

The Rise and Fall of the Undergraduate Research Project

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Abstract: A project carried out as an independent piece of work, either by an individual student or a very small group, is often included in Business and Management degrees as a capstone activity. At undergraduate level historically the expectation in the British system is that some form of independent study is an essential part of an honours degree although typically this is not formally stated in university regulations. Historically such a project, even at undergraduate level, would have included an element of research and provided an opportunity for students to carry out their own inquiry into an area which had caught their interest. This provided students with research skills which could be adapted to carrying out some form of useful intellectual inquiry in their subsequent careers and gives them an opportunity to focus on particular areas where they have interests. Some students report finding the project a valuable source of material for subsequent job interviews. In recent years there has been a tangible move away from expecting students to do a project at undergraduate level. An effective project needs one-to-one supervision which often places a strain on faculty resources. It is hard to define exactly what would count as an acceptable level of independent scholarship for an undergraduate. It is very hard to ensure a consistently good student experience given a large group of supervisors and a wide range of subjects. Students frequently struggle to see the relevance of research methods to their intended careers. At its worst the project can appear to students as a time when they are left to their own devices with very little support and unclear expectations of what is required of them. Drawing on experiences from a UK business school with a large undergraduate cohort, where the policy up to now has been to retain an independent project in some form within students' final year, this paper discusses the challenges associated with the move away from independent projects and some ways in which they can be met.

Keywords: Undergraduate research, projects, relevance of research

1. Introduction and background

Individual projects carried out by students working independently have an important role within undergraduate education. While this is rarely a formal requirement imposed by university regulations, in the UK system there is a tacit assumption that an element of independent work is essential to achieve an honours degree, and this is in a context where an ordinary degree without honours is deemed to be indicative of a student who has not quite completed their course. It can act as a capstone where students have the opportunity to put into practice what they have learned earlier in their studies. It can provide them with an introduction to research and at the very least give them the discipline of writing an extended piece of work. It can even offer an opportunity, however tenuous, for students to become engaged with research carried out within the institutions where they study.

In Business and Management a project typically comprises an extended and analytical essay. There is rarely an opportunity to produce a tangible object (compared for example to Computer Science students who can build a prototype of a piece of software or hardware as an independent project) although students with an entrepreneurial slant can produce a proposal and perhaps the basis for a new business idea. Students interested in finance or in quantitative approaches to business can produce projects based on mathematical and statistical analysis, for example building new and distinctive models to explain observed phenomena. Those with access to willing participants for surveys or interviews can gather primary data, and often analyse it and relate it to concepts from a sub-discipline such as business strategy.

This leaves a significant number of students for whom there is no clear template for a Business or Management undergraduate project. Moreover it leaves considerable scope for writing descriptive work which might be good when regarded as purely an essay, but mediocre when regarded as a project and lacking in its fit with the aim for students to practise research skills and to build some sort of capstone. In a contemporary business school there are other activities, such as work-based learning, which more closely match the aim for students to put into practice the knowledge that they have acquired through their studies and these are potentially more valuable as a capstone element than a written project.

Moreover with a large number of Business and Management students in a typical undergraduate course there are severe limitations on the sort of resources needed to foster effective projects. Academic staff have little time for one-to-one supervision and except for the few occasions where students' work feeds directly into the supervisors' scholarship there are few clear benefits from engaging with undergraduate projects.

Therefore there are considerable attractions in moving away from the established approach to an independent project. This paper is based around the experience of one UK business school in making such a move. In the next section there is a discussion based around existing literature on the inclusion of independent projects and of related approaches such as work-based activities in the context of a business and management course. This is followed by an account of a business school's responses to the need to revise their approach to independent business and management projects and the paper concludes with some reflections relevant to possible next steps.

2. Literature on projects

There is a significant amount of established literature on students' experience of carrying out projects and the overlapping domain of how students can function as researchers in collaboration with faculty members. Much of this is relevant to undergraduate students in business schools. For the purposes of this discussion the term 'project' is used to refer to any type of extended independent work. In practice in a business school this and the term 'dissertation' are largely interchangeable, but the term 'dissertation' more specifically refers to an extended piece of written work whereas a 'project' could cover other types of deliverable such as an artefact, a piece of software, or even a performance. Webster et al (2000) focused on undergraduate and on a school of social sciences and law within a post-1992 university in the UK. This does not include a business school but given that management at least can be regarded as a social science their analysis has some relevance. A theme running through their account is the lack of consistency and in fact they observe in their conclusions a resistance among social science academics to introducing any sort of conformity in approaches to projects. Their recommendations therefore cover both the provision and publication of clear guidelines on what a project should contain, and guidance on how to deal with unusual projects which do not fit well with those guidelines. They also acknowledge the importance of a project to students, as an individual piece of work, and frame it in the context of a discussion of consistent academic standards. This was a key issue at the time that their paper was published and arguably has become even more important in the years since.

Feather et al (2014), also within a post-1992 university but this time within a business school, focus on the supervisor. They noted that many academics do value supervision of projects – which they nevertheless characterise as 'resource-hungry' – for the combination of skills that they provide to students. But they also discuss whether a project should be made voluntary for students or dropped altogether, and in their recommendations are broadly in favour of making it an option offered only to students who have attained a certain mark so far. They note that this would mean supervisors would typically get to work with the strongest students and thus those who were most rewarding to supervise, but implicit in that is that the students allowed to do projects would be the ones most able to benefit from the experience through producing high quality work.

The range of different approaches to Business and Management projects is also apparent in work by Malcolm (2012). She grounds her analysis in the nexus of teaching and research, significantly because it prompts a discussion of why the link between research and teaching is important and indeed whether it is essential to the nature of a university, and highlights different perceptions between students and their supervisors. There are subtle but significant differences in the way each of them frame the process of research, so for instance students are less comfortable than supervisors with a research process which is initially open-ended and which can develop as students find out more. Students are portrayed as fundamentally pragmatic and interested in an approach which would lead to completion of their degree in as straightforward and achievable a manner as possible.

The term 'capstone' frequently appears in the literature around undergraduate degrees, for instance when Starr-Glass (2020) discusses a capstone experience relevant to future employability which in fact follows the format of a conventional project. There are other potential ways in which a students can consolidate their learning and consider its application in the wider world. Work-based learning (Helyer and Kay, 2015) offers another approach and also exercises similar skills, for example in self-paced work and in project management, to those in a project. The extent to which research, as it is understood in an academic context, is applicable to many workplaces is contestable but as an example relevant to many Business and Management students' planned future careers Biggs (2010) devotes a whole section to research techniques for management consultancy. Modules based around work-based learning exist in many business schools: a recent conference presentation (Fischbacher-Smith et al, 2023) was an engaging account of one such activity based around close collaboration between students and employers.

It is difficult to quantify the scale of such activities but the Higher Education Statistics Agency (2023) does gather and publish data on the scale of universities' work with businesses and with other partners in the community. In 2021/22 consultancy contracts between businesses and UK universities had a value of over £550 million as just one indication of the importance of consultancy and business links to academia.

Yuan et al (2020) in a very different context – a university in Hong Kong and a Bachelor in Education – take an alternative perspective on research by undergraduates, relating it to critical thinking skills which are also essential for Business and Management students. One of their research questions specifically addresses their students' ability to transfer critical thinking skills to professional learning, a step analogous to students preparing for transition to the world of work. Another example from Asia is related by Pan et al, an international project-based learning programme where students can choose from a number of partners in business within which to work and a range of business issues to address. Other approaches to involving students in research involve students working as partners with academics, thus replicating in some ways a project where the student works on the supervisor's area of interest and in effect functions as a research assistant for them.

Other routes to building research into undergraduate studies include approaches where faculty members adopt more of a mentoring approach than the established project supervision approach (Smith et al, 2020) and focusing on those who will need to develop research skills because of an interest in potentially taking a PhD in the future (Ehrenberg, 2005). In an institution committed to supporting both its students' employability and the development of faculty these routes have considerable potential.

While individual projects can offer the opportunity for students to develop familiarity with practical business problems they are less well aligned with the need for them to develop 'soft skills' such as interpersonal and teamworking abilities and awareness of the cultural context within which they operate. This is an aspect of management education where employers' needs have become increasingly influential. Succi and Canovi (2020) discuss the difference between students' perspectives and those of employers, and highlight the difference in generation as well as the difference in perspective between the two groups. Nevertheless their findings suggest increased importance of soft skills perceived by employers and an increased imperative for universities to provide activities which offer these. A focus on graduate attributes (Allen and Simpson, 2019) provides an opportunity to connect the needs and perceptions of those involved and to focus the design and content of courses on what graduates should know and achieve.

3. Rethinking the undergraduate project: one business school's experience

This section covers the author's own experience of developing and adapting undergraduate project requirements. This is in the context of a business school offering a range of Business Management, Accounting, and Finance courses with a common theme that students until recently were always expected to produce a project with, as a guideline, a 10,000 word written report as part of their final year. As a possibly relevant aside, students on one particular Management course at the school were in the past (until 2010) offered the option of writing a significantly longer project and taking one fewer taught elective modules than their peers. Typically about 10% of each cohort took the long project, very often either those interested in pursuing a PhD subsequently or those with very clear connections with a business to which they could relate their project.

On a number of occasions during the period 2015-2020 the question of the nature and future of the undergraduate project was raised in discussions around the course structure. This resulted in introduction of a few specialist options within the standard framework of a 10,000 word written piece, including a more structured project for those specialising in accountancy and an option to work closely with businesses for those specialising in corporate social responsibility. Through all of this, and indeed through some significant revisions of other aspects of the courses, the assumption that there would be a 10,000 word project remained constant. When member of faculty questioned the importance of the project, partly prompted by the difficulty in identifying suitable supervisors, the leadership team (including the author) responsible for undergraduate teaching argued that it should remain. Arguments advanced for its continuation included references to (usually very strong) students who had used their projects as a stepping stone to being offered graduate employment and a principle that students should be encouraged to study beyond the formal material within the course. While there were strong concerns that projects were too varied to offer consistency either to students or supervisors, echoing earlier research on the role of the project (Webster et al, 2000) the leadership team recommended addressing this through more precise guidance, more writing workshops, and a measure of training in research methods.

By 2020 the internal landscape had changed further. It remained difficult to assign supervisors. More than that, in an environment where students were invited to choose from a range of broad areas in which to take their projects, there was a mismatch between areas of expertise among faculty and areas of interest to students. For example digital marketing proved to be a popular subject but students in this area were often assigned supervisors with no specialist knowledge either in digital business or in marketing, on the basis that supervision depended on a measure of familiarity with business as a whole and elementary research techniques. From the supervisors' perspective the role was downgraded, from something where they could share particular knowledge and their own interests, to the equivalent of an elementary management module. At the same time the university had set up an initiative to promote employability. A number of final year modules offered to students, principally as electives, offered opportunities for either practical work such as in a consultancy role with an external business, or for research including market research as one of a suite of specialised modules for marketing specialists.

This prompted some pragmatic moves around undergraduate students. The first of these affected finance specialists, and was the introduction of a shorter (5000 word) applied project as an alternative to the established longer project, with the students who took the shorter project expected to take one more elective module. In terms of degree structure and choices this amounted to reintroducing a similar approach to one which had been taken years earlier, with the optional longer project. Informed by research elsewhere that an optional project would best be confined to the strongest students (Feather et al, 2014), only those who had reached a threshold overall mark from their first two years equivalent to a good upper second class degree were permitted to do a longer project. About 60% of students specialising in finance have chosen the shorter applied project since it was introduced in 2021.

In contrast to management projects, where students were encouraged to collect primary data and where project briefings were carefully worded to disabuse anybody who thought that using secondary data only would be an easy approach, finance projects typically depended on finding new ways to analyse data such, as share prices or other financial indices, that is in the public domain. This allowed for a simple and accessible structure built around group supervision of finance projects, where a number of students working with the same supervisor would pursue the same exact subject, and would typically each apply a similar analysis to a distinct dataset. The use of group supervision introduced a further benefit compared to the conventional project where all supervision meetings were one-to-one, in that students had the opportunity to discuss techniques with one another and supervisors to explain research methods to several students at the same time.

Initial feedback on the shorter applied project was very positive, the more so because introduction of a more structured approach to supervision coincided with students' return to in-person study after the first wave of the pandemic. Therefore a natural next step was to introduce a shorter project as an alternative for management students, with similar conditions to ensure that only stronger students took the longer project. When this was initially proposed to colleagues the only possibly negative reaction was a suggestion that it should have been introduced years earlier, and this was implemented for management students starting from 2022. Because management projects were more diverse, it proved more difficult to identify a set of distinct subjects. So in practice, although the group supervision was carried over from the finance experience, the shorter applied projects for management students tended to be individual endeavours and group supervision sessions focused on more general issues around such as identifying a research question or choosing an appropriate methodology.

In practice the inclusion of a shorter applied project as an option for management students was essential to being able to deliver learning to final year students in by this stage. It made it feasible to structure supervision effectively, because supervisors with limited time could be allocated to the applied projects and had a finite amount of time to work with their students in groups. Nevertheless a number of problems continued. It remained difficult to allocate supervisors with relevant interests to the proportion of students who had still chosen the full project. The full, 10,000 word, project continued to attract a proportion of students who did little work on it until the very last few weeks, even though this was supposed to be distributed throughout their final year of study, and limiting the full project to those with stronger marks in their first two years did not eliminate this effect. Typically students who waited until the last minute gathered and analysed some useful data, but completed the work hastily so that the result was mediocre and did not reflect their abilities. A few students chose to switch between the full project and the shorter applied project once their final year of studies was underway, creating pedagogic uncertainty and typically administrative confusion as well.

At the same time, the university's employability agenda had an impact on undergraduate projects. Feedback from students in the National Student Survey and elsewhere suggested that final year students especially

wanted more contact with employers, and a greater emphasis on skills which they would build up through working with employers. The full-length final year projects which were done in conjunction with employers had generally resulted in a very high quality of work and a high level of engagement, although they were deliberately positioned as an option which a small number of students (often as few as 5% of the management students) would take. So a logical next step was to introduce shorter applied projects which had employer engagement built into them. Whereas the initial concept of the shorter project worked best with finance students relying on secondary data, a shorter project related directly to an employer works well for management students because the employer can typically provide primary data as well as access to a clearly defined research question. Nevertheless a number of employers in the finance sector have also worked with the university on defining requirements for applied projects.

Negotiations have already taken place with employers as part of the ongoing engagement which is already a key activity for a university teaching vocational subjects, and while it is impossible yet to predict the proportion the hope is for the majority of students coming into their final year of studies in 2023 and taking shorter applied projects to do these in conjunction with an employer. This fits well both with the principle behind the undergraduate course that students should be encouraged to go beyond the formally taught content and also the university's agenda around readiness for employment. As alluded to in some of the relevant literature this becomes closer to work-based learning than the established research-based project, and potentially is a more relevant and achievable way to bridge the gap between experience as a student and as in the workplace in the future.

The most recent step in the evolution of projects was to reconsider whether, in particular for management students, a project was necessary at all. Looking across the UK undergraduate sector as a whole, a project is no longer a universal part of honours degrees and other institutions either make it optional or do not offer it at all. Through successive changes it remained difficult to match supervisors to projects especially for management students. The business school has collected feedback from students on their individual project experiences and a proportion have questioned the value of the project in this context. Moreover there is now an established structure which allows students to choose different project approaches and different numbers of taught electives to attain the necessary number of credits for their final year. So the intention for the future is to move to a scenario where students have three options, to do a full 10,000 word project, to do a shorter applied project of 5000 words plus one additional elective, or to do no project at all and take two additional elective. This does have implications for the demand on elective modules and the need to accommodate larger numbers of students on these taught modules but preliminary modelling suggests that this is achievable.

4. Reflections and implications

The previous section has been presented deliberately as a chronological series of events and it is worth reflecting on some themes. Unfortunately the scope for formally evaluating the various changes is limited. The National Student Survey tracks the overall level of satisfaction of a final year cohort. The changes outlined above covered a period of considerable turbulence, including both recruiting an increased number of students and the impact on learning of the pandemic, so the fairly modest variations in survey scores achieved by the business school over this period could not be ascribed to any particular initiatives. The discursive comments collected as part of this survey and also those raised at staff-student meetings reveal that a significant number of students are unhappy about the level of preparedness provided by the university for independent work on the project. However they provide little clue as to how widely these concerns are held and the only observation which can be made with any certainty is that among the cohort there are some students for whom a project is extremely worthwhile and some for whom it is a frustrating and irrelevant exercise. The future of the project has been a consistent theme raised at various staff-student meetings over the years and in general the steps taken to change the provision and arrangements have reflected discussions there.

Over the years a sequence of relatively small incremental changes has led to a very considerable change in what is offered to students. While this has not altered the general focus of the degrees, in terms of either pedagogy of subject matter covered, it has been an important element in ensuring that they are contemporary and attuned to the requirements of the market within which the business school operates. And this has reflected a subtle but significant shift away from research skills, as historically understood in an academic context, to skills which are acquired through engagement with an employer.

So does research have a future in an undergraduate business degree, and if so is an independent project the best way to pursue it? There remains a strong case for students with an aptitude for individual research to be

encouraged to pursue it at undergraduate level, especially those who are likely to pursue further study or a research career. There are areas of specialised research, for instance market research as mentioned earlier in the context of students who have chosen to specialise in marketing. Consultancy, which is a popular destination for management students, has a tangible element of research and depends on skills around collecting and analysing data that are similar to those necessary to pursue scholarly research.

A well structured project can be an exceptionally effective way for students to build research skills: conversely a project which is done purely as a hurdle to be overcome can be a superficial exercise with little resultant learning. While there have been challenges around implementation a structure which gives students significant choice in the type of project to take and the amount of work involved appears to be the most constructive approach.

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