www.gov.uk/government/speeches/the-kings-speech-2024

[12] L. Dearden, J.Britton, N. Shephard, N. A Vignoles, *How English domiciled graduate earnings vary with gender, institution attended, subject and socio-economic background. Institute for Fiscal Studies (2016),* https://ifs.org.uk/sites/default/files/output_url_ files/wp201606.pdf

[13] Chiraag Shah'What happened to being well-rounded, *Varsity,* 30 January, 2025,

https://www.varsity.co.uk/comment/28852

'mathematics' as STEM subjects, but they must still be able to attract students rating their value in terms of future employment prospects.[14]

Although all providers which previously had degree-awarding powers were allowed to keep them under the *Higher Education and Research Act* of 2017, the Office for Students was henceforth responsible for granting powers to award degrees or 'registering' a new 'provider'. This grant of powers was designed to be subject-based. 'Providers' could 'apply for these powers in specific subjects, for all subjects, and up to specific levels.'[15]

It therefore remains customary to describe a degree as being 'in' a subject, but that may now be recognised as 'vocational' or 'professional'. 'Vocational' disciplines are recognised as involving study designed to lead to specific employment such as accountancy, business, engineering, plumbing, health and social care. Some may count as 'professional' in that they are governed by ethics, standards, and objectives set by a professional body.

The legislation of 2017 makes a higher education provider free to choose its own subjects and the content of courses in that subject, as well as the level and the assessment requirements for its degrees and other qualifications.[16] Broadly speaking the Russell Group universities offer courses in a traditional range of subjects in the arts and humanities, as do many of the post-1992 universities. The range specialised in by the 'alternative providers' which have multiplied during the early twenty-first commonly includes Business and Management and 'professional courses', though those are not necessarily offered at a level constituting or leading

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[14] https://www.thecompleteuniversityguide.co.uk/student-advice/what-to-study/what-is-stem

[15] https://www.officeforstudents.org.uk/for-providers/registering-with-the-ofs/degree-awarding-powers/

[16] *Higher Education and Research Act*, 2017 s.2(5).

to professional qualifications.[17] Among providers of courses combining 'knowledge' with 'practice' Business Schools have proved by far the most popular.[18]

Five-year 'Masters degrees' offered by alternative providers may extend the length of the course to include 'placement' periods of practical experience. Nevertheless, professional qualifications in medicine or law may not be fully achievable in that way. A would-be medical doctor needs more than a course in 'health studies' and an aspiring solicitor needs more than a course in 'legal studies' to qualify.

Division of bodies of knowledge into 'subjects' or 'disciplines' is proving slow to die out in English higher education and is in part preserved by talk of the 'interdisciplinary', with its built-in assumption that knowledge comes in 'bodies' or subjects. In January 2025 the Chief Executive of UK Research and Innovation reported that she was 'increasingly finding' herself 'being asked by colleagues in other nations to speak about our initiatives on interdisciplinarity', among other matters.[19] UKRI consists of seven discipline-focussed Research Councils. Their 'executive chairs can choose to operate at the level of their individual council, in bilateral and multilateral collaborations between councils, or fully collectively'. The experimentation which is reshaping all that still has some way to go to establish new norms.

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[17] https://www.hepi.ac.uk/2025/01/09/the-lle-and-five-year-integrated-masters-degrees/

[18] https://www.timeshighereducation.com/our-solutions/business-schools-register

19 Ottoline Leyser, 'UKRI's collective leadership helps UK research transcend zero-sum thinking', *Times Higher Education*, January 27, 2025, https://www.timeshighereducation.com/opinion/ukris-collective-leadership-helps-uk-research-transcend-zero-sum-thinking