

A Sandwich Year Can Seriously Damage Your Chances of Obtaining a Poor Degree!

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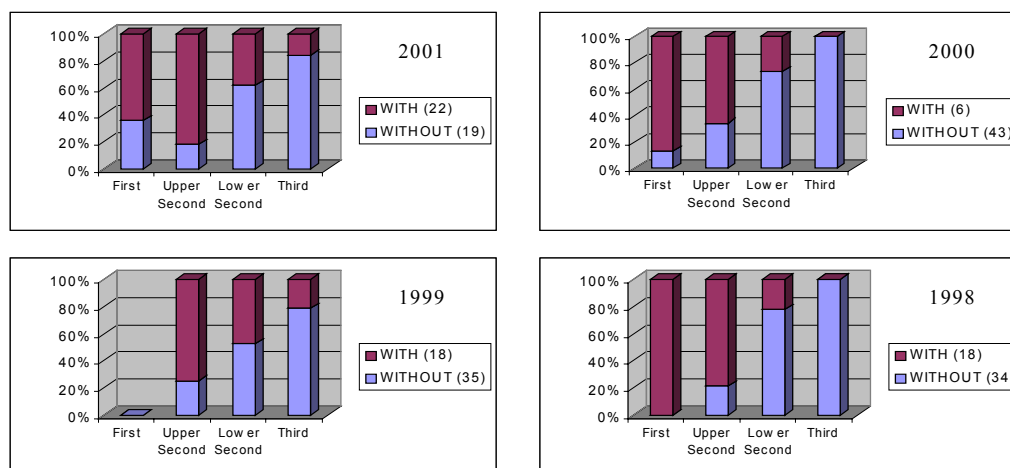
Introduction

Much has been written about the benefits of the sandwich degree experience for equipping students with those skills which are highly sought after by employers¹. Much less has been said about whether the sandwich period enables students to fare better than they otherwise would have done in their studies, on return to the university, had they not had such experience. Although this question can never be answered absolutely, I believe that there is an underlying assumption, often based on anecdotal evidence, that these students may well achieve better academic results. Firmer evidence is harder to gather, and indeed data on this subject appear to be lacking in the literature. Although it has to be acknowledged that ‘a good performance’ can be influenced by many factors, the rigours and discipline of a work placement can do much to focus the mind, sharpen the organisational skills and improve the work ethos of the individual for the return to the university. Where there are cohorts of students exposed to one academic pathway rather than another, it should be possible to discern meaningful differences in academic performance, given sufficient numbers.

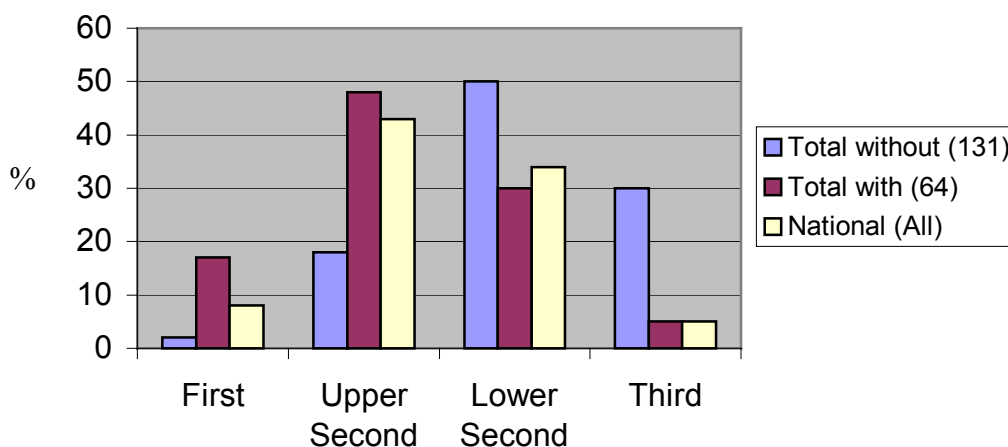
The beginnings

Comments and discussions over the years led me recently to examine data from my own Department regarding the degree outcomes of different cohorts of students during the academic years 1997/1998 to 2000/2001. In particular I compared data for students who had followed a BSc chemistry sandwich degree pathway with students who had studied on our full-time course. These data are reproduced below:

BSc Degree Outcomes Nottingham Trent University Chemistry Department 1998-2001 (with and without industrial training)



BSc Degree Outcomes Nottingham Trent University Chemistry Department 1998-2001 (with and without industrial training) compared with national results for all subjects and all modes of study



If these departmental chemistry data are put together for the four years and compared with national data² for all subjects and all modes of study, the following observations can be made:

- NTU chemistry students following a chemistry sandwich degree have a significantly greater chance of obtaining a first class honours degree than their full-time counterparts and indeed than students of any subject discipline or mode nationally
- The same local observation is true for an upper second class honours classification, although the 'advantage' is marginal compared to all subjects and modes nationally
- Our full-time students are more likely to obtain a lower second or third class classification and this is higher than the national average

This trend is apparent for all four years looked at, and although sample sizes are small these data suggest the value of looking at national data to see whether similar trends are discernable in other institutions. Such data is, of course, in the public domain but not readily accessible. Statistics on degree outcomes are collected by HESA (Higher Education Statistical Agency)² and certain data could, until recently, be made available through the Society for Research into Higher Education³ for student academic study.

The wider perspective

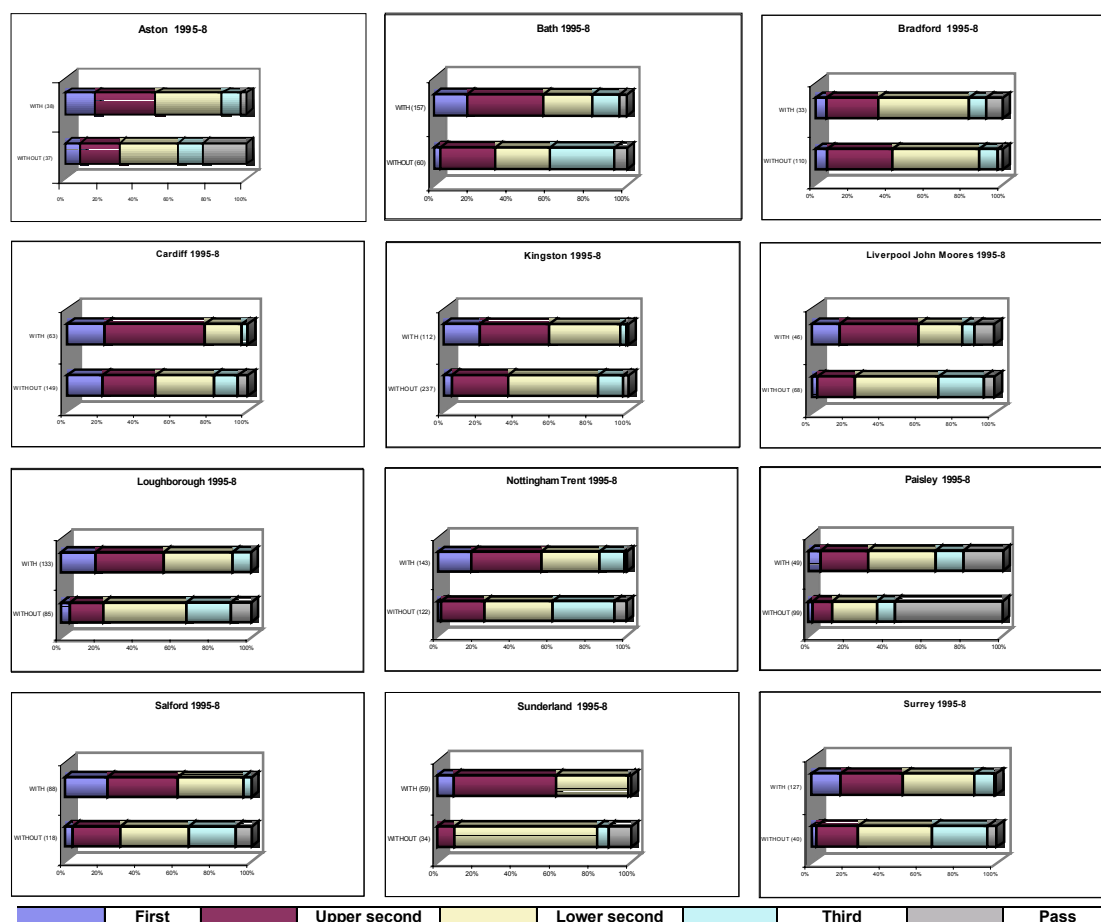
Late in 2001, data concerning degree outcomes for (a) chemistry degree courses (sandwich, full-time & part-time modes) (b) all [combined data] courses (sandwich, full-time & part-time modes) for the academic years 1994/5 to 1997/8 were obtained from SRHE³ for a final year student project. These were the most recent years for which data sets were available.

Initial evaluation of the data for all chemistry courses as a whole nationwide suggested that there were differences in the performance in each degree category for students on sandwich, full- and part-time courses, although these differences appeared to be small. Such simple analysis can, however, hide significant differences by including inappropriate data. For instance taking total numbers of chemistry students, sweeps in departments only offering a full-time study mode (the majority) and this leads to unbalanced cohort size comparisons. (In the years studied 85% of chemistry students followed the full-time mode, compared to 15% on sandwich courses). Additionally and importantly, it does not allow comparison between students following essentially the same academic course, differing only by an intervening

year of industrial experience, in the same institution. The latter situation should provide a much more revealing insight as to whether the sandwich year may be having an effect on subsequent academic performance.

From the data provided, twelve universities fulfilled the criteria of running both sandwich and full-time courses and having statistics for four years. They were Aston, Bath, Bradford, Cardiff, Kingston, Liverpool John Moores, Loughborough, Nottingham Trent, Paisley, Salford, Sunderland and Surrey. When the number of firsts, upper seconds, lower seconds, thirds and pass degrees were tabulated for each type of degree and each institution, what became apparent immediately was that in all cases except one (Bradford), students who followed a sandwich degree pathway were more likely to gain a first or upper second class honours degree, than those who studied by the full-time route. This ranged from, Cardiff 76% (SW), 49% (FT) to Paisley 31% (SW), 12% (FT) of students respectively. The gap between the two modes of study was never less than 19%, in 'percentage points advantage', in numbers of students gaining a 'good' honours degree over those awarded the lower classifications. In once case (Sunderland) it was as much as 52%!

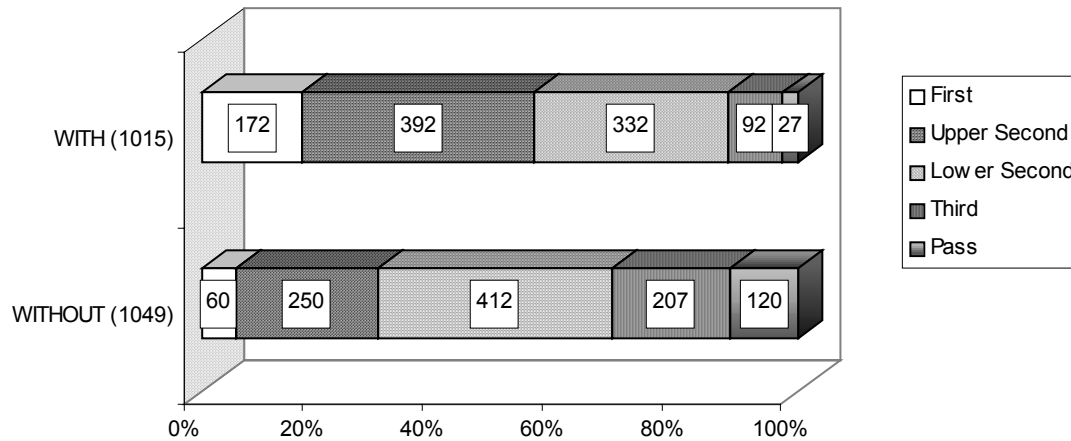
BSc Degree Outcomes Twelve Universities offering both sandwich and full-time chemistry degrees 1995-8



If we combine the data from all eleven institutions, we have roughly equal numbers of students studying by sandwich (1015) and full-time (1049) modes. Examination of the stacked bar graph below reveals that a sandwich student is, on average, three times more likely to gain a first class honours degree as compared to his/her full-time counterpart

(SW 17% firsts, FT 6%) in institutions where both pathways are on offer and that approximately twice as many sandwich students are likely to gain a 'good honours' degree as full-time students (SW 56%, FT 30%).

The 'Eleven' departments 1995-8



Conclusions

In this paper I have deliberately avoided detailed statistical evaluation of data, since the purpose of my investigation was simply to discover if there was a readily discernable difference in final degree performance of sandwich, compared to full-time students, following the same academic course. I believe that such a difference is clearly demonstrated. However a note of caution has to be sounded before concluding that a sandwich degree provides more, better academically qualified, graduates than a traditional degree. It will be readily apparent that a number of other factors may well influence student performance. Certain questions need to be asked. Probably the most obvious – are the more able students being preselected by the employer interview process? This must be true to a certain degree but in my experience, placements are secured by a wide ability range of students. Do the entry point scores of the two groups of students differ markedly? Are the students seeking industrial placements more motivated anyway? Are they different in temperament, approach to life and study etc? Is a year in industry simply alleviating financial problems, allowing the student to concentrate on studies in the final year, without the need for paid employment at that time? Doubtless there are other questions we could pose. These alternative and additional factors need to be the subject of further study. One thing is clear however - there is strong evidence to support the fact that sandwich students do indeed, on average, do better when it comes to final degree results, whatever the reason. Other studies have shown that they find employment more easily⁴. If only for these two reasons, and there are many more besides, it is imperative that the sandwich route to a degree should continue to be encouraged and supported.

References

¹ Work Experience: Expanding opportunities for undergraduates, Lee Harvey, Vicki Geall and Sue Moon, *Centre for Research into Quality*, 1998, ISBN 1-85920 113 X, and references cited therein.

² <http://www.hesa.ac.uk>

³ <http://www.srhe.ac.uk>

⁴ http://www.prospects.ac.uk/cms/ShowPage/Home_page/The_graduate_job_market/In_depth_articles_and_surveys/Indicators_of_employment__Summer_01_/p!efbbcL

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