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# Contents

# Introduction

Welcome to the second edition of ***ifs*** *University College*'s Journal of Professional Scholarship in Banking and Finance. I am delighted to be able to share the good practice, reflection and ideas emerging from those participating in Cohort Two of our Postgraduate Certificate in Higher Education (PGCHE). Each student, as part of studying for Module Three of the programme, has to produce an educational study relating to banking and finance education. A journal seemed an appropriate way to showcase the work of the participants given how many of their projects are relevant to our day-to-day business.

The range of projects produced by this cohort covers such thought-provoking pieces from "The student and tutor uses of technology" to "Case method and teaching of business strategy". I hope you enjoy reading the journal – the articles at minimum create an opportunity for reflection on your own practice either as an academic or as a practitioner or indeed as both! If you have been inspired by the articles and would like to study for the PGCHE then please get in touch. If you are interested in learning more about the PGCHE then please contact Ms Samantha Godden, Manager, Academic Community Development on 01227 818654 or by email: sgodden@ifslearning.ac.uk.

If you have any feedback on the journal or would like to submit a paper for the next edition, I should be delighted to hear from you.

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# How can the use of forums, as asynchronous online discussion platforms, be increased and used effectively at *ifs University College*?

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## Abstract

Forums, also known as asynchronous online discussion platforms or asynchronous computer mediated communication (ACMC), have been made possible by advances in technology. Research has outlined parameters for the use of forums and case studies have reported that they can enhance learning, but their purpose has not yet been clearly defined at ***ifs*** *University College*. This paper examines, via a questionnaire, students' use and attitudes towards Forums, why they are not used to their full potential, and seeks tentative ways forward.

### Introduction

'I have clearly stated … that my main method of communication to [students] as a group shall be by way of the forums. I can honestly say I have done my level best to get participation in the forums going but have in the large failed. It is frustrating that I don't know the reason why.' This comment is from an exchange of emails between *Module One* lecturers at ***ifs*** *University College* on the use of forums.

Forums are an additional means of learning and communication available to students and lecturers, complementing lectures, tutorials, individual mentoring and one-to-one emails. They work as a dedicated 'email' communication channel for each student group and are 'time and space independent … providing a time lag between reading a posting, formulating a reply and finally sending it' (Arnold and Ducate, 2006, p43). At the ***ifs*** *University College*, forums are a component of the Virtual Learning Environment (VLE) available to all ***ifs*** students.

But all is not well, as the opening quote indicates. What is not being done, and what needs to be done, to make forums an integral part of the student experience at ***ifs*** *University College*? Are forums an essential element of the learning mix?

Rovai (2007) provides a blueprint on how forums can be used effectively. Case studies (Arnold and Ducate, 2006; Thorpe, 2008; Nandi et al., 2012) show that forums can be effective. The case studies assessed in their papers show that, for both online courses and students on campus, forums can engage students fully. Can this be replicated with ***ifs*** *University College* full-time undergraduate and part-time distance and flexible learning students?

Thorpe (2002) and Eynon (2008) discuss the progress and possibilities of technology for learning. Technology has made forums possible, but is this what students and lecturers want and will use?

As research for this paper, questionnaires were used to establish the preferences and motivations of Level 4 and Level 5 students at ***ifs*** *University College* in their use of forums; what, in their opinion, was not appropriate for forums; why the forums are not used; to confirm whether lecturer involvement is needed; and to come up with some perspective of what may be done to make forums integral to studying at ***ifs*** *University College*.

Students already have channels for electronic communication – mobile phones, email, Facebook and Twitter – which are easy to access and use. Forums cannot compete directly with these. Should and could forums, instead, be used for something more directly related to their learning, where deeper understanding can be achieved?

According to Nandi et al. (2012), 'Student engagement in on-line discussion forums does not always take place automatically'. What can be done to use forums to 'motivate students to engage in positive social interaction and active engagement in learning?' (Rovai, 2007, p79).

## Literature review

### Theory of forum participation

'Online courses need to be designed so that they provide motivation for students to engage in productive discussion and clearly describe what is expected, perhaps in the form of a discussion rubric' (Rovai, 2007, p77). Forum 'design' is needed to motivate students – whether by providing the initial impetus, structured questions or activities, or by grading contributions. Rovai (ibid., p79) notes that grading contributions can provide this motivation.

Contributions at Levels 4 and 5 at ***ifs*** *University College* are not graded, so students are lacking that external motivation. The writer is aware that he has used the forums as a means of communication (so competing with other forms of communication) and has put minimal thought into the 'design' for forums. He has not made it clear to his students what he expects of them.

A key consideration is the need to amalgamate, firstly, the social constructive aspect, where, according to Vygotsky (2006, cited in Rovai, 2007, p78), students learn collaboratively, effectively creating a learning community; and, secondly, the constructivism philosophy whereby students scaffold their learning, the building blocks being an amalgam of students' experiences and interactions. These aspects have previously not been considered adequately by the writer.

## Studies on the use of forums

Arnold and Ducate (2006) report on forum usage by two groups of foreign language trainee teachers in full-time study. The research underlying the study echoes Rovai (2007) and measures participants' cognitive and social presence in their forums. There was a requirement to post contributions weekly. Positive findings of this study were that students did engage socially and cognitively. There was no, or minimal, tutor involvement in their discussions, which is not usual. The foreign language trainee teachers, being more mature, could be expected to manage discussions autonomously and take greater control of the process themselves. Arnold and Ducate were reluctant to draw general conclusions from their study, as there were too many variables.

Research carried out by Thorpe (2008) on an online Open University course, where the students met together for only one day, also produced positive outcomes regarding the use of this technology. She identifies the benefits of technology for distance learning students, reducing the negative effects of distance between students, the teacher and the study material. However, Thorpe (ibid., p59) identifies that the 'availability of forums "in principle" has not translated into … use in practice, whether for distance education or for the campus'. The exception noted is where the use of forums is part of the assessment process.

Nandi et al. (2012) discuss student and lecturer participation in two fully online technology courses, their aim being to quantify the quality of the forum participation and increase productive participation. Much more thought is given to the involvement of the lecturer, not surprisingly as the lecturers were 'distant', whereas they were on hand for Arnold and Ducate's students. The conflicting scenarios (instructors either directing forum discussions or letting students construct their own knowledge) are reviewed. However, they also do not feel able to draw any definite conclusions. 'A combination of approaches … requires students and instructors to take responsibility to construct and share knowledge" (ibid., p27). This shows that one cannot be prescriptive.

Forums for the writer's courses have lacked a purpose and an academic basis. His forums have not been 'designed as an integral part of the course, with collaborative learning as essential as assessment and study' (Thorpe, 2002, p105). They have not included 'a sequence of structured tasks' as did Thorpe's Forums (2008, p57).

## The impact of technology

Thorpe (2002) takes us back to when online integration was in its infancy. The traditional structure where courses were designed, then delivered, becomes obsolete when technology allows continuous design of courses and continuous delivery. The term 'learner support' now incorporates 'supporting learning'. However, Thorpe (ibid., p111) appreciates that technology provides additional means of communication (competing with face-to-face, telephone and email) and not everybody is comfortable with all these means of interaction.

Eynon (2008, p20) stresses that technology is supplementing, not substituting for, existing practices and can be used to enhance campus-based learning. It is a move from didactic methods to student-centred approaches. It does not necessarily decrease costs. More means of communication may be more flexible but are more time consuming. She says (ibid., p21) that technology should not be used just for technology's sake but must be used appropriately in teaching and learning in the future.

Whichever way technology develops, the relationship between course materials, the individual learner, learner groups, the tutor and technological resources has changed: certainties have gone, which is one of the reasons why researchers are reluctant to draw conclusions when learning situations are now developing dynamically.

The writer has become aware of the need to apply social constructivist and constructivism theories (Rovai, 2007, p78) to involve students in their learning, drawing also on the lessons of the case studies of Arnold and Ducate (2006), Thorpe (2008) and Nandi et al. (2012). The writer is aware that he has to learn how to work with the new technology and use it effectively.

# Research methodology

## The research proposal

This research project examines the use of forums at ***ifs*** *University College* to establish how their use can be increased and how they might be used more effectively.

A questionnaire was formulated to assess students' perceptions of forums as a tool for communication and learning. See Appendix 1 for the full text of the questionnaire. Questionnaires were sent to:

- Twenty-eight students on Module One (Level 4) first year undergraduate course from October 2012 to June 2013. Eleven questionnaires were returned (39%).

- Eighteen students on the *Module Two* (Level 5) flexible learning course (distance learning with three workshops) from May to October 2012. Five questionnaires were returned (28%).

## The questionnaire

The questionnaire sought information and opinions on the following.

- Frequency of access to the forums – this was a factual question, asking whether postings were viewed only or whether the student participated actively.

- Students were asked to select three reasons why they did not use forums – for practical reasons or because the forums do not satisfy a cognitive or social need. This question was optional, depending on the answer to the first question, but was completed by most participants.

- What were the forums used for? This question gave a wide range of options to establish whether students were interested in the cognitive or social possibilities. Is there any evidence of 'communities of practice' developing, as advocated by Lave and Wenger (1991).

- What should the forums not be used for? This question is the counterpart to the above question.

- Should contributions to forums count towards the final mark, and if so, what percentage should they account for?

- What balance should there be between posts by lecturer and students? Does lecturer involvement affect the way that students participate?

- Students were asked to state their preferred methods of study. This was a more wide-ranging question to see whether forums are at the forefront of students' minds as a method of study.

## Rationale for the questionnaire

This research does not attempt to assess the quality of students' contributions to forums, as did the work of Arnold and Ducate (2006) and Nandi et al. (2012). It is looking, rather, at Rovai's (2007) concern with the motivation of students to use forums and to establish what they are, and should be, used for. There are very few posts in the writer's student forums and these are used mainly for conveying information and ideas for further reading. These are inefficient uses of forums from a pedagogical viewpoint, where other means of communication are more appropriate.

The questionnaire called for some quantitative but mainly qualitative responses. The writer's perspective is a practical, pragmatic one. He wants to use forums, but has not found out what they are best used for, how to guide the students or even how to praise forum contributions. The opening comments to this project indicate that there is a feeling that fellow lecturers are also searching for ways to get meaningful discussions on forums.

What the writer is trying to do is to establish what he should do with the next cohort of students he will have two months after completing this project. What has been done in the past is unsatisfactory and is not engaging students. Should he persevere with forums, when other means of communication, such as tutorials and emails, are more prominent and, as things stand, more effective?

## Volumes of posts

A comparison was made of the number of postings made by *Module One* and *Module Two* students and by those taking the Level 7 Postgraduate Certificate in Higher Education (PGCHE) from September 2012 to August 2013.

There were 28 posts overall in the *Module One* forum, 24% by students and 76% by the lecturer. There were seven postings in the *Module Two* forum, all by the lecturer. The low numbers of posts by students confirm the minimal forum usage by these two groups and that the writer's presence was overwhelming.

The PGCHE students made 298 posts (70%) while 126 posts (30%) were made by their tutors, the opposite proportions for tutor / student participation at Levels 4 and 5 above. Most of these posts were in semester one, which counted towards the final mark. The number of posts indicates that using forums can become an accepted way of learning.

These statistics confirm Rovai's (2007, p79) findings that students are motivated to use forums if they are part of the assessment. Forums counted for 20% of the assessment on the Level 7 course. Rovai (ibid., p79) found that inclusion of forums in the assessment was most effective when forum contributions counted for between 10% and 20% of the grade marks, so this grade mark appears to have been effective. If forums were introduced into the assessment at Levels 4 and 5, making forum contributions count for 10% to 20% of the assessment grade could be considered initially.

## The research

### The questionnaire – Level 4 and Level 5 students

The writer believes that the questionnaire answers gave an adequate breadth of views and opinions. See Appendix 2 for a quantitative summary of the questionnaire results. The findings are as follows.

### Frequency of access to the forums

Most students, both flexible learning and full-time undergraduate students, accessed the forums rarely (56%) and only made a small number of reactive postings (53%). This confirms the numbers for the volumes of postings above. Students' comments included:

'I only participated when required'.

'I often found it easier to email [the] lecturer direct than log in to [the] forum but did look at others' comments for reference.'

### Reasons the forums were not used

The two main reasons given (38% in each case) were lack of time and dislike of this method of communication. The next reason (31%) was that students felt that they had little to contribute.

The writer thought that the steps that are needed to 'log in' would be a significant factor, and this was the case for 19% of the students, the same proportion that reported that the effort was disproportionate to the rewards. Students' remarks included:

'Would have preferred to have an email thread or even a Facebook group – something that incorporated itself into my existing lines of communication rather than adding to them. As it stands, forums are just a laborious way to communicate material.'

'Being able to ask follow-up questions is easier via email than through multiple posts.'

### What the forums were used for

Students' expectations were that forums are used for support to be given by the lecturer (56%) and for asking questions on the subjects (44%). Views were otherwise dispersed on the purpose of forums – there was support for forums to be used for news items and for group activities, for discussion and for posting opinions. There was little or no support for forums being a 'virtual classroom', for private reflection or, surprisingly, evidence of forums to be the basis of a 'community of practice'. Students noted:

'I honestly don't see the use of forums as a useful part of a learning scenario.'

'Opportunity to engage on subject and with other students although due to monitoring there is less interaction among students.'

'I communicate with others via different ways.'

### What the forums should not be used for

There was a strong view that forums should not be used for social exchanges (63%), private reflection (50%) or teaching (50%). A number thought that group activities and engaging with other students was not the purpose of forums, but almost as many were happy with this purpose. These results show, also, confusion among students as to the purpose of forums.

### Whether contributions to forums should count towards the final mark

Overwhelmingly (94%), students did not consider that forum participation should contribute to the final mark achieved. Where opinions were stated, the preferred percentage (19% of the students) was that forum usage should count 5% towards the final mark – the lowest possible level.

### What balance there should be between student and lecturer posts

There was clear demand for the lecturer to be involved in the forums (63%), more than just in initiating and summarising topics (31%). The lecturer appears to be expected to respond to student postings. As one student said:

'[The] lecturer breaks the ice and greases the wheels.'

Students' preferred methods of study

Students, both flexible learning and full-time undergraduate students, stated that their preferred methods of study are lectures and tutorials (both 50%). The flexible learning students prefer private textbook study (80%) while the full-time undergraduates prefer doing assignments.

Objective tests (multiple-choice questions) were a preferred means of assessment of the full-time undergraduates (44%), but are not a consideration for the flexible learning students, who do not take objective tests.

Forums are out of favour, with no students indicating them as one of their three preferred methods of study. No one highlighted examinations, but these are only used as an assessment tool, whereas assignments do have a learning element.

### Additional comments included:

'I personally do not like the forum method of interaction in general; I would suggest that most students like to keep the majority of their questions and queries private and between the tutor and themselves, or other students who they trust.'

None of the academic articles broached the inner feelings of students as expressed in this student's comment. This comment may reflect the student's learning style as one of the four developed by Honey and Mumford (2000). Here is a reflector or theorist, rather than an activist or pragmatist. Two 'activist' students on the Level 4 forums posted comments unbidden, so there will always be different levels of contributions from students, depending on their learning style and whether they are happy to be 'lurkers' 'who simply read messages and do not participate' (Nandi et al., 2012) or whether they want to be active participants.

## Research findings and conclusions

### Questionnaire findings

The first question confirmed that these Level 4 and 5 students make very little use of forums. The reasons are lack of time (full-time students) and not liking this method of study (flexible learning students). If forums are to become integral to studies, the writer believes they need to be a more formal part of teaching and learning and possibly of the assessment process.

Can forums be used for knowledge-giving? In none of the case studies or theories examined has this been a role for forums. When used this way by the writer, it has produced minimal response. Knowledge-giving is through lectures and study texts, and to a lesser extent through tutorials. A better use of forums is for developing that knowledge.

The topics of discussion at Level 7 (PGCHE) made use of students' academic research and experiences. These are good bases for discussion.

Much of the material at Levels 4 and 5 is technical and new to students. It does not lend itself immediately to discussion. To get forum participation, exercises could be used, either for individual or group contributions. Previous assignment questions could perhaps be used, with one member of a team presenting a group view. 'High participation and evidence of dialogue and argumentation within online tutor groups was achieved not by active tutor moderation but by a sequence of structured tasks' (Thorpe, 2008, p57).

If students can become comfortable with the concept of forums as learning tools, being asynchronous, they can allow students to adopt their preferred learning style, whether this is pragmatic, reflective, theorist or activist, in the same way that they adapt in tutorials and for examinations.

Students may not be aware that they are part of a 'community of practice' for the period they study together, so this is not a concept to impose but to help develop organically.

A finding was that forums should not be used for news or social exchanges. There are many channels for news both generally (news services, Facebook and Twitter) and for course administration (dedicated email addresses). The writer concurs that forums should not be used for 'communication'.

The majority view is that forums should not count towards the final assessment at Levels 4 and 5. The writer agrees with this at Level 4, as students joining at this level are unlikely to have used forums before. This could change as technology in schools changes. If students can be inducted successfully into using forums at Levels 4 and 5, they could become part of the assessment at Level 6,where full participation could then be anticipated (Rovai, 2007). However, the forums would need to replace some other element of assessment, for example shorter assignments.

There is a clear need for judicious lecturer involvement with students at Levels 4 and 5. It is a matter of judgement as to when to pose leading questions or praise students' efforts and it involves a commitment of time. Student–instructor interaction is important in enhancing students' satisfaction in an online course. It is for lecturers, at these levels, to set the direction for contributions and discussions.

Students expressed a preference for traditional methods of learning, particularly lectures and tutorials, with private study a preferred option for flexible learning students. The full-time students have a preference for assignments. The implication is that encouraging students to use forums will need direction, effort and inducements.

### Summary, issues and proposals

The questionnaire responses indicated that students at Levels 4 and 5 only consider forums to be an extension of lecturer support and for asking questions. They do not consider a main use to be group work, though this had some support. Yet the case studies (Arnold and Ducate, 2006; Thorpe, 2008; Nandi et al., 2012) indicate that forums can be successful if they are used purposefully and with students being clear about what is expected of them. As Rovai (2007, p81) adds, 'the final element of the design strategy is to provide discussion forums for content and task-oriented discussion that support collaborative group activities and the construction of content knowledge'. This key focus has been missing from the writer's and his students' use of forums and also from that of ***ifs*** *University College*.

There is a requirement for flexibility when student group sizes vary. At the time of writing, it is anticipated that the ***ifs*** 2013 graduate intake will be about 70 students, compared to 30 in 2012. But Rovai (2007, p81) indicates that groups for forums should be between 10 (minimum) and 30 (maximum), so there is a logistics issue for course administrators.

If forum contributions matter, do they need 'equivalent' status with coursework and assignments, ie be part of the assessment process? This is a game changer in the approach to forums and, as already suggested, would need to replace or reduce the marks allocated to one of the other assessment methods. It requires much more ongoing commitment from lecturers and students.

If forum contributions are assessed, lecturers will need to have experience or be trained in managing the process. Students will need to be clear on how they will be assessed. Will this be an equivalent of GradeMark, as used by ***ifs*** *University College* for assessing assignments, or will a rubric such as advocated by Rovai (2007, p80) be used?

As a means of teaching, forums are not as effective as textbooks, lectures and tutorials. As a means of communication, forums lack the spontaneity of emails and Twitter. However, as a means of learning, they can be used to complement discussion and debate beyond the classroom. They should not be used to impart news or knowledge, but to help students construct their understanding.

To move forward at ***ifs*** *University College*, forums might be used:

- over defined periods during courses, say for one term when there are no other examinations or assignments scheduled;
- at Level 4, for students to present group exercises (which are not assessed), individual contributions being encouraged but optional;
- at Level 5, for students to put more individual contributions on the forums (which are not assessed);
- at Level 6, for students to post individual contributions, which are assessed for quality.

The forums need to be made more easily accessible at ***ifs*** *University College*. The forums are embedded in the VLE for each course, accessed alongside the course materials. If they are considered a key learning tool, should they not be accessible on the 'my ifslearning' page, without the need to go to the course materials?

The writer will be incorporating exercises and structured tasks for the forums for his next intake of Level 4 students, which might only be during the first semester, so as not to conflict with the formal assignment assessments that occur later in the course, when he will encourage students to generate their own discussion contributions.

## Limitations and future research

The greatest limitation in going forward and making fuller, more effective use of forums at ***ifs*** *University College* is the effort and resources that will be required to do this and the fact that any change will displace other learning processes, all of which may be considered essential. Making forums a small but integral study element at Levels 4, 5 and 6 would open up the opportunity to monitor and review the outcomes. However, this is a seismic shift in focus that will require all lecturers to be on board and a commitment of time and resources at ***ifs*** *University College*. It may wish, instead, to move forward piecemeal in trying various solutions at different levels and taking account of available underlying pedagogy to see what works best. 'Electronic communications will be evolutionary not revolutionary' (Thorpe, 2002, p111).

The greatest constraint in beginning this project was the difficulty in understanding what forums can and should be used for. A clue lies in our first quote (Arnold and Ducate, 2006, p43) which views forums as a means of communication. We should not think of forums as a means of communication but as a learning tool through discussion and group exercises, giving them full attention and recognition as part of the learning process based on lessons that can be drawn from the theory and examples of Rovai (2007), Arnold and Ducate (2006), Thorpe (2002; 2008) and Nandi et al. (2012). Technology has made forums possible but they are not the same as, and should not replicate, other learning processes.

## Postscript April 2014

During the first term of the academic year 2013/2014, the writer asked his first year *Module One* undergraduate student groups to post answers to specific topics on the website. This was successful in that over 30 submissions were made, but less successful in that no discussion was generated. The exercise highlighted the need, at Level 4, for the process to be structured (and the structure communicated) so that students know what is required of them. This exercise was not continued into the second term, when students' priorities became coursework submissions.

The time-consuming nature of the exercise became evident and the conclusion remains that introducing forums may displace other study activities. However, lessons have been learned and efforts will be made in the academic year 2014/2015 to further integrate forums into students' learning experience.

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forums

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# Appendix 1

Questionnaire – Your Use of ***ifs** University College* Forums

May 2013

How to complete this questionnaire

Please put an 'x' against your choice of answer and add any comments you wish to make.

1. (a) How frequently did you access the forums during the last ***ifs** University College* module(s) you studied?

___Did not access

___Accessed rarely

___Accessed frequently

(b) If you used the forums, how did you contribute?

___Viewed messages only

___Made a small number of posts but no interaction

___Participated interactively

Comment.....

2. What were three main reasons you do not/you might prefer not to contribute to forums?

___Lack of time

___Don't like this method of communication

___Afraid I might expose myself to ridicule

___Felt I had little to contribute

___There are already many ways of studying and this does not add to the learning experience

___It's tedious to log on

___Effort disproportionate to rewards

___Feeling of isolation

___Afraid to use

___Don't enjoy

___Not real time

___They are a series of monologues not dialogues

___Lack of humour / emotions

___No guidelines

___Irrelevant discussion

___Other (please specify)……

3. (a) What do you consider are the three principal purposes of forums?

___News

___Private reflection

___Asking questions about the subject / syllabus

___Social exchanges

___Lecturer support

___Being part of a community

___Engaging with other students

___Group activities

___Exchanging / developing ideas

___Critical discussion, posting opinions

___Learning

___Teaching

___Virtual classroom

___Sharing knowledge and experience

___Other (please specify)…….

Comment……..

3. (b) Are there any of these uses for which you would NOT use forums?

___News

___Private reflection

___Asking questions about the subject / syllabus

___Social exchanges

___Lecturer support

___Being part of a community

___Engaging with other students

___Group activities

___Exchanging / developing ideas

___Critical discussion, posting opinions

___Learning

___Teaching

___Virtual classroom

___Sharing knowledge and experience

___Other (please specify)…….

Comment……..

4. (a) Should forum contributions count towards the final course mark (to encourage the use of this medium)?

___Yes

___No

(b) If they should, what percentage mark should be allocated?

___5%

___10%

___15%

___20%

___More than 20%

Comment……

5. (a) What balance do you believe there should be in the forums between the contributions of the lecturer and the students?

___Student–student interaction only

___Lecturer to initiate and conclude threads only

___Lecturer to respond to most contributions

(b) Does or would lecturer involvement affect the way you use forums?

___Yes

___No

Comment……

6. (a) Which three methods of study are most useful to you?

___Private textbook study

___Private study using other resources (library / Internet)

___Lectures

___Tutorials

___Reflection

___Group work

___Forums

___Doing objective tests (multiple-choice question examinations)

___Completing assignments

___Taking examinations

___Other (please specify)…….

(b) If not included, what would encourage you include forums in your list of three?

Comment……

Any additional comments you wish to make……
……
……
……
……
……

**Thank you for your assistance in completing this questionnaire**

# Appendix 2

| | Questionnaire Analysis | L4 | L5 | Total | % |
|---|---|---|---|---|---|
| | USAGE | | | | |
| 1a | Did not access | 1 | 1 | 2 | 13 |
| | Accessed rarely | 6 | 3 | 9 | **56** |
| | Accessed frequently | 4 | 1 | 5 | 31 |
| 1b | Viewed only | 4 | 2 | 6 | 40 |
| | Small no. posts | 6 | 2 | 8 | **53** |
| | Participated interactively | 1 | 0 | 1 | 7 |
| 2 | REASONS FOR NOT USING | | | | |
| | Lack of time | 4 | 2 | 6 | **38** |
| | Don't like this method | 3 | 3 | 6 | **38** |
| | Afraid of ridicule | 1 | 0 | 1 | 6 |
| | Felt I had little to contribute | 5 | 0 | 5 | **31** |
| | Many ways to study, not does not add | 1 | 0 | 1 | 6 |
| | Tedious to log on | 0 | 3 | 3 | 19 |
| | Effort disproportionate to rewards | 2 | 1 | 3 | 19 |
| | Feeling of isolation | 1 | 0 | 1 | 6 |
| | Afraid to use | 1 | 0 | 1 | 6 |
| | Don’t enjoy | 2 | 0 | 2 | 13 |
| | Not real time | 1 | 1 | 2 | 13 |
| | Monologues not dialogues | 0 | 1 | 1 | 6 |
| | Lack of humour | 1 | 0 | 1 | 6 |
| | No guidelines | 1 | 0 | 1 | 6 |
| | Irrelevant discussion | 0 | 0 | 0 | 0 |
| | Other | 1 | 1 | 2 | 13 |
| 3a | USES MADE OF FORUMS | | | | |
| | News | 3 | 1 | 4 | 25 |
| | Private reflection | 0 | 1 | 1 | 6 |
| | Asking questions about subject | 4 | 3 | 7 | **44** |
| | Social exchanges | 0 | 1 | 1 | 6 |
| | Lecturer support | 6 | 3 | 9 | **56** |
| | Being part of a community | 0 | 0 | 0 | 0 |
| | Engaging with other students | 4 | 1 | 5 | 31 |
| | Group activities | 4 | 0 | 4 | 25 |
| | Exchanging/developing ideas | 3 | 0 | 3 | 19 |
| | Critical discussion, posting opinions | 3 | 1 | 4 | 25 |
| | Learning | 4 | 1 | 5 | 31 |
| | Teaching | 1 | 1 | 2 | 13 |
| | Virtual classroom | 0 | 1 | 1 | 6 |
| | Sharing knowledge | 3 | 1 | 4 | 25 |
| 3b | FORUMS SHOULD NOT BE USED FOR | | | | |
| | News | 3 | 0 | 3 | 19 |
| | Private reflection | 5 | 3 | 8 | **50** |
| | Asking questions about subject | 1 | 1 | 2 | 13 |
| | Social exchanges | 7 | 3 | 10 | **63** |
| | Lecturer support | 0 | 1 | 1 | 6 |

| | | | | | |
|---|---|---|---|---|---|
| | Being part of a community | 0 | 3 | 3 | 19 |
| | Engaging with other students | 0 | 3 | 3 | 19 |
| | Group activities | 4 | 0 | 4 | 25 |
| | Exchanging / developing ideas | 0 | 0 | 0 | 0 |
| | Critical discussion, posting opinions | 0 | 1 | 1 | 6 |
| | Learning | 1 | 1 | 2 | 13 |
| | Teaching | 5 | 3 | 8 | **50** |
| | Virtual classroom | 3 | 2 | 5 | 31 |
| | Sharing knowledge | 0 | 1 | 1 | 6 |
| | Should Use of Forums COUNT TOWARDS FINAL | | | | |
| 4a | MARK | | | | |
| | Yes | 1 | 0 | 1 | 6 |
| | No | 10 | 5 | 15 | **94** |
| 4b | IF SO, PERCENTAGE | | | | |
| | 5 | 2 | 1 | 3 | **19** |
| | 10 | 1 | 1 | 2 | 13 |
| | 15 | 0 | 0 | 0 | 0 |
| | 20 | 0 | 0 | 0 | 0 |
| | more than 20 | 0 | 0 | 0 | 0 |
| 5a | STUDENT-LECTURER CONTRIBUTIONS BALANCE | | | | |
| | Student–student interaction only | 0 | 0 | 0 | 0 |
| | Lecturer to initiate / conclude | 4 | 1 | 5 | **31** |
| | Lecturer responds to contributions | 7 | 3 | 10 | **63** |
| | | | | | 0 |
| 5b | AFFECTED BY LECTURER INVOLVEMENT? | | | | 0 |
| | Yes | 8 | 2 | 10 | 63 |
| | No | 2 | 3 | 5 | 31 |
| 6 | METHODS OF STUDY MOST USEFUL TO YOU | | | | |
| | Private textbook study | 3 | 4 | 7 | **44** |
| | Private study other resources | 5 | 1 | 6 | **38** |
| | Lectures | 4 | 4 | 8 | **50** |
| | Tutorials | 6 | 2 | 8 | **50** |
| | Reflection | 3 | 0 | 3 | 19 |
| | Group work | 2 | 2 | 4 | 25 |
| | Forums | 0 | 0 | 0 | 0 |
| | Objective tests | 4 | 1 | 5 | **31** |
| | Assignments | 6 | 1 | 7 | **44** |
| | Examinations | 0 | 0 | 0 | 0 |

# Case method and teaching of business strategy: a case study on case studies

Dr Anthony Gandy FCIB PGCHE

## Abstract

The following paper is essentially a narrative. It briefly describes the concept behind the use of two case studies. One case study has been developed for use in ***ifs*** *University College* MSc in Banking Practice and Management and the second for simultaneous use by the ***ifs*** and to support a governance programme at the University of Southampton. Effectively this is a case study on case studies which were developed contemporaneously with this paper. These cases evolved in the course of this project and have changed in nature as the understanding of cases and their use in education has developed. One of the cases has changed radically from being a lecturer-led exercise to being a student-led assignment exercise. This is clearly a case of the objects being studied being directly influenced by the research process, but in this case it is a positive feedback loop as the project here was aimed at improving the understand of the role and delivery of case method learning.

### Introduction

The initial plan for this paper was to consider the use of case study material in the education of two sets of students. The first community are students of ***ifs*** *University College* and the second set are students at the University of Southampton. The ***ifs*** MSc students represent a body of students whose key focus is on financial services and markets and are, in the main, practising bankers. The University of Southampton students are taking a third-year module in Corporate Governance and come from various degree backgrounds, including BSc Accounting and Finance through to mechanical, electrical and electronic engineering.

The original cases were:

- Case 1:

o Case: Beware the evolving business model – the demise of Alliance and Leicester

o Student audience: ***ifs*** *University College* MSc Banking Practice and Management

o To be developed by Dr Anthony Gandy (***ifs***)

- Case 2:

o Case: Navigating the M-form business structure: the development and failure of the general-purpose computer business at General Electric

o Student audience: University of Southampton (now also being used by ***ifs*** MSc students)

o Developed by Dr Anthony Gandy (***ifs***) and Dr Roy Edwards (Southampton)

However, as the literature review for this paper took place and as the use of case studies became better understood, it became apparent that better use of the case study approach could be made than was initially conceptualised. While Case 2 has been written for students of both universities in roughly the expected way, Case 1 has developed into a student-delivered assignment exercise (Case 3) rather than a lecturer-led case.

When reflecting on the literature review developed for this paper, and reflecting on the categorisation of case study methods, it became clear that there was already a diverse use of cases in the ***ifs*** MSc programme and that Case 1 could be replaced by a more student-centric exercise. Case 1 was recast into a student-led case on Northern Rock, which students were asked to develop as a 3,000-word briefing paper as part of a formal assessment exercise.

Therefore the two case studies developed were:

- Case 2:

o Case: Navigating the M-form business structure: the development and failure of the general-purpose computer business at General Electric

o Student audience: University of Southampton (now also being used by ***ifs*** MSc students)

o Developed by Dr Anthony Gandy (***ifs***) and Dr Roy Edwards (Southampton)

- Case 3:

o Case: The demise of Northern Rock

o Student audience: ***ifs*** *University College* MSc Banking Practice and Management

o Set by Dr Anthony Gandy, to be developed by students as an assessment

## Case study literature

There is a great deal of literature now covering the subject of case studies and their uses. In an environment where academic research has moved away from the 'authentic' towards the abstract, case studies have become vital tools to try to relink the academic study of phenomena to real-world experience.

Flyvbjerg (2006) outlines five 'misunderstandings' about case study research. These are that:

- theoretical knowledge is more valuable than practical knowledge;
- one cannot generalise from a single case – therefore, the single-case study cannot contribute to scientific development;
- the case study is most useful for generating hypotheses, whereas other methods are more suitable for hypotheses-testing and theory-building;
- the case study contains a bias towards verification;
- it is often difficult to summarise specific case studies.

It is quite remarkable that the Flyvberg paper, a paper not appearing in a highly ranked journal, has been cited so often:

- 584 times according to Scopus;
- 394 times according to Web of Science;
- 2,612 times according to Google Scholar.

while it may appear surprising that such a paper has so many citation, it really represents a hunger to justify case method as a viable teaching and learning process. Flyvbjerg (2006, p221–222) notes that there is a key difference between 'context independent' learning and 'context dependent' learning. The former, he argues, can only provide a foundation. True virtuoso-level understanding requires context, and indeed true human experts understand in detail the context in which events occur and have often mastered thousands of such examples. For example, pilots not only need a basic understanding of the laws of flight, but must have experienced hundreds of examples of in-context events and repeated their response to them many times. The high citation rate for Flyvbjerg expresses the desire of many educators to justify why the expression of in-context experience is vital to both research and teaching.

Such efforts to justify in-context experience seem unique to business schools and to social science schools. In other disciplines, context-dependent and context-independent concepts have been fully embedded as different forms of learning. Scientists will focus on principles (to some degree, context independent); engineers will look to explore these within the context of the tools they are developing (clearly, context dependent). This self-doubt about the value of in-context cases is enormously worrying as so many of those teaching in business school environments, where student expectations will be of in-context knowledge exchange, are now from a social science background and lack any connection to in-context experience. Bennis and O'Toole (2005, p98) make the point that business schools would now never hire into their faculty, let alone promote to tenure, an academic whose main experience was in running an assembly plant, and yet students are looking for this form of practical learning as well as scientific underpinnings. Bennis and O'Toole (2005) decry the move towards a generation of academics with 'physics envy', promoting generalist social science tools with little experiential evidence to teach with. The relevance of social science theory to business education is very low.

Flyvbjerg points to Harvard and the principles it uses in its learning processes as a method for rooting business education in useful experience. The Harvard Business School Case Study Method is now used throughout Harvard and is methodologically supported by Harvard's Christensen Center for Teaching and Learning. It is worthwhile quoting Garvin (2003, p56) in some depth as the following quote underpins the important role of authenticity through case studies in professional education:

"All professional schools face the same difficult challenge: how to prepare students for the world of practice. Time in the classroom must somehow translate directly into real-world activity: how to diagnose, decide, and act. A surprisingly wide range of professional schools, including Harvard's law, business, and medical schools, have concluded that the best way to teach these skills is by the case method."

Built on the case approach used in Harvard's Law School, the Business School adopted the Case Method in 1920 and the Medical School began using the Case Method in 1985 (Garvin, 2003). Cases bring authenticity, the ability to solve real-world problems and develop in-context knowledge. This, of course, is not to the detriment of theory; it enables the application of theory and engages students with that application in areas they can see are relevant to their desired outcomes.

Services such as the Case Centre (www.thecasecentre.org/educators), previously the European Case Clearing House, and Harvard itself now share and sell cases and even promote the Case Method of teaching to other business schools to try to help inexperienced lecturers to root some of their teaching materials in context.

However, the role of experience and how it can be used to develop business education is not necessarily simply about authenticity supporting technical learning. McGill University's Henry Mintzberg (2004) argues that undergraduate business students should be taught to think and understand philosophy, not be taught technical toolkits. In addition, MBA students should only be given places in business schools once they have appropriate levels of managerial experience so that they can work on their understanding of the process of management – not be taught rudimentary activities such as the basics of finance or the statistics of marketing.

Gosling and Mintzberg (2004) argue that "Management education should be restricted to practicing managers, selected on the basis of performance." Only managers who can bring experience to the classroom provide value there, both to themselves and to other students.

Mintzberg (2004), on the face of it, agrees with the points made by Flyvbjerg (2006); he believes that the wrong type of people are taking MBAs and teaching MBAs, and that they

have neither the craft (experience) nor the art (vision) but overemphasise the scientific .

The weakness here seems to be that in Mintzberg's conceptualisation, there seems to be no space for technical learning, whether it is experiential or not. For the majority of general management students, some form of technical learning must take place in an academic institution. The case study provides the basis for technical learning presented in a practical context. However, Mintzberg believes that Harvard and many others use cases to reinforce technical learning. He believes that there is little value in case study materials prepared by lecturers who have little context for those cases and read by students with even less context.

However, it seems remarkable that Mintzberg (2004) and Gosling and Mintzberg (2004) seem to conceptualise business students only in the context of management education, the process of managing others. They ignore the need for technical understanding in the structures of enterprises. Harvard is a business school, not a school of management; this much better explains the need for functional understanding to underpin technical business functions. The MBA is a business administration degree, not a management degree in isolation; there are technical underpinnings to most business activities – management is one small part.

Notably, Mintzberg does emphasis 'action learning' in his thinking and the case study driven by the student, though not by the lecturer, can play a key part in this.

Other thinkers on management development see cases as being almost the opposite of action learning. Mumford (1995) sees passive case studies delivered by lecturers as of little value. In his concept, management trainees should work in teams on real problems and execute real projects for real enterprises. Indeed, a number of MBA programmes take this approach. For example the Hult International MBA (see: www.hult.edu/en/programs/mba) uses the LEAP method, which focuses on a six-week 'action project' working in teams on a real project for a real enterprise.

However, action projects are of little use in technical education until basic technical knowledge has been imparted, and are of even less real value in part-time programmes when six-week full-time assignments are hardly practical. Action learning is sometimes poorly served by the terrible one-liner from Bergeron (2003) quoting Kahil Gibran "A little knowledge that acts is worth more than much knowledge that is idle." That is so trite in a technical education environment, but there is no reason why action and technical learning cannot go hand in hand and the case can be the vehicle.

Cases studies can instead be used as a form of action learning – simply get the students to build the case.

# Analysis

## Emerging case study types

During the literature review and during the consideration of the two cases been written for the ***ifs*** MSc in Banking Practice and Management, it has become clear that it is necessary to think about the wider nature of the case study and consider how cases can be classified as to their role in learning and teaching, and more specifically how they are used in the MSc programme.

Initially the two cases that are the subject of this study were both aimed at providing frameworks for lecturer-led exercises but which contained some industry context to show a match of theory to practice. Effectively they were illustrative pieces 'showing' strategic concepts within the context of a real corporation. This is how the General Electric case study has been developed. However, the second case study, originally to be Alliance and Leicester but now focusing on Northern Rock, has changed radically. It has now become an action-learning exercise, integrated with an assignment.

The change from the lecturer-led Alliance and Leicester case study to the student-led Northern Rock assignment case was formulated through reflection on the author's growing understanding that, in a broad sense, cases can be both the Harvard style, supporting technical learning, and Minztberg style, drawing on student understanding and taking a more action-learning approach.

Across the whole of the ***ifs*** MSc in Banking Practice and Management programme, four basic forms of case study materials have emerged. They fall into two broad categories. While not scientific, the following is a proposal of how to categorise the various cases used in the MSc.

## Lecturer-led cases

These are cases presented by the lecturer that form a part of the technical learning, simply in-context illustration matching theory to practice.

### Type 1: Short illustrative cases

o Short examples illustrate theory or concepts already 'taught'.

o Example: Wingspan

• In the ***ifs*** MSc Banking Practice and Management programme, in the first two rotations there was a module called Customers and Channel Strategy which introduced a case on the failed US internet bank Wingspan. The module materials had already discussed the problems of establishing a new bank that emphasises only new channels to market as its competitive advantage but which then fails to achieve a competitive position in other areas of the banking value chain. Wingspan is used to illustrate this point.

o There are a large number of such cases throughout the MSc learning materials.

### Type 2: Core learning cases

o Here the case is used to directly 'teach' the core concepts that are not contained in any other materials.

o Example: General Electric

• This is one of the cases studied in this project – it is used as the main delivery vehicle for new learning not covered in a context-independent way in the main body of the module and focuses on issues of managing an M-form business structure and competition for capital created by a concentrically diversified corporate configuration.

## Student-led cases

These are cases that are driven by the students and act more as an action-learning exercise using student-developed cases as the tool.

### Type 3: Framework action-learning cases

o Case studies are used to exercise core competencies throughout a module.

o Example: Britvic case

• In the ***ifs*** MSc's Financial and Bank Accounting module, there is a case study embedded throughout the whole module. This case study is used to engage students with the exercise of core competencies. For example the lecturers who developed this running case use the data provided to get students to calculate core numbers, such as constructing discounted cash flows, or working out the cost of capital. In the 2012 session, the case was based on Britvic's 2011 Annual Report.

### Type 4: Case study, action-learning assessment

o Student-constructed case studies are used for assessment.

o Example: Northern Rock assignment

• The second case studied in this project falls into this category.

During the initial conceptualisation of the two cases being studied here, it was envisaged that the original Alliance and Leicester case would be a Type 1 case, purely illustrative of concepts already discussed in class, while General Electric would be a Type 2 case, introducing ideas new to discussion. This changed radically and the Alliance and Leicester case was replaced by a Type 4 case focusing on Northern Rock and used as a student assignment.

## Northern Rock – a Type 4 case study, action-learning assessment

As noted, during the original development of the two cases, it was envisaged that a case study would be built by the lecturer to show a number of in-context illustrations about the problems associated with wholesale funding models coupled to high concentration risks in mortgage-lending banking.

Initially this was to be a case on the termination of the Alliance and Leicester (A&L) business. While A&L did not fail in the same way as Northern Rock and Bradford & Bingley, its purchase by Santander was very much driven by the same dynamic. The appeal of this case to the lecturer was simply that it is a case that has not been greatly studied but which still has great resonance. This provided three key benefits:

• Firstly it was a case through which the migration of funding from a traditional deposit-based model towards a wholesale/securitisation model could be tracked.

• Further it was a case that allowed for the study of concentration risk, given A&L's focus on the housing sector and the dangers such concentration can create.

• Finally, as A&L has not been greatly studied, there was the potential of creating a peer-reviewed journal paper from the work which would go into developing a teaching case.

It is that last point that is critical. While the general circumstance of A&Ls demise is well known, no formal case as such exists. To create the case for students, the lecturer would need to create the case themselves, with a view to both providing illustrative materials on the risks of securitisation and of concentration risk for students, and with half a mind to publication. However, perfectly adequate cases have been written on the same failings (and, indeed, a more extreme case) through the analysis of Northern Rock. There are online primary materials on Northern Rock's collapse in the form of evidence presented to the House of Commons Treasury Committee during its assessment of the collapse of Northern Rock and from the same source there is also a formal report on the failings at Northern Rock (House of Commons Treasury Committee (2008)). In addition, there are half a dozen or more academic evaluations of the same primary research and the wider context of the Northern Rock failure, for example Shin (2009), Marshall et al. (2012) and Goldsmith-Pinkham and Yorulmazer (2010).

With these sources available, it seems wrong that the motivations of the lecturer to publish in peer-reviewed journals should, in part, drive the development of a new case that would have fewer resources for students to assess beyond the case written by the lecturer, when another case (Northern Rock) already exists and has much richer content available. Instead, it is clear from the availability of primary and secondary data that students could easily create their own case drawing on both the Northern Rock materials and the theoretical background given in the standard MSc course materials on the function and risks of securitisation and the risks of overly concentrated asset portfolios. Indeed, students are given this theoretical background in the form of theory and during the course of a number of Type 1 illustrative mini-case studies showing the impact of these issues on other banks. Therefore it is clear that students are fully equipped to

consider using the freely available materials on Northern Rock to develop their own narrative and analysis and to link theory, practice and outcomes through their own research efforts. This process of linking theory, practice and outcomes could form a basis for assessment.

The Alliance and Leicester case was abandoned (though may get written as a case for publication at a later date) to be replaced by a student assessment based on the development of a report on the failure of Northern Rock in the form of a briefing paper for a new CEO of a banking trade body. This 3,000-word assignment allows students to explore the evidence created by the House of Commons Treasury Committee and to search for evidence elsewhere and to use this to develop an evidence-based case study in the form of the briefing. The effort has been passed to the students, and this will help to assess whether they are able to link the Northern Rock 'story' to a wider analysis of the financial crisis and to evaluate their appreciation of why UK banks were caught up in that failure and why a changing business model may have caused this link. Such an assessment can be used to ensure that the wider learning in the module can be used by the student to evaluate a real-world case.

It should also be noted that there was a second reason why the Northern Rock case was adopted as an assignment piece. The module specifications note that part of the assessment is to be through a case study and the External Examiner to the Banking Competition and Strategies module thought that the original assessment 'case' was too convoluted – very sensible advice. The adoption of Northern Rock and setting the goal that students should use this as an illustrative case in a briefing paper was seen as a better match to the case study approach outlined in the module specification than the original case, which was a wider piece on the subprime market in the USA.

## General Electric – a Type 2, lecturer-led, core learning case

The ***ifs*** MSc in Banking Practice and Management follows the creed of in-context education. While containing theoretical content, it presents this in the context of banking and financial markets in a broader sense. However, there are wider concepts of management which over the years have been more fully explored in industries outside banking.

The General Electric (GE) case used in the MSc is based on primary research into the operations and functions of the GE corporation in the USA. This research was undertaken for a peer-review paper looking at the development of the Computer department within GE and how this related to the corporate organisation and governance structures of GE. The first paper from this research focuses on the Computer department itself and has been accepted into a peer-reviewed journal (Edwards and Gandy, 2014, ranked 4 in the Association of Business Schools (ABS) journal rankings) and a second paper, comparing the corporate structure of GE to the reality of the operational business models, is being prepared for another journal (rated 4* by the ABS). It is this second paper from which we draw case materials on the structure and organisation of multi-business corporations.

This is a vital concept as the term 'multi-business corporations' sums up the business model inherent in banking which is dominated by large bancassurance and universal banking groups. However, a theoretical understanding of how such multi-business companies are/should be structured has been studied in a more comprehensive way outside the banking sector. GE is a vital case in this area. Not only is it one of the most studied corporations in history, but it has also had a direct role in the history of management theory. As a part of the journal paper primary research, we covered the role of Harold Smiddy, a senior strategist at GE, and how he worked on the development of corporate structure and then later performance management methods with the management theorist Peter Drucker (see Greenwood, 1981).

In the specific case of the ***ifs*** MSc in Banking Practice and Management, the GE case is used as a straightforward example of the development of the multi-business enterprise illustrating the concepts developed by theorists such as Chandler (1990) and Williamson (1975). It is useful as we, in the module materials, have already described how banks often look to achieve economies of scope through offering multiple product lines to the same set of customers (such as insurance products to banking customers) and the GE case puts into more context the challenges of such a structure as it generates internal competition for resources. By looking at GE we can see how a corporation can move from a functional structure, really geared to a single product for a single market, to a multi-business organisation looking to exploit economies of scope as well as scale. More importantly, we can then look at how such corporations can face problems if the imagined economies of scope cannot materialise because the organisational structure prevents effective collaborative working between different product groups (Chandler, 1990; 2001).

However, in reality this case is a simple lecturer-led case. Its context is GE, primarily because that is where so much management theory has been developed. The surrounding context in the module provides greater theoretical perspective, including the development of the Transaction Based Economics view of the firm (which directly relates to the GE case), the Resource Based View of the firm and the rapidly developing field of the Business Models approach to firm evaluation. All of these more theoretical topics are discussed in the context of banking. The use of GE plays the happy role of matching a learning outcome that covers learning and experience from outside the banking sector. It is compared to the Northern Rock case study, focused on core module learning materials delivered in context. It is not necessarily that engaging for students.

There is a difference in how this case is used at the University of Southampton. There the case is used to explore governance structures, relating formal structures of governance to operational reality. The lecturer goes on to use the case to generate student discussions and calculation for project finance decision-making, such as discussing the role of discounted cash flow calculations. While still lecturer-led, there is more of an action element to it.

## Conclusions

This is clearly a self-reflective paper. It is a description of the development of two case studies and how carrying out the literature review for this study has changed what one of the cases covers and who now undertakes that case – it has moved from the lecturer to the students.

As such this paper in its own right effectively acts as an action-learning piece and a case study on case studies. Of course, the case studies themselves have not been reproduced here. The Northern Rock case is an assignment and is not appropriate to release. The General Electric case is in part taught as a classroom discussion and while large element of it have been published as peer-reviewed journal papers, these are not in the same form as the way the case is used in the classroom.

As a part of the discussion above, we have briefly evaluated the problems faced by business schools in teaching subjects that ideally should contain context, but which are increasingly being replaced by context-independent theory. The reasons behind this are as much to do with the nature of teaching staff, their 'physics envy' and, what seems to this author, a misunderstanding of what business education should cover with an overemphasis on management and power/authority (critical management theory) as lecturing staff have little context in which to place technical learning. The case study can provide context, both in the materials provided by the lecturer (as in the GE case) and, most importantly, in the learning and activities that students undertake themselves (as in the Northern Rock case/assignment).

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# How does attainment within a multiple choice question component at Level 4 undergraduate level predict overall module grade?

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## Abstract

Examining the level of correlation between the final grade and performance in summative multiple choice question (MCQ) examinations within a multi-component module, this study found a good correlation with no differences on gender although there were subject differences.

Drawing on comparative literature, findings were extended by considering the relationship between MCQ assessment and essay attainment, concluding that there was limited correlation regarding total data set, each subject independently or gender.

Further extension via an attitudinal questionnaire considering other variables that may affect the correlation showed that Level 4 ***ifs*** *University College* lecturers generally deemed MCQs to be an effective summative assessment tool at Level 4 to various extents, although all respondents considered essays to be a significant and effective summative assessment tool. Options for alternative inclusion of MCQs in assessment and additional influencers on student results were considered, adding value to the data and providing further research recommendations.

### Introduction

The study of links between performance on summative MCQ, essays and final grade is not new. MCQs are often considered by students and lecturers to be an easy option over essays (Lawrence and Singhania, 2004). The use of MCQs in summative assessment is popular because:

- they are low-cost and easy to administer to large numbers (Lumsden and Scott, 1995; Walstad and Becker, 1994; Kuechler and Simkin, 2010; Krieg and Uyar, 2001);
- they test knowledge at the lower level of Bloom's taxonomy (Lumdsen and Scott, 1995), although Harper (2003) argues that they can be used to assess higher-level skills; and
- it is possible to achieve consistency in results since there is no margin for opinion (Lumsden and Scott, 1995; Walstad and Becker, 1994; Bleske-Rechek et al., 2007).

However, some consider that they emphasise recall and encourage guessing (Walstad and Becker, 1994).

Essays allow creativity and an 'ability to assess the thought process of the student' (Walstad and Becker, 1994, p193), displaying deep learning techniques (Scouller, 1998), but can results on MCQ predict students' essay or overall score? Downs (2006) suggests that performance varies greatly depending on subject type and institution but concludes that 'students perform best and consistently in MCQ'.

This study draws on research conducted over a variety of subject areas and considers what conclusions, if any, can be drawn by exploring secondary quantitative data from 875 students on three Level 4 subjects from the ***ifs***. However, correlation does not imply causation and this study seeks to investigate some of the reasons for the conclusions by drawing on previous research findings, and enrichment of data through primary qualitative and quantitative questionnaire responses from Level 4 ***ifs*** lecturers.

### Literature review

Literature and empirical evidence surrounding the hypotheses being considered in this study are extensive and varied, making universal predictions difficult although identifiable themes emerge.

Leading subject researchers Walstad and Becker (1994) considered the correlation of MCQs to final grade to be 'almost unity' (p195) in their study of around 4,000 students, concluding that 'the primary determinant of the composite score is the multiple choice score' (p195), although adding the caveat that this could be influenced by the weighting given to MCQs in a multi-assessment module. While Hickson and Reed (2009) concurred, suggesting that 50% of their data sample of 8,400 students showed a link, they attributed the rest of any correlation to student learning although this is an un-reviewed working. They considered Walstad and Becker's study to be flawed, feeling it was biased towards proving MCQs as an assessment technique. Alternatively, O'Neill (2001) and Krieg and Uyar (2001) concluded that test type had no bearing on final grade, with O'Neill considering Walstad and Becker's survey to be too narrow to provide a hypothesis and Krieg and Uyar suggesting student characteristics to be a factor.

A variety of studies consider attainment on MCQs as a predictor of essay attainment, including Pepple et al. (2010) who concluded that 'students in all grade groups were likely to perform better in the MCQs than in the long essay questions' (p86), a view held by Hartley et al. (2007) although they qualified that, if mature students were removed from the sample, gender was a large contributor – ignored by Pepple et al. (2010). Mujeeb et al. (2010), comparing MCQs with short essay questions in a study of 533 Medicine students, cited Pepple et al. (2010) confirming significant correlation at pass grades but lack of correlation at fail / distinction levels and suggesting examiner marking bias as the sole contributory factor. Interestingly, subject leaders Walstad and Becker (1994) and Lumsden and Scott (1995) suggested a high correlation between the two, although this could be dependent on subject type with more quantitative subjects (eg chemistry) showing higher correlation. This was extended by Hickson and Reed's (2009) 8,400 students and they concluded that MCQ results were a predictor of essay attainment having eliminated instructor bias.

Contrarily, Lumsden and Scott's (1987) study of 3,000 UK students concluded that MCQ results could not generally be used to predict essay results, a view corroborated by Krieg and Uyar (2001), McElroy et al. (2006), Walstad and Becker (1994) and Kuechler and Simkin (2010), all suggesting students' characteristics, preference and learning to be factors and recommending further research given these variables. However, the author considers that these results appear to be based on their own result bias rather than based on a null hypothesis since certain characteristics have been considered influential or ignored in all these studies.

Scouller (1998) concluded that application of surface techniques to essay and / or deep learning to MCQs produced poor results and vice versa in a sample of 206 students. Tozoglu et al. (2004) stated that the majority of their study preferred MCQs over essays although 70% of their respondents were male, suggesting biased results. Lumsden and Scott (1995) confirmed that, based on general psychological literature, females performed worse than males in MCQs but no differently on essays, a fact highlighted by research undertaken by Cole (1997), Ryan and Fan (1996) and Breland (1991) cited by McKendree (2013) and reiterated in Kuechler and Simkin (2010) who highlight gender importance for professional exams where males are thus given a statistically small advantage in MCQs. This is of interest to the current study where the data sample is almost exclusively finance professionals. Conversely, Becker and Johnston (1999) suggested essay marks as 'a highly significant variable' (p354) initially in predicting MCQ performance and vice versa, confirming that females perform better on essays than MCQs. Based on these findings, the author considers gender considerations to be a matter for further research with basic statistical analysis conducted in this study.

Other significant variables the author has found to be relevant during research, meriting further investigation but outside the detailed scope of the data collection of this limited study, include age (Lumsden and Scott, 1995; McKendree, 2013); assessment timetabling (Krieg and Uyar, 1997; Lumsden and Scott, 1995); instructor bias (Pepple et al., 2010; Lawrence and Singhania, 2004); nationality (Lumsden and Scott, 1995; Walstad and Becker, 1994; Scouller, 1998) and student overconfidence (Koku and Qureshi, 2004). The author also suggests, following literature reflection, that significantly different data sizes and academic subjects can be determinant conclusive factors.

It appears from the review of presented literature that there is extensive research based on certain subjects, or academic sites with differing sample sizes and statistical methods employed. Practically, it would be impossible to include every variable characteristic in a study but the author has considered subject, cohort and gender to be the most influential for the quantitative analysis for this study and attempts to consider others via the qualitative questionnaire.

## Hypotheses

This study considers whether the following deductive hypotheses, constructed based on the literature review – after Lawrence and Singhania (2004), Walstad and Becker (1994) and Lumsden and Scott (1995) – can be applied to students of ***ifs*** Level 4 and thus make recommendations for further research.

- H1: that students' attainment level on MCQ component will, on average, predict their overall attainment level for a module; and

- H2: that students' attainment level on MCQ component will, on average, predict their overall essay attainment level for a module.

## Research methodology

By restricting this study to ***ifs***, controlled analysis is performed on available data since all students on each subject follow the same syllabus and assessment – unlike Lumsden and Scott (1987) but similar to Krieg and Uyar (1997).

The ***ifs***, a 'not-for-profit professional body and registered charity' (***ifs*** *School of Finance*, 2013a) established as the Institute of Bankers in 1879, gained taught degree-awarding powers in 2010. The Level 4 Professional Certificate in Banking is a prerequisite qualification for continuation onto the ***ifs*** Levels 5 and 6 Diploma and Degree programmes (***ifs*** *School of Finance*, 2013b).

The author has conducted a mixed methods approach of deductive reasoning to the hypotheses:

- secondary quantitative statistical analysis of data following prior research methods;

- primary quantitative attitudinal responses via an eight-question, five-point Likert model questionnaire using the SurveyMonkey website (SurveyMonkey, 2013); and

- some enrichment of primary data qualitatively via a free response at the end of the questionnaire.

The author used secondary data from 875 ***ifs*** Level 4 students on three modules over ten study sessions between March 2010 and October 2012, where the module was completed on first attempt and at one sitting as below:

- 295 *Module One* – 98 female, 197 male;

- 128 *Module Two* – 72 female, 56 male; and

- 452 *Module Three* – 182 female, 270 male.

These modules all use MCQs and essays in summative assessment and test similar skills – for example, recall and interpretation of facts but not numerical calculations.

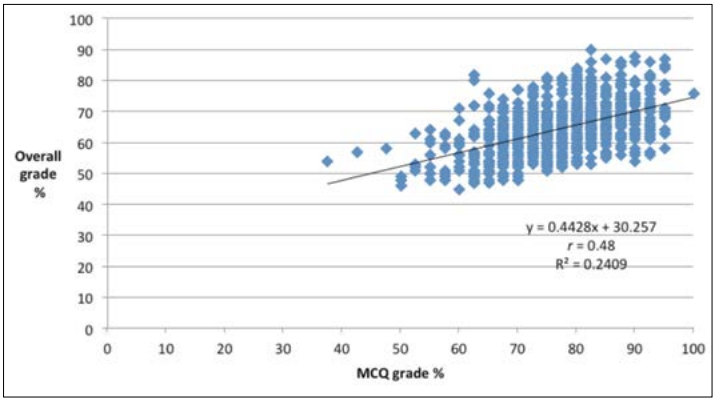
### Module features

The above modules all share the following features:

- each worth 30 credits;
- 300 recommended learning hours delivered via academic centres, distance or flexible learning;
- 40-mark MCQ taken after ten weeks of study, testing early course knowledge and representing 30% of the overall module mark weighting;
- 20-mark first essay coursework, tutor marked, taken after approximately 16 weeks, representing 20% of module weighting;
- 50-mark end-of-course assignment, marked independently, taken at 24 weeks, representing 50% of module weighting; and
- module overall pass mark 45% (***ifs*** *School of Finance*, 2011).

## Data analysis and discussion

### H1: that students' attainment level on MCQ component will, on average, predict their overall attainment level for a module



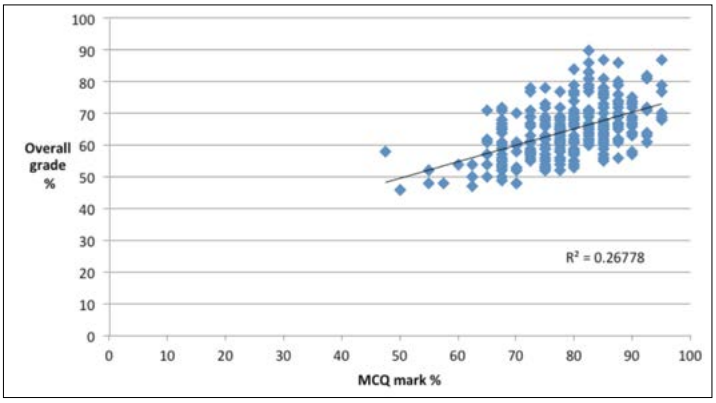

(Fig. 1: H1 using full sample group. Source: Author)

On analysis a Pearson coefficient r = 0.48 was obtained, indicating a positive association and partial linear correlation between the two variables to a 'medium correlation' (Laerd Statistics, 2013) with wide scattering. This association is lower than research findings by Walstad and Becker (1994) at 0.69 and 0.65 although their larger data set comprised predominantly 18- to 19-year-olds whereas ***ifs*** has a wider age variance, both of which may be contributory factors. It is in line with the regression analysis at .50 undertaken by Hickson and Reed (2009) who consider the same level of students.

R2 shows how well performance alone on MCQs can predict overall performance, and in this sample R2 at 0.2409 shows that 24% of the variation of the overall grade is attributable to the MCQ mark, thus suggesting that other assessments may play a larger part in predicting overall grade. This is at variance to Walstad and Becker (1994) – R2 of 0.93–0.95 – but their MCQ assessment contributed 67% to overall grade, and to Krieg and Uyar (2001) – R2 of 0.56 – where MCQs contributed 56% to overall grade. The ***ifs*** MCQ assessment only contributes 30% to overall grade so an expectation of R2 being lower is feasible.

Using the full data set and corresponding regression line, 230 had incorrect predictions giving the probability of a correct grade prediction of 74% (corroborating Walstad and Becker,1994) based on the three-band ***ifs*** criterion: Fail (0%–44%), Pass (45%–69%) or Distinction (70%+). The wide Pass banding distorts these figures but it is interesting to note that the prediction line works for nearly three-quarters of the sample set. So, as a predictor of grade banding, MCQs correlate well.

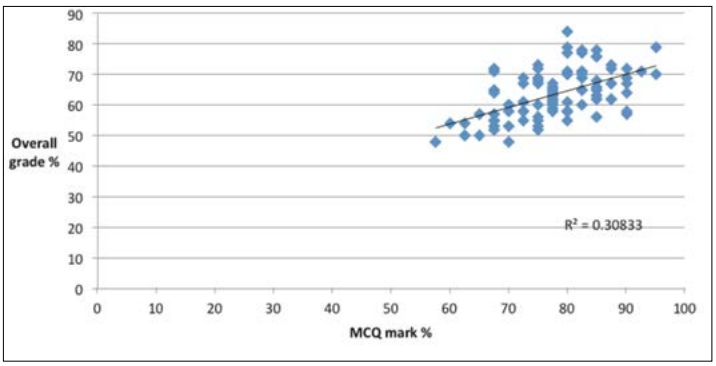
The author then considered whether the correlation and prediction would be different or consistent if looking at one subject only. The data for *Module One* was analysed because it has 295 students so it is a mid-size sample similar in size to that of Krieg and Uyar (2001).



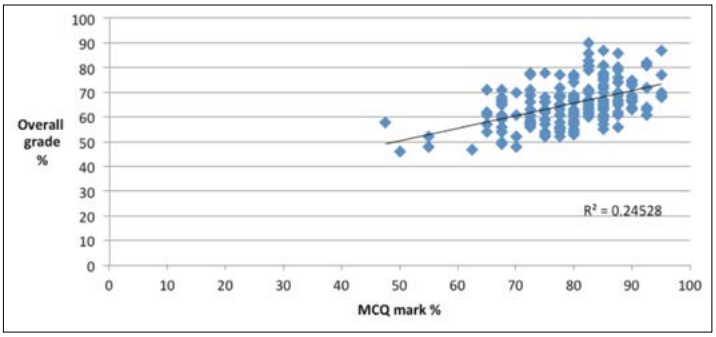

(Fig. 2: H1 using *Module One* sample only. Source: Author)

With r being 0.51, on the cusp of strong correlation but not at variance with the complete sample findings, the researcher concludes that there is little difference in correlation when looking at the full sample or an individual subject. Within the confines of this small study, additional individual subjects cannot be studied although variances would not be expected owing to the similar style and level of these subjects.

The literature review suggests that males perform better than females at MCQs so this study has extended the hypothesis, using *Module One*, to **consider the correlation between each gender and MCQ attainment and final grade.**




(Fig. 3: H1 *Module One* female correlation. Source: Author)




(Fig. 4: H1 *Module One* male correlation. Source: Author)

Interestingly, although there is a small variance between male and female correlation, compared to other literature it is not significant nor is there a significant variance to that of the whole of *Module One*. This is at odds with findings by Lumsden and Scott (1987) and Becker and Johnston (1999) who found that males performed significantly better than females on MCQs. The *Module One* findings could reflect the age and employment of ***ifs*** students who are on the whole older than the other samples and are usually in the financial services industry which attracts, in general, personnel conversant with processing this style of questions.

In view of the many influencers on the grade highlighted by previous research, the researcher **compared MCQ attainment to final grade for two individual semesters** to consider whether timing of assessment was relevant. Comparing total sample results for March to August 2010 (211 students) and May to October 2010 (85 students), no significant correlation difference was noted between semesters or whole sample (Table 1), thus rejecting findings from Krieg and Uyar (1997) and Lumsden and Scott (1995). This could be influenced by the ***ifs***' rolling semester programme, rather than traditional college terms / vacations, which thus ensures continuity of study.

| Both genders | r | R2 | Average MCQ% | Average overall % |
|---|---|---|---|---|
| Total sample | 0.48 | 0.24 | 77.1 | 64.4 |
| March–Aug 2010 | 0.5 | 0.26 | 77.8 | 63.2 |
| May–Oct 2010 | 0.45 | 0.21 | 78.5 | 66.4 |

(Table 1. Source: Author)

Similarly, individual semesters broadly reflected the total *Module One* sample based on gender except for May to October 2010 for males, which shows a slight correlation differential that could be due to data size and subject type (Tables 2 and 3).

| Females | r | R2 | Average MCQ% | Average overall % |
|---|---|---|---|---|
| Total Module 1 sample (98) | 0.54 | 0.31 | 77.8 | 63.5 |
| March–Aug 2010 (96) | 0.46 | 0.22 | 76.6 | 62.4 |
| May–Oct 2010 (85) | 0.46 | 0.22 | 77.3 | 65.2 |

(Table 2. Source: Author)

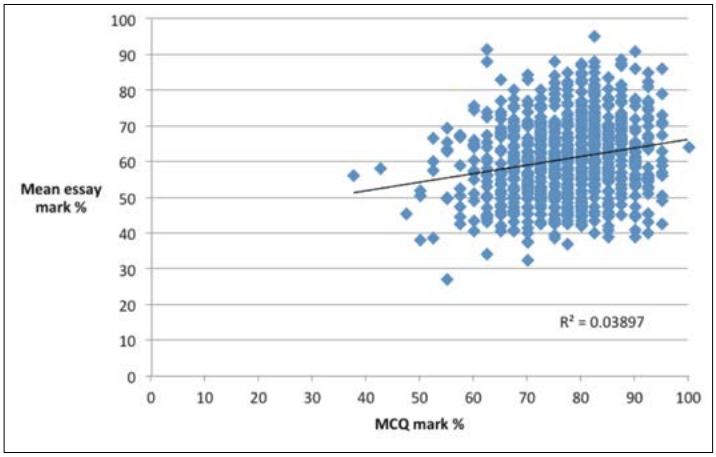
| Males | r | R2 | Average MCQ% | Average overall % |
|---|---|---|---|---|
| Total Module 1 sample (197) | 0.48 | 0.25 | 79.4 | 65.2 |
| March–Aug 2010 (115) | 0.53 | 0.28 | 78.8 | 63.9 |
| May–Oct 2010 (51) | 0.35 | 0.12 | 79.3 | 67.2 |

(Table 3. Source: Author)

## H2: that students' attainment level on MCQ component will, on average, predict their overall essay attainment level for a module

For clarity of comparison, the students' MCQ percentage has been compared with their average (mean) essay percentage. The two essay components are weighted and marked differently so this ensures analogous results.

If there is a high correlation (near unity), an assumption could be made that they measure the same thing; thus test type adds little differential value to the overall assessment. This may affect future assessment methods.




(Fig. 6: H2 full sample group: Source: Author)

Showing a weak Pearson coefficient of 0.19 with wide scattering (Laerd Statistics, 2013), there appears to be limited correlation between MCQ attainment and essay grade over the whole sample. This is at disparity with Walstad and Becker (1994) – at 0.64 to 0.69 depending on subject tested – who note their high correlation and say that this may not be representative of all tests; this is reiterated by Hickson and Reed (2009) discussing their correlation of 0.6. Lumsden and Scott (1987) quote 0.18, citing the low proportion of MCQ questions to the whole assessment as a reason. This could reflect the ***ifs*** sample where MCQ assessment is only 30% of the overall assessment and essays 70%.

Considering other contributory factors, the author then tested one subject (*Module One*) over all cohorts to consider whether a subject made a difference and also split by gender (Table 4). This confirmed a weak correlation both in total and by gender, interestingly showing comparable average marks across text types dependent on gender.

| | Nos. of students | $R^2$ | r | Average MCQ % | Average mean essay % |
|---|---|---|---|---|---|
| All *Module 1* | 295 | 0.08 | 0.3 | 78.9 | 59.5 |
| Female | 98 | 0.08 | 0.28 | 77.8 | 58.4 |
| Male | 197 | 0.09 | 0.3 | 79.4 | 60.1 |

(Table 4. Source: Author)

The author then drilled further, to consider one subject (*Module One*) on one cohort to see whether a particular time of year affected correlation, also splitting by gender. Lower correlation was concluded although males did represent the original findings (Table 5).

| | No. of students | $R^2$ | r | Average MCQ % | Average mean essay % |
|---|---|---|---|---|---|
| *Module 1* cohort | 48 | 0.03 | -0.18 | 75.4 | 59.7 |
| Female | 11 | 0.01 | -0.1 | 60.5 | 55.2 |
| Male | 38 | Nil (too scattered) | 0.36 | 76.6 | 60.9 |

(Table 5. Source: Author)

When considering numbers, two-thirds of this cohort was male but, interestingly, the female negative correlation has affected the overall picture significantly.

The author considered a further extension of the above by looking at all three subjects within this cohort, but no significant correlation was found (Table 6). A limitation of this approach was finding a cohort with statistically significant numbers to make suitable comparisons, and in this case *Module Two* was insignificant.

| | No. of students | R2 | r | Average MCQ % | Average mean essay % |
|---|---|---|---|---|---|
| Total | 67 | 0.02 | 0.14 | 76.4 | 62.4 |
| Module 1 | 32 | 0.03 | 0.175 | 73.9 | 61.3 |
| Module 2 | 6 | – | – | 79.6 | 47.2 |
| Module 3 | 29 | 0.06 | 0.264 | 78.5 | 66.8 |

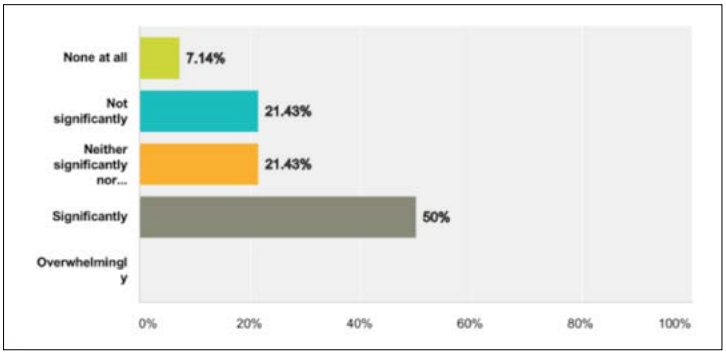
(Table 6. Source: Author)

With the data available, other contributory factors could not be investigated, leading the author to conclude that, in the case of the sample explored, no significant correlation can be seen between MCQ attainment and mean essay grade when evaluated against comparable research.

## Attitudinal questionnaire responses

Eight quantitative questions and a free-form qualitative response area were loaded onto a SurveyMonkey online platform and all current Level 4 ***ifs*** lecturers were invited to respond. An email and survey link were sent to 21 lecturers via this course's administrator to ensure anonymity together with a standard ***ifs*** research information sheet and consent form. Fourteen responded and confirmed at question 1 that they have lectured at the ***ifs*** on a module using summative MCQs during the data sample period in order to ensure consistency of approach and assessment experience. All respondents answered questions 1–8, with 50% providing free-form responses which are incorporated into the analysis below.

Respondents were asked 'In your experience, to what extent do MCQs accelerate learning at Level 4?'



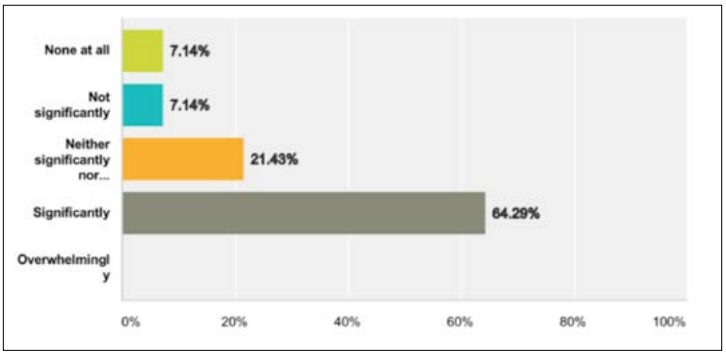

(Fig 7: MCQs accelerate learning at Level 4. Source: Author)

The responses show that although 50% of lecturers, in their experience, felt that MCQs accelerate learning significantly at Level 4, just over 25% felt that MCQs added little or no enhancement. This contrasts with the same question about essays, where only 7.14% felt that little acceleration was added but 88.72% felt that essays significantly or overwhelmingly accelerated learning at this level. The following comments provide some reasons:

'I believe MCQs can be used primarily to test knowledge and understanding – therefore can be used as a basis from which to build toward their coursework and assignment submissions.'

'Enhancing student learning can also be done by means of other activities which develop the knowledge and understanding tested in the OT [MCQ], eg true / false questions.'

Enhancing this, respondents were asked: 'In your experience, to what extent are MCQs an effective summative assessment tool at Level 4?' – and the same question regarding essays. A total of 76.57% of respondents considered essays to be a significantly effective tool, with the remaining 21.43% feeling essays to be an overwhelmingly effective tool.




(Fig 8: MCQs as an effective summative assessment tool. Source: Author)

Interestingly, 64.29% felt, in their experience, that MCQs had a significant part in the assessment process, with 14.28% saying that MCQs had little or no place and one respondent declaring 'Can't stand MCQs – think they should remain at primary school level.'

When asked if, in their experience, MCQs could be used as an effective summative assessment tool at Levels 5 and 6, two-thirds considered they could not, or not significantly, although a fifth considered that they could be effective (but not overwhelmingly). One respondent provided this insight: 'Good MCQs can be a good way of testing – but this should only be one test in the degree programme, in year 4 (as it is). At a recent discussion I attended, the view was that our students are good at assignments, because they are used to doing coursework for BTEC [qualifications], but then fail at doing exams well at Level 5 because they lack the experience of doing exams.'

To consider this further, leaning on previous research highlighted in the literature review, respondents were asked, from their experience, what they considered the five most important influencers on ***ifs*** students' results. They were given nine influencers and asked to rank them from 1–5 with 1 being the most important and 5 being the least important but still significant (see Table 7).

| | 1 (most Important) | 2 | 3 | 4 | 5 (least important) | Total respondents |
|---|---|---|---|---|---|---|
| **Gender** | **0%** | **0%** | **0%** | **0%** | **100%** | |
| | 0 | 0 | 0 | 0 | 7 | 7 |
| **Examiner / marker bias** | **0%** | **0%** | **0%** | **33.33%** | **66.67%** | |
| | 0 | 0 | 0 | 2 | 4 | 6 |
| **Ease of question** | **42.86%** | **21.43%** | **28.57%** | **0%** | **7.14%** | |
| | 6 | 3 | 4 | 0 | 1 | 14 |
| **Students' perception of the difficulty / importance of that test** | **9.09%** | **54.55%** | **27.27%** | **9.09%** | **0%** | |
| | 1 | 6 | 3 | 1 | 0 | 11 |
| **Age** | **0%** | **12.50%** | **62.50%** | **25%** | **0%** | |
| | 0 | 1 | 5 | 2 | 0 | 8 |
| **Assessment timetabling (at what point in the semester are they assessed)** | **16.67%** | **8.33%** | **25%** | **8.33%** | **41.67%** | |
| | 2 | 1 | 3 | 1 | 5 | 12 |
| **Nationality** | **0%** | **0%** | **62.50%** | **25%** | **12.50%** | |
| | 0 | 0 | 5 | 2 | 1 | 8 |
| **Test type (MCQ or essay)** | **21.43%** | **35.71%** | **14.29%** | **21.43%** | **7.14%** | |
| | 3 | 5 | 2 | 3 | 1 | 14 |
| **Previous academic history** | **28.57%** | **28.57%** | **14.29%** | **28.57%** | **0%** | |
| | 4 | 4 | 2 | 4 | 0 | 14 |

(Table 7: The five most important influencers on ***ifs*** students' results. Source: Author)

All respondents considered ease of question, test type and previous academic history to be of importance with nearly two-thirds rating ease of question as most or very important and over half similarly rating the other two. Of least importance is gender – borne out with the quantitative data sample but in contrast to researchers such as Kuechler and Simkin (2010) – and examiner bias (unsurprisingly, given that this was answered by lecturers but in contrast to most research quoted). In conclusion, this table shows that lecturers' experiences considered the four most important influencers (rated 1 or 2) to be ease of question, student perception (corroborating Kuechler and Simkin, 2010), previous academic history and test type (corroborating Walstad and Becker,1994). A verbatim comment suggests an alternative reason, too, which could certainly be an area for further research: 'It's not so much the MCQs as the lack of effective feedback to inform the learning experience.'

Respondents were also asked, from their experience as an ***ifs*** Level 4 lecturer, how they consider student learning could be enhanced to have a high prediction of MCQ grade to final grade, ranking 5 options from 1 (most important) to 5 (least important) – see Table 8.

| | 1 (most important) | 2 | 3 | 4 | 5 (least important) | Total | Average Ranking |
|---|---|---|---|---|---|---|---|
| **Include practice MCQs as formative assessments in order to prepare them for the summative assessment** | **35.71%** 5 | **42.86%** 6 | **14.29%** 2 | **7.14%** 1 | **0%** 0 | 14 | 4.07 |
| **Place the MCQ later in the assessment programme in order to test a wider area of the syllabus** | **57.14%** 8 | **14.29%** 2 | **14.29%** 2 | **7.14%** 1 | **7.14%** 1 | 14 | 4.07 |
| **Encourage students to write their own MCQs for testing** | **0%** 0 | **21.43%** 3 | **64.29%** 9 | **14.29%** 2 | **0%** 0 | 14 | 3.07 |
| **Do not feel MCQs have a place in Level 4 assessment** | **7.14%** 1 | **7.14%** 1 | **0%** 0 | **28.57%** 4 | **57.14%** 8 | 14 | 1.79 |
| **Other (please specify on comments on final page)** | **0%** 0 | **14.29%** 2 | **7.14%** 1 | **42.86%** 6 | **35.71%** 5 | 14 | 2.00 |

(Table 8: Ways of enhancing a link between MCQs and final grade. Source: Author)

Interestingly, 13 out of 14 respondents considered that the use of MCQs in formative assessment or placing it later in the programme would be the most important ways of improving correlation. All of these suggestions have been noted by the author during research and the question was asked in order to gain some guidance towards areas of further research. Of those who suggested 'other', comments included:

'There are some skills which, if possessed, the students will find significantly aid their chances of a good grade – eg speed. I'm not sure that this is something that should have a place in assessment at Level 4.'

'I viewed it [MCQs] as one predictor in the context of their overall performance during the semester.'

This shows the wide diversity of opinion and experience around the use of MCQs at this level.

Limitations of the study

- The word count restriction for this paper limits consideration of the many variables that can contribute to differing outcomes, but the author has statistically considered the variable of gender to deepen results and through the questionnaire considered many other significant variables.
- The literature review has been limited to post-1994 studies and has also not considered studies that look at MCQs as formative assessment, thus maintaining tightness of scope.
- The author has presupposed that all MCQs have similar difficulty and consistency of design.
- No distinction has been made between modes of study for the ***ifs*** data sample.
- Results from previous literature indicate that a variation of results may be dependent on study size.
- Due to word count, data and time restrictions, basic regression analysis has been undertaken, although more complex statistical analysis was not possible which may have produced different results.

## Conclusion

It can be concluded that by looking at all parts of the author's mixed methods approach, MCQ attainment within the ***ifs*** does predict with some significance the overall grade of the student (hypothesis 1) but not as robustly as other research has indicated (eg Walstad and Becker, 1994; Hickson and Reed, 2009). Of the significant influences noted by previous research, gender (Lumsden and Scott, 1995) has been discounted within this sample as has timing of assessment (Krieg and Uyar, 1997). Similar correlation seems to appear across subjects and individual cohorts, which could be due to the weighting of MCQs within the whole assessment at the ***ifs***. While Level 4 lecturers have suggested, through the questionnaire, ways that this correlation could be improved, some question the validity of the use of MCQs at Levels 4 and above as an effective assessment tool. This has added a further layer to the data outputs presented.

The hypothesis of a prediction link between MCQ grade and essay grade (hypothesis 2) is disproved within the ***ifs*** where little correlation is seen, with gender, subject and individual cohorts showing a similarly weak correlation in line with

Lumsden and Scott (1987) and Walstad and Becker (1994) among others. This again can be linked to the weighting of the MCQ component and essays within the overall assessment and the different skills displayed, in line with Lumsden and Scott (1987).

In conclusion, while there is some support for hypothesis 1 and limited support for hypothesis 2 using the secondary quantitative data, this could be affected by the basic single independent variable statistical tests undertaken. The primary qualitative and quantitative data, having utilised the main influencers indicated in previous research, considered ease of question, test type and previous academic history to be of most influence on ***ifs*** student results which, although are reflections from lecturers, enrich the output received by the author from the secondary quantitative data and would be worthy of further investigation.

### Recommendations

- Conduct further research into use of MCQs for formative assessment at all undergraduate levels in order to consider a time-effective way of enhancing student learning.

- Consider placing MCQ assessment later in the programme to allow a wider breadth of syllabus to be tested.

- Conduct further research as the ***ifs*** full-time undergraduate programme develops to consider whether the results are similar and consider reasons for this.

- Share this research with key ***ifs*** departments to assist with planning syllabus or course reviews.

## References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# Appendix A – Questionnaire

1. Have you lectured at ***ifs*** *University College* (***ifs***) at Level 4 in a module that has had multiple choice questionnaires (MCQs) as a summative assessed component between March 2010 and October 2012 under the old PCertB syllabus?

(yes / no)

If no, thank you for your time but there is no need to complete further.

2. In your experience, to what extent do MCQs accelerate learning at Level 4?

| | | |
|---|---|---|
| none at all insignificantly | not significantly significantly | neither significantly nor overwhelmingly |

3. In your experience, to what extent are MCQs an effective summative assessment tool at Level 4?

| | | |
|---|---|---|
| none at all insignificantly | not significantly significantly | neither significantly nor overwhelmingly |

4. In your experience, to what extent could MCQs as an effective summative assessment tool be replicated in Levels 5 and 6?

| | | |
|---|---|---|
| not at all insignificantly | not significantly significantly | neither significantly nor overwhelmingly |

5. From your experience as a lecturer in Level 4 modules for the ***ifs***, how do you consider student learning could be enhanced in order that MCQs may predict overall grade in a high proportion of cases?

o Include practice MCQs as formative assessments in order to prepare them for the summative assessment.

o Place the MCQ later in the assessment programme in order to test a wider area of the syllabus.

o Encourage students to write their own MCQs for testing.

o Do not feel MCQs have a place in Level 4 assessment.

o Other.

6. From your experience, what do you consider are the FIVE most important influences on ***ifs*** students' results? Please rank from 1–5 with 1 being the most important and 5 the least important but still significant.

o gender;

o examiner / marker bias;

o ease of question;

o students' perception of the difficulty / importance of that test;

o age;

o assessment timetabling (at what point in the semester are they assessed);

o nationality;

o test type (MCQ or essay);

o previous academic history.

7. In your experience, to what extent do essays accelerate learning at Level 4?

| | | |
|---|---|---|
| not at all insignificantly | not significantly significantly | neither significantly nor overwhelmingly |

8. In your experience, to what extent are essays an effective summative assessment tool at Level 4?

| | | |
|---|---|---|
| not at all insignificantly | not significantly significantly | neither significantly nor overwhelmingly |

9. If you have any other comments or thoughts on the link between MCQs and final grade or essay and final grade, please state here.

(free-form box)

"Thank you for taking the time to complete this survey. It is much appreciated and will help me triangulate the findings from my literature study and the ***ifs*** Level 4 data analysis."

# An investigation into the effect of optional attendance at face-to-face tutorials on assessment outcomes of distance-learners

Jude Lynex BA(Hons) MBA. PGCHE

## Abstract

This paper considers, by way of secondary data analysis and research, whether optional face-to-face tutorials for distance learning students result in improved outcomes in coursework assessments and / or examinations, relating to three cohorts over a two-year period totalling 162 students.

The literature provides contrasting views on whether attendance at optional face-to-face tutorials has a statistically significant benefit on assessment outcomes in quantitative studies. Based on qualitative measures, however, the literature generally concurs that attendance at non-compulsory face-to-face tutorials for distance learning enhances the learning experience for students, but does not necessarily improve learning outcomes. However, Barlow (2012) does find an improved examination outcome by altering his pedagogic method of teaching. Conversely, Kekkonen-Moneta and Moneta (2002) found an inverse relationship between face-to-face tuition and assessment outcomes versus pure distance learning assessment outcomes.

Given the conflicting research into whether assessment outcomes are improved by face- to-face tuition versus distance learning, the current study is felt to be a valuable addition to the contrasting body of evidence and research.

## Introduction

This paper investigates the possible impact of optional face-to-face workshops on assessment outcomes of part-time distance learning students employed full-time and studying towards a certificate leading to *Diploma A.*

### Aim and purpose of the study

The study aims to test the null hypothesis that there is no direct relationship between attendance at non-compulsory face-to-face tutorial workshops and attainment in coursework assignment grades and / or end-of-course examination results for distance learning students. The purpose of proposing the null hypothesis is that the workshops are denoted as optional and students who are unable to attend are advised that non-attendance will not significantly affect their likely outcome in assessments. Anecdotal experience of students' views by the author, and scrutiny of pre-course questionnaires and post-course evaluation forms, indicate that students who attend workshops do so because they believe that non-attendance will be detrimental to their assessment outcomes. If the null hypothesis is found to be disproved by this study, it will raise the question as to whether policy on optional versus compulsory workshops should be reconsidered by the course provider.

The small scope of the study does not enable the author to investigate why students may be motivated to attend non-compulsory face-to-face courses. Some of the students' numerous reasons for attending can only be surmised from responses to pre-course questionnaires. Answers to the pre-course question 'What do you hope to gain from attendance at this tutorial?' tend to support Snyder (1971) that there is a 'hidden curriculum' to which students hope to gain access by informal face-to-face discussions with a tutor. Such responses include pre-course statements for attending such as: 'To understand which areas of the syllabus are most important', 'To understand how to best approach the coursework assignments' and 'To find out what is expected from students taking the course and which areas to focus on for the end-of-course examination'.

The present author suggests that any correlation found between attendance at tutorials and higher attainment in assessments may well support Snyder's notion of the 'hidden curriculum' premised over forty years ago.

### Methodology

The application for research ethics approval has been validated by ***ifs*** *University College* Ethics Committee. Secondary quantitative data was sourced from the educational provider who approved the project. Complete anonymity of candidates has been assured by using candidate numbers and the subsequent shredding of spreadsheet data.

The project analyses quantitative data of three cohorts of students undertaking the learning provider's course of distance learning study, all of whom were offered optional one-day training seminars delivered by the writer. The course is a 12-month programme of study assessed by three coursework assignments (contributing 40% to the overall mark) and an end-of-course examination (contributing 60%) of the overall mark. All students were full-time employees in the financial services industry. Cohorts overlap by six months and the three cohorts span a period of two years: cohort 1, registered in May 2010 and examined in May 2011; cohort 2, registered in November 2010 and examined in November 2011; and cohort 3, from May 2011 to May 2012. In the analysis that follows they are designated by cohort number only. The population size totals 162 students, although cohort sizes differ significantly: cohort 1 having 72 students; cohort 2 with 50 students; and cohort 3 totalling 40 students. The sample size from the total student population is, however, deemed large enough to provide statistical significance given that the whole population of each cohort is under analysis and indeed a sample size of just 30 (were a sample to be taken) is generally agreed by statisticians to be the minimum number for analysis to be relevant at a 5% margin of error (Bancroft and O'Sullivan, 1981).

Each cohort of students is analysed separately and as part of the total population. Given that the cohorts are composed of differing sizes, percentages are used for the purpose of comparison between groups. The methodology of analysis follows Bell (2010) and the data was collected in order that the project can attempt to determine any relationship that may exist between one set of facts and another.

Pre-course questionnaires and post-course feedback and evaluation forms were scrutinised to understand some of the qualitative reasons students cited for attendance at non-compulsory face-to-face day courses. (These were not necessarily the same cohorts of students studied in the quantitative analysis.)

Certain variables were available from the quantitative data used to facilitate consideration of the 'potential relationship between one set of facts against another' (Bell, 2010). These variables included whether or not students were re-taking the course having previously failed; whether assignment results were a first or second attempt; and whether students attended one or more than one face-to-face, full-day training sessions, or studied the course by distance learning (textbook-based) alone. However, given the small scope of the current study, it was decided to limit the enquiry to determine whether or not attendance at any number of face-to-face training events affected assessment outcomes. The writer also considered whether to exclude re-takers (of the examination) or students making second submissions (in assignments) in order to provide as neutral a population as possible when analysing the effect that the attendance at face-to-face training may have on assessment outcomes, as it was considered that to include these may skew the results downwards. However, since re-takers were also offered the chance to attend face-to-face workshops, it was not considered necessary to exclude this element from the sample population.

The data available also offered the possibility of investigating whether attendance at the face-to-face workshop for '*Module One*' improved the assessment outcome in the third assignment which related to that specified syllabus area. Again, given the limited scope of the present study, this aspect was not investigated. The word limit on the current project was felt a constraint to fully investigate all issues of interest.

The approach of this project has therefore been to test the null hypothesis that attendance at face-to-face, one-day training sessions has no significant effect on the outcomes of assessments for distance learning students undertaking a '*Certificate A*'. The methodology that has been applied in this study would ensure that any future study into the same cohorts of students would replicate the results found herein.

## Literature review

'Despite the university's emphasis on online lecture notes and multimedia learning, the chalk-and-talk lecture method as well as face-to-face tutorial sessions remain the most important teaching method' (Lai et al., 2010). This assertion, however, was based purely on qualitative perceptions. Barlow (2012), on the other hand, argues that 'chalk and talk' creates an environment of learners as passive recipients of information. His analysis showed an improvement in student exam marks when information was delivered in podcasts and his pedagogical classroom approach altered from delivering information to student-centred problem resolutions. Conversely, an objective quantitative analysis reported by Zi-Gang Ge (2012) found in their second study a statistically significant relationship between learning outcomes in a blended cyber and face-to-face approach (higher marks) and students undertaking cyber (distance) learning only. However, Zi-Gang Ge studied the acquisition of language (English), a skill arguably more readily attained and retained in a face-to-face approach than the learning of predominantly knowledge-based subjects in financial services, which is the subject of the current study. More akin to the current study, which compares distance learning versus blended learning, Kekkonen-Moneta and Moneta (2002) found comparable factual learning outcomes between 105 'chalk and talk' students versus 309 distance-taught students in Computing, and indeed distance-taught (e-learning) students actually outperformed 'face-to-face-lecture' students in applied conceptual learning. This is contrary to the findings of the current study, that distance learning alone is less effective than blended learning, in terms of assessment outcomes. These authors propound that good interactive e-learning actually fosters greater higher-order learning outcomes than traditional lecture-room-based teaching and learning. Tabor (2007) describes the hybrid blend of distance learning with occasional face-to-face lectures as being a highly effective new learning educational strategy and considers qualitative student perceptions ranging from motivational difficulty with less interesting topics and also a perception that the distance-learned material was less important than that covered in class. This is one of a large number of studies into qualitative perceptions of distance learning versus chalk-and-talk learning. A number of empirically based research papers attempt to ascertain a direct relationship yielding positive assessment outcomes for the blended approach relative to outcomes of distance learning alone, but with conflicting results. Dennis (2003) found no empirical difference in learning outcomes between face-to-face tutorial groups and synchronous online learning groups. Similarly, Summers et al. (2005) found no correlation between higher grades and face-to-face instruction compared to online learning alone. Conversely, Richardson (2012) found that in management courses (but not arts courses) attainment was lower for distance learning (online) students than those taught by traditional face-to-face methods. This was the outcome expected by the author of the current paper too.

A similar relevant study, albeit qualitative (Price et al., 2007) found significantly poorer conceptions of all educational aspects for those students only undertaking learning by distance compared to those students also undertaking some face-to-face tuition, as traditional modes of educational engagement in the classroom are considered not just for their educational value, but for their pastoral value too. Cultural differences were found by Fung and Carr (2000), with significantly higher attendance at non-compulsory face-to-face tutorials by distance learners in Hong Kong than in other areas, reasons cited being the compactness of Hong Kong. Relevant to the author of this study is Fung and Carr's assertion that students attended non-compulsory tutorials for 'specific guidance within a largely directive framework';

this is the personal experience of the author of the current study. All students were found to attend tutorials because they 'preferred "lecturing" to more student-orientated modes of learning', with many attending to 'exchange viewpoints, discuss course content and share experience with others'. As with the present author, Fung and Carr found that non-compulsory tutorials were attended by students who required guidance on coursework assignments and who had an expectation that much of the course content would be covered during the face-to-face meeting, hence easing the burden on students of studying the material alone and of their own volition. To a large degree this has indeed been the current author's experience, but there are variables at play regarding selection for face-to-face day courses, which are discussed below under 'Limitations'. These variables include selection by job seniority since one-day courses are expensive in terms of lost work days, travel and overnight accommodation. This is in addition to the cost to employers of the course itself, therefore leading the author to infer that seniority of job rank may dictate employers' willingness to select students for optional day courses. The inference is that it is those with the higher job rank, who tend to be graduates with a tertiary educational background, who may be selected for optional day courses. These students are likely to be self-motivated learners who require less, not more, tutor input.

The experience of the author would suggest the opposite situation to Fung and Carr's viewpoint: that, indeed, students who attend non-compulsory tutorials are more able to study alone of their own volition, based on the assumption that those in more senior positions are more likely to be graduates holding more senior posts and are therefore the most likely to be selected to attend relatively costly day courses.

## Findings

The analysis below collates and quantifies data from three cohorts of distance learning students over a two-year period commencing in May 2010 through to May 2012. The data was obtained from the learning provider's internal records and registers of student names as attendees on day courses. Data was only used for those students who completed all three compulsory coursework assignments and the end-of-course examination. Students who deferred or dropped out from the course for any reason were excluded from the results.

Table 1: Comparison of outcomes for all students

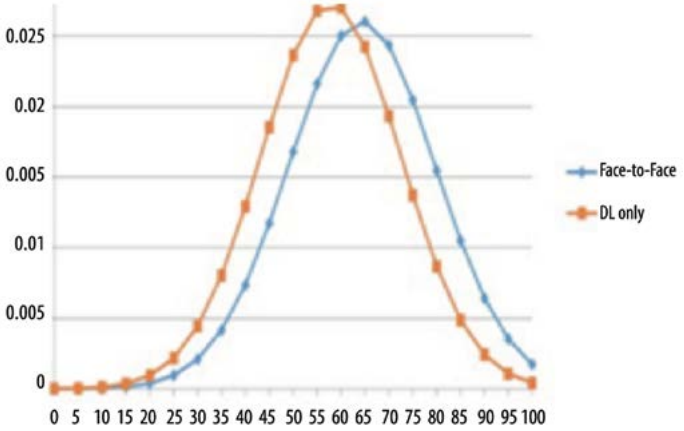
| | |
|---|---|
| Total number of students in population: | 162 |
| Total number failed overall | 15 (9%) |
| Total number obtaining a 'Pass' grade | 66 (40%) |
| Total number obtaining a 'Credit' grade | 68 (42% |
| Total number obtaining a 'Distinction' grade | 14 (9%) |

The findings shown in Table 1 clearly indicate a standard distribution. Even given that there are only four categories, when plotted in a bar chart a bell-shaped curve around the mean is expected, and found: once individual results are plotted, this proves to be the case (see Figure 1).

Figure 1: Normal distribution of examination marks around the mean

Red = distance learning only

Blue = distance learning plus face-to-face courses




These results clearly show a standard distribution in a bell-shaped curve of results within the whole population of *Certificate A* students over the two-year period. When the population is divided into those studying by distance learning alone and those who also attended face-to-face courses, a standard distribution of results still applies but the mean is significantly increased – evidenced by the bell-shaped curve shifting to the right.

Table 2: Comparison of student outcomes – students attending optional face-to-face training days versus students studying by distance learning alone

| | |
|---|---|
| Total number of students in population | 162 |
| Total number attending optional face-to-face training | 58 (36%) |
| Students not attending optional face-to-face training | 104 (64%) |
| Average overall mark of 'face-to-face' students | 66.5% |
| Average overall mark of purely distance learning students | 62.67% |

Based on end-of-course examination marks alone, the difference in achievement between the 'face-to-face' students and 'distance learning only' students is even more pronounced (see Table 3).

Table 3: Comparison of student outcomes based on end-of-course examination marks alone

| | |
|---|---|
| Students not attending optional face-to-face training | 104 (64%) |
| Average examination mark of 'face-to-face' students | 63.26% |
| Average examination mark of purely distance learning students | 57.85% |

The reason that examination marks show a more pronounced difference between the two categories of students stems from *Association A's* qualitative nature of marking coursework assignments by way of a descriptive, broad, marking scheme of 'Pass', 'Credit' or 'Distinction'. This equates to a standardised 57.5%, 72.5% or 90% respectively, towards the 40% available for the coursework element. This has the effect of smoothing overall results.

Table 4 shows the distribution of results overall by category, comparing students who opted for face-to-face training with those who did not. The results clearly show that significantly higher proportions of students who attended face-to-face training fall into the 'Credit' and 'Distinction' category than those who studied by distance learning alone, while significantly fewer scored only a 'Pass' or a 'Fail' where they had opted for the non-compulsory face-to-face training. Whether this is the 'hidden curriculum' effect whereby students believe that face-to-face training gives them more accessibility to 'the answer' to 'What do I have to do to get the best marks?', or whether other factors are at play, is discussed further under 'Conclusions'.

Table 4: Assessment outcomes: distance learning versus face-to-face

| | Face to Face | | Distance Learning | | Total | |
|---|---|---|---|---|---|---|
| | No of students | % | No of students | % | No of students | % |
| Fail | 2 | 3 | 13 | 13 | 15 | 9 |
| Pass | 21 | 36 | 44 | 42 | 65 | 40 |
| Credit | 28 | 48 | 40 | 39 | 68 | 42 |
| TOTAL | 58 | 100 | 104 | 100 | 162 | 100 |

Whether these results are statistically significant is an important question. The null hypothesis states that there is no difference in assessment outcomes between students studying by distance learning alone, and those taking optional face-to-face training sessions. This appears to be disproved by a 5.41% difference in mean examination mark, and a 3.83% difference in overall mark of the whole population. Hence there appears to be a direct correlation between attendance at optional face-to-face day courses and higher achievement in assessment outcomes. The author has therefore employed an analysis of variance (ANOVA) technique to compare the mean of the two sets of data. This is an appropriate measure of statistical significance once it is clear that the data is normally distributed as shown diagrammatically in table 4 above. Using this method, the mean score of 'face-to-face' students is statistically significantly higher than the mean score of students not attending face-toface courses. The probability that the higher mean occurred purely by chance is so low that the null hypothesis is therefore rejected. It is correct to draw the conclusion that these students attending optional face-to-face courses attain statistically significant higher assessment outcomes than students who study by distance learning alone.

These findings are contrary to Summers et al. (2005) who found no correlation between higher grades and face-to-face instruction compared to online learning alone, although it is conceded that there is a difference between the textbook nature of distance learning undertaken in the current study and the online distance learning studied by Summers et al.

The findings of the current project support Richardson (2012) who found that, in management courses, attainment was lower for distance learning students than those taught by traditional face-to-face methods.

## Limitations

A number of quantitative variables were available but not analysed and the reasons these variables were discounted from the current study are discussed in the 'Methodology'. These variables include whether more than one non-compulsory face to-face training day was attended. It would have been interesting to investigate whether attendance at both training days augmented the improved outcomes in assessments that were found in the study. A further refinement on this theme would be whether attendance at face-to-face training improved outcomes in the final examination more than in assessment by assignment, or vice versa. Another refinement would have been to study whether the first training day, which focused on modules 1 and 2, improved outcomes only in assignments 1 and 2; and, similarly, whether attendance at the second training day, focusing on module 3, improved assessment outcomes only in the third assignment which related to module 3.

The author considers it quite possible that the choice of whether to attend the optional workshops was outside the control of individual students. Given that students are dispersed throughout the UK and that the workshops were only offered at one central location (Birmingham), the additional cost of the day course, travel and hotel accommodation may mean that only more senior employees were offered the option of attendance by their employer (who bears the cost). A positive correlation between attendance at workshops and attainment in assessments could therefore be caused by only higher-ranking staff, who by their rank may be more likely to be of graduate calibre (for example Business Development Managers, rather than, for example, Credit Controllers) being permitted to incur the additional cost of face-to-face training.

A limitation of the present study is that qualitative issues around attendance at non- compulsory face-to-face tutorials are not addressed with the sample group of students. Students' qualitative feedback and reasons for attendance at tutorials may have elucidated whether students come to workshops who are motivated already and therefore likely to do better in assessments than those who do not choose to attend. Or conversely, students may have been found to attend workshops because they are not motivated to learn of their own volition and therefore wish the distance learning syllabus to be 'lectured' to them in a more accessible or memorable format than the written word.

Qualitative feedback is obtained from students attending the optional face-to-face training days which seems to indicate the presence of the unwritten curriculum propounded by Snyder (1971). Pre-course questionnaires asking 'What do you hope to get out of this course?' tend to elicit responses along the lines of: 'A better understanding of what is expected in assignments and the examination'. Post-course feedback evaluation invariably suggests that students value the advice on assignments, corroborating Snyder's claim that the 'hidden curriculum' (how to get the best marks) can only be obtained from face-to-face interaction with the tutor.

While qualitative feedback (and pre-course evaluation) is sought by the learning provider on face-toface courses, qualitative feedback is not sought by the learning provider from those students studying purely by distance. The current study is therefore unable to analyse qualitatively the reasons why distance learning students chose not to attend optional face-to-face workshops. A larger, future, qualitative and attitudinal study of this nature may elucidate reasons for the results illustrated by the quantitative analysis above.

The author acknowledges that there are a number of variables that have not been addressed in the sample group which are likely to influence attainment outcomes such as prior educational attainment (graduate / non-graduate) and seniority of job rank. This information is available and could be the subject of further analysis in future. The student population on which data was obtained were all in full-time employment in financial services and were working towards an industry-specific Diploma in Financial Services. However, the study does not consider any gender or age profile of the three cohorts of students under scrutiny. Sampling bias was avoided by analysis of the whole population of students within each cohort rather than excluding or selecting a certain segment, such as those re-sitting the examination or re-submitting coursework assignments. The author was careful to apply the same criteria in gathering data relating to all members of the population within the student cohort.

The small scope of this enquiry is also a major limitation, both in terms of time and word-count constraints. Data is now available for two further cohorts of students and it would be interesting to attempt to replicate the current study using this later data.

## Conclusions and recommendations

This study concludes that a 5.41% higher difference in mean examination scores of students attending face-to-face training courses compared to those who do not is statistically significant. All three cohorts demonstrated higher marks both overall, and in the end-of-course examination, when they attended face-to-face courses. The null hypothesis that there is no difference in attainment between the two modes of learning has been rejected.

The current project does not identify the reasons why students perform better in assessments when they attend face-to-face sessions in addition to their distance learning study. It could be argued that those who attend optional courses are more motivated to learn than those who do not; and that optional attendance reflects the fact that they are already likely to fare better in assessments because they are motivated to make the effort to attend, reflecting a pre-existing motivation to learn. However, this argument presupposes that additional effort is required for attendance, which is not in fact the author's experience. Students who attend may be directed by their employer's training policy and budget. For many students it is a 'day out of the office' with overnight accommodation and travel provided, and few, if any, students choose to attend of their own volition. The author concludes therefore that the argument for pre-existing motivation in attendees does not hold true in this case. The argument that students with more prestigious job roles, and of graduate calibre, may be more likely to be funded by their employer to attend these optional courses may, however, hold true. Nonetheless, no evidence exists to support this assumption and it is therefore discounted as a factor in the present study.

Given that students do not attend face-to-face optional courses of their own volition but are directed to do so by their employer, the writer concludes that a pre-existing higher motivation to learn in student attendees does not follow. Therefore Snyder (1971) may well still hold the clue that there is a 'hidden curriculum'.

This author concludes that there is indeed a hidden curriculum ('how to get the best mark') which is accessed by students informally through face-to-face interaction, and which is not accessible by distance learning study alone. This supports the findings of Tabor (2007) that students hold a perception that the distance-learned material was less important than that covered in class, and explains the qualitative reasons students give for attending face-to-face courses.

The educational institution in this study has not conducted its own research into efficacy of teaching method on learning outcomes.

Given the significantly higher assessment outcomes for students attending face-to-face courses, together with the fact that students are only advised that these tutorials are optional, the learning provider should consider altering its advice on the 'optionality' of face-to-face tutorials. Improvement in students' assessment outcomes is clearly the goal of all providers of education.

## Areas for future research

Individual differences in learning styles might be an important variable when considering any relationship between outcomes in different learning environments: distance learning at home versus face-to-face, and traditional 'chalk and talk' environments. However, Zacharis (2010) refutes this by comparing outcomes in online versus traditional instruction. While he found that traditional learners had slightly higher assessment outcomes, these were not statistically significant; student learning style did not statistically affect their course grades in either of the two instructional methods; nor was there any relevant relationship between learning style and instructional method, an assertion one might find surprising. It would be interesting to try to repeat Zacharis' study alongside the current study given a wider remit of investigation.

A deeper search of the literature and research in this area might yield studies which compared distance learning via textbook with face-to-face tuition outcomes. Much recent research focuses on distance learning via the online medium rather than by the more traditional textbook method. Time constraints did not allow for a fuller investigation into all the available literature and the author of the current project concedes that this is a weakness of the study.

Another area for future investigation that the author wishes to undertake would be whether face-to-face courses for distance learning students improved the course completion rate. The sample population studied in this project includes only those students who actually completed all three coursework assignments and the final examination. Those who dropped out (whether or not they attended face-to-face courses) were not included in the results as their percentage of zero would significantly skew the mean. If face-to-face training were found to significantly improve completion rates for distance leaners, this would further support the need for the learning provider to reconsider its policy on the optionality of face-to-face tutorials.

The author would like to undertake further research on students undertaking post-graduate modules through the medium of distance learning with optional face-to face tutorials. Post-graduate students are self-motivated learners and it would be interesting to ascertain if the results of the current study were replicated with a different profile of student population. If this were the case, it may support Barlow (2012) who propounds that face-to-face learning encourages learners to be 'passive recipients of information'. The course of learning in this study is a Certificate-level course assessed on a knowledge basis whereas post-graduate courses require higher-order skills of analysis and argument. It is suggested that if Barlow is right, face-to-face tuition for Certificate-level students may have a more pronounced positive effect on assessment outcomes for students undertaking such lower-level courses than those taking higher-level postgraduate qualifications.

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# An exploration of the inconsistencies regarding the application of the QAA subject benchmarking statements for Islamic Banking and Finance Masters level degrees in British universities

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## Abstract

There has been a fast development of Masters degrees in Islamic Banking and Finance in British universities, especially during the last five years. However, the curricula offered are being developed in a sporadic manner without much attention being paid to the QAA (Quality Assurance Agency for Higher Education) subject benchmark statements, which require that a discipline should have both coherence and identity. This approach has created inconsistencies in what is being taught. This research is an attempt to identify the reasons for these inconsistencies in the curricula. The following reasons were identified: lecturers are not sufficiently qualified in Islamic law and economics, there is no appropriate subject benchmark statement for Masters level dealing directly with Islamic Banking and Finance, and finally the discipline is being taught in various departments that have their own specific educational objectives. The main recommendation made to improve this situation is that a panel of experts should suggest a 'gold' standard programme after consultation with the main players in the industry.

### Introduction

Islamic Banking and Finance is mushrooming in British academia. According to Belouafi et al. (2012), it is being taught in 18 universities in the UK. However, according to present research, there are 32 universities and institutions involved in the teaching of Islamic Banking and Finance. When analysing the curriculum development of this discipline, it seems that there is a lack of consistency with regard to the application of the QAA (Quality Assurance Agency for Higher Education) subject benchmarking. This situation is substantiated by a survey carried out across five universities. Also, a preliminary survey of university websites reveals that different universities offer Islamic Banking and Finance in a variety of schools or faculties. For example Durham University offers it at its Business School while Newcastle University offers it at its Law School. Yet the religious aspect that makes this nascent discipline 'Islamic' does not fit the benchmark statements of any of these subjects.

Hence, a deeper exploration of this issue is of paramount importance so that a more stable curriculum is developed. This research therefore aims at exploring the concept, rationale and process of benchmarking from a QAA perspective and then to apply these concepts in identifying the most appropriate subject benchmarking for Islamic Banking and Finance at Masters level. This process will help in identifying those inconsistencies by analysing a sample of five universities teaching Islamic Banking and Finance and the QAA subject benchmarking they used.

### Literature review

This area of research seems not to have been widely explored to date. No data is available regarding the application of the QAA subject benchmarking statements to Islamic Banking and Finance. Hence, the literature review is divided into two main areas: firstly to analyse the evolution and adaptation of the concept of benchmarking into higher education; and secondly to explore QAA's approaches to subject benchmarking statements. These will indicate the gaps in the literature which will help in developing this research further.

The concept of benchmarking hails from the business world (Jarrar and Zairi, 2010). Benchmarking is considered as an effective way of identifying the best practices and improving the quality processes in an organisation (Lutfullayez, 2007). As a result of its success in the business world, the idea of benchmarking infiltrated the higher education arena as well (Alstete, 1995). Zairi (1996) attributes the application of the idea of modern-day benchmarking to the American Xerox Corporation. In 1979 this corporation faced tough competition from its Japanese competitors and it had to diagnose the reasons for its commercial decline in the lucrative photocopier market. Xerox thus analysed the Japanese firms' best practices, which then became a benchmark for them to act upon. This helped them to capture the market again in 1980. From Xerox's experience, its seems that benchmarking became known as a 'continuous, systematic process of evaluating companies recognised as industry leaders, to determine business and work processes that represent "best practices" and establish rational performance goals' (Zairi, 1996).

Over the last four decades the idea of benchmarking has burgeoned and many models have been identified (Alstete, 1996; Lund, 1998; Cook, 1997). The common denominator from these various models is that there is both an internal and an external benchmarking process. In the mid-1990s many academics, such as Schofield (1998) and Alstete (1995), advocated the suitability of benchmarking for higher education. In 1990 the first benchmarking and methodologies were applied and adopted in North America (Lutfullayez, 2007). In the UK the famous book Benchmarking for higher education, authored by Jackson and Lund (2000), seems to be the pioneering work where they explained the adoption of benchmarking for higher education.

The historical context of this paradigm shift can be explained by the rapid rise of student enrolment in UK universities coupled with a progressive reduction in the amount of funding from government sources. As universities were forced to generate their own income, they were encouraged to look for best practices in order to remain in the market. Jackson and Lund (2000) looked for alternative means to bridge the funding gap in two ways: increasing efforts to keep income from non-government sources; and through achieving cost saving or efficient gain.

In 1997 the Dearing Report specifically recommended that a new quality assurance agency should 'work with institutions to establish small, expert teams to benchmark information on academic standards' (Schofield,1998; Lund, 1998). Best practices gathered from various British universities were collated by the Higher Education Funding Council for England (HEFCE). But Schofield (1998) argued that more important was the increasing interest in the formalisation of comparisons between universities rather than just having a collection of best practices. After various attempts to formalise the best practices, QAA was established in 1997 and became operational in 1998. Its main business is to review and report on the performance of providers of higher education with regard to standards of awards and the quality of provision (QAA, 2013a).

Regarding the graduate assessment outcome, it has been argued that benchmarking tallies and tracks key, agreed-upon, markers of accomplishment. It is contended that this would usually help students progress through a programme and / or demonstrate the programme's success. For example, it might shed light on how many students pass their qualifying exams within a specified period.

A program will set out particular expectations and how many students meet them and when they meet them. This is a crucial process for ensuring that students meet program expectations and that they don't get stuck at certain stages. Benchmarking, then, is a way of tracking the progress of each student, and, in aggregate, of demonstrating that a program has succeeded (or perhaps failed) in advancing its students appropriately.

The QAA explains that 'Subject benchmark statements set out expectation about standards of degrees in a range of subject areas. They describe what gives a discipline its coherence and identity, and define what can be expected of a graduate in terms of ability and skills needed to develop understanding or competence in the subject' (emphasis added) (QAA, 2013(b).

In order to realise this objective, on 17 February 2006 QAA produced a report Securing and maintaining academic standards: benchmarking M level programmes (QAA, 2013c). Based on this report, QAA has published subject benchmark statements for Masters degrees in 13 disciplines (QAA, 2013d) and 58 subject benchmarking statements established at Honours level (QAA, 2013e). From these, many universities have opted for different subject marking when developing the curriculum for Islamic Banking and Finance courses. Bangor University , Durham University Aston Business School (Birmingham University) and University of East London, for instance, offer an MSc in Islamic Banking and Finance, except for Durham University which calls it MSc in Islamic Finance and Management, at their respective Business Schools, thus indicating that the QAA subject benchmark statement used is most probably that of Business and Management. Bangor University and the University of East London, for instance, also offer an MBA in Islamic Finance, focusing mainly on business and corporate finance. It is observed from the list of modules offered in these various programmes that only two or three modules are focused on Islamic banking and finance. The content of the Islamic finance modules is generic and covers basic topics. The rest of their programmes are pure, conventional management modules. Yet the same QAA subject benchmark statements are being used, it would seem, ie Business and Management for both the MSc and MBA programmes. This reflects a shortage of in-depth analysis of the Islamic issues, which is not in line with the coherence and identity of the subject as warranted by QAA's definition of the subject benchmark statement.

Middlesex University and the Markfield Institute of Higher Education offer a wider spectrum of modules related to the Islamic side of banking and finance as compared to most universities in the UK. Middlesex University offers an MSc in Islamic Banking and Finance while the Markfield Institute of Higher Education offers an MA in Islamic Banking, Finance and Management. The subject benchmark statement used is not clear for these two institutions. According to the various modules they offer, it does not seem that the subject benchmark statements they would use fit into the QAA Business and Management subject benchmark statement. This is because the learning outcome and skills to be imparted for Business and Management focus mainly on markets, management and other areas not related to Islamic law and economics per se (QAA, 2013(f). Some of these modules can find a match with subject benchmark statements at Honours level but not at Masters level such as Religious Studies.

Reading University offers an MSc in Investment Banking and Islamic finance. There is no subject benchmark statement for this from the list of QAA Masters subject benchmark statements. Newcastle University is offering a few modules of Islamic Banking under its degree MSc Finance and Law with Islamic Finance. Their emphasis is on legal and regulatory aspects. These modules do not fit with the Business and Management subject benchmark statement either. Coventry University is offering only one module of Islamic finance under its MSc Finance degree.

From this survey of the courses advertised on the websites of universities offering full-time Islamic Banking and Finance programmes, it is clear that the trajectory of the post-graduate courses offered in various universities is really inconsistent. Some are offering it under the Department of Economics while others are offering it at the Business School, others at the Faculty of Law. It is observed that most universities offering a full-time MA, MSc or MBA in Islamic Banking and Finance are offering only a few modules pertaining to Islamic Banking and Finance, while the focus is mainly on conventional modules. This situation demands an investigation because it is not in line with the spirit of QAA's definition of the subject benchmark statement as discussed above.

It can be argued that a given subject can be taught from different angles; but the counter-argument is that Islamic Banking and Finance can only be called Islamic if there is a high proportion of 'Islamicity' in the curriculum so that the coherence and identity are well identified, which can help towards students' employability in this industry.

In the opinion of the present researcher, there has been no research carried out so far to identify the reasons for the variances in these approaches. It seems that every university is doing what it deems necessary as an internal benchmark rather than following the external benchmark of the QAA subject benchmark statements, because these are limited

in number for Masters level. There is no subject benchmark for Law, Finance, Banking, and Islamic Studies for Master's degrees. The benchmark statement from QAA's list that is most appropriate for benchmarking Islamic Banking and Finance at Masters level seems to be the one for Business and Management.

As a starting point to unfold this labyrinth, three research questions can help us in finding some answers:

1. What are the syllabus contents at various universities?

2. Under which subject benchmarking are these modules being accommodated by QAA?

3. Is consistency in the syllabuses an ultimate aim to aspire to?

[1.] Interestingly, Codling (1996) traces back the origin of the term benchmarking to ancient Egypt when scales were used for weighing by using an accurately determined point as the bench.
[2.] Available at: www.gradschool.umd.edu/GOA_Assessment/GOA_Assessment_vs_Benchmarking.pdf [Accessed: 12.08.2013]. 2013(b).
[3.] Available at: www.bangor.ac.uk/courses/postgrad/taught/courses.php.en?view=course&prospectustype=postgraduate&courseid=419&subjectarea=21 [Accessed: 12.08.2013].
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## Research methodology

To find answers to these questions, there is a need to generate primary data because no data is available on this topic. The research philosophy adopted is mainly a combination of positivism and interpretivism. Both form part of the epistemological approach, ie it is concerned with what should be regarded as acceptable knowledge in a discipline. According to Bryan (2008), positivism is an epistemological position that advocates the application of the methods of natural sciences. The laws or rules are fixed as gathered from the research. However, even as the facts are gathered, they will still need to be interpreted; hence, interpretivism is also accommodated. Interpretivism is a term that usually denotes an alternative to the positivist orthodoxy (Bryan, 2008). It explores the different meanings of given data. Hence, in the present research the appropriate methodology is inductive, ie knowledge is arrived at through the gathering of facts that provide the basis for laws (Frankfort-Nahmias and Nachmias, 2006). Data needs to be generated in order to identify whether there are inconsistencies in the adoption of the QAA subject benchmark statements for Masters programmes in Islamic Finance; and also to see whether there are inconsistencies for the curriculum and the reasons for this.

A purposive survey was carried out, ie a non-in-depth survey to gather a few data, due to the time limit. Hence, the methodology is mainly qualitative. A questionnaire was designed (see Appendix A) to collect data for finding answers to the three research questions. The focus of the questionnaire is as follows.

1. Assess the Islamic Banking and Finance lecturers' understanding of Islamic aspects of Islamic banking and finance.

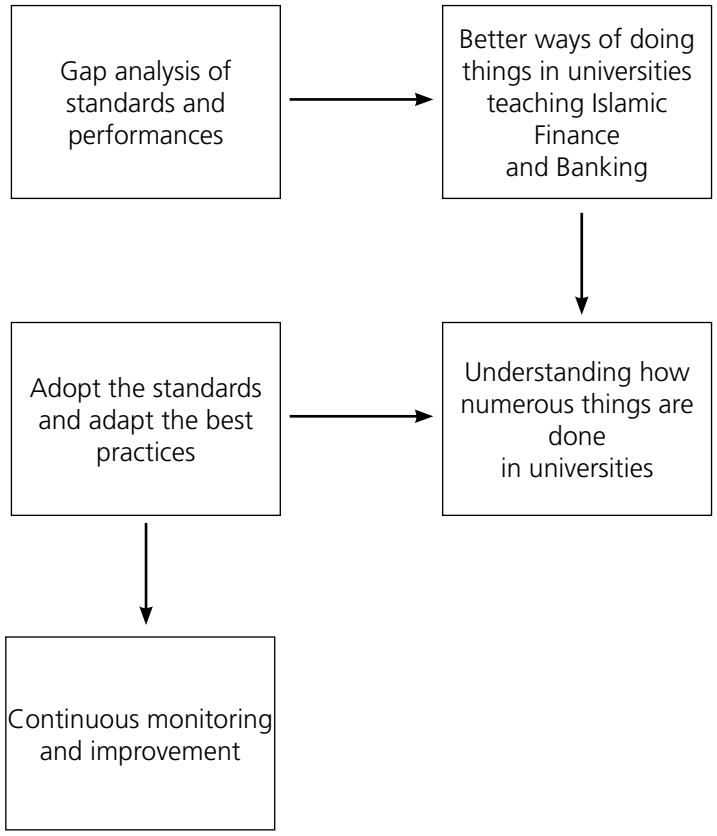
2. Assess the Islamic Banking and Finance lecturers' understanding of learning outcome and assessment for their module descriptors based on the QAA document The UK Quality Code for Higher Education: a brief guide (QAA, 2012).

3. Assess the Islamic Banking and Finance lecturers' interest in developing some level of standardisation for Islamic Banking and Finance.

The questionnaire was emailed to seven British universities involved in teaching full-time Islamic Banking and Finance at Masters level. The questionnaire was addressed to the lecturers. Five universities replied to the email, three of which responded to the questionnaire while two declined to respond to the questionnaire on the basis that they are not acquainted with the QAA procedures and rules.

The research design is a re-adaptation of Zairi's (1996) benchmark process (Figure 1) to develop the said questionnaire in order to find solutions for the research questions and for improving the curriculum consistency.

Figure 1: Zairi's model of benchmarking




(Adapted from: Zairi,1996)

## Analysis of findings and interpretation of findings

The survey was divided into three main areas.

### 1 Assessing the Islamic Banking and Finance lecturers' understanding of Islamic aspects of Islamic banking and finance

This was important because the QAA subject benchmark statements and the UK Quality Code for Higher Education (the 'Quality Code') clearly envisage that the curriculum needs to have a given outcome and assessments. If these expectations are not met, then it will be difficult to develop an appropriate curriculum and its module descriptors.

From the data collected it was apparent that only one of the participants in the survey had a qualification in Islamic law. This may be problematic as one could argue that it is difficult to develop module descriptors for a subject if one is not appropriately qualified. This might explain the shift from pure Islamic finance towards incorporating mostly conventional subjects into the curriculum as pointed out in the literature review. However, one may argue that these conventional subjects provide a better grounding in finance in terms of employability of the students as expected by QAA. The counter-argument then would be what is the difference between an MSc or MBA in conventional finance as compared to an MSc or MBA in Islamic finance? Any one or two modules could be introduced in a given MSc or MBA, but the core subject must dominate to meet the QAA benchmark. But unfortunately in the case of Islamic finance courses, the Islamic modules are often converted into a simple 'elective' sort of subject, which is overshadowed by the conventional financial mindset, while in fact it ought to have its own specific coherence and identity in order to meet QAA's requirements. For instance the outcome of conventional economics is not the same as Islamic economics. So using the subject benchmark statements of Economics will not yield what ought to be achieved for Islamic economics.

Also, as the Islamic finance industry is expanding, the need to meet a growing demand for Islamic Banking and Finance courses is more important. In the words of Azid (2005), the MBA programme developed could use either the Commodification Approach or the Originality and Invention New Paradigm Approach. The first approach is to produce students for the market while the second approach is to develop a discipline. It would seem that the Commodification Approach is being used in all universities and this in turn is not allowing the enhancement of the discipline to have its coherence and identity. Consequently we see that a Deep Learning Approach is not manifesting, but rather the Surface Learning Approach is dominating Islamic finance curriculum and teaching methodologies at most British universities.

This lack of qualifications also explains the diversity in module descriptors because the lecturers do not know what exactly to incorporate in the syllabuses and even what module descriptors to develop to meet the QAA subject benchmark. That is, if someone wants to develop an LLM in Islamic Finance, for instance, it is difficult to decide what modules need to be developed as there is no real precedent in the UK.

When analysing the modules offered by the surveyed universities, it is obvious that they converge on the products being offered by Islamic retail banks and Islamic capital markets without much creativity in their curricula. However, there are many other issues that need to be looked into depending on which subject benchmark is adopted. This is hardly reflected in the modules being taught. Most universities have confined Islamic Banking and Finance to basic Islamic financial products, while the industry is moving fast in different areas of finance and economics; many new issues, such as cross-border financing, are not being catered for in the curriculum. Those universities teaching MSc Islamic Banking and Finance have divergent modules. Some have included corporate finance; others have incorporated international management, etc. Hence, when the proportion of Islamic content in the syllabuses is analysed, there is a wide diversity and inconsistency. One university claims that 60–69% of its syllabus is Islamic while two universities say it is 40–59%. This disparity may be explained by two main facts: firstly a lack of qualified teachers to decide the content of the syllabuses, and secondly the approach of selling the course as explained by Azid (2005) above.

Looking at the subjects offered, most universities surveyed via the websites offer only two modules focusing on Islamic finance out of eight modules. This comes to 25% of the curriculum, which does not reflect coherence and identity of the discipline.

[14] This approach is of the view that every topic or course should be based on three layers: presage, process, and output. Hence, it should be able to produce a comprehensive understanding of the discipline. However, this could come at the expense of longer study duration which, to some extent, is less preferable by students.' (Kasri, 2010, p6).
[15] This second approach suggests that more topics should be covered within a minimum time such that the student could immediately apply this knowledge in their practical life. While many topics could be delivered to students, the coverage might be narrow and students' understanding of the topics might be questionable.' (Kasri, 2010, p7).
[16] For instance the MSc, MBA and MA degrees reflect more or less the same content of Islamic finance which are relatively generic courses.
[17] Bedfordshire University tried to develop one but it did not come to fruition. Markfield Institute of Higher Education as well tried it by using a shell LLM in International Commercial Law; but this too has not been realised. Newcastle University uses the existing shell structure of MSc Law and Finance and just added two modules on Islamic banking and finance regulation. If someone is not adequately qualified in Islamic commercial law it will be difficult to accommodate Islamic finance within an LLM format.

### 2 Assessing the Islamic Banking and Finance lecturers' understanding of learning outcome and assessment for their module descriptors based on the QAA document The UK Quality Code for Higher Education: a brief guide

This was an important aspect to investigate because the QAA's Quality Code makes it clear that the learning outcomes and assessment are important elements in maintaining the standards.

From the data collected, three lecturers claimed to know about QAA's Quality Code, while the rest admitted they do not know anything about QAA's requirements. The survey seems to indicate that no real matching of subject benchmarks is being done by the teaching staff but, rather, it is the administrative staff who are handling the QAA benchmarking. There is a miscommunication between the academic and administrative staff. This is problematic because the Quality Code defines QAA's expectation relating to development of the learning outcome and assessment procedures. However, it seems that not all participants are clear regarding the expectations from QAA subject benchmark statements and the Quality Code.

Depending on which discipline Islamic Banking and Finance is being taught under (Business, Finance, Law. etc), the learning outcome and assessment vary accordingly. This explains the inconsistencies in the curricula. Moreover, out of the three lecturers who claimed to know about the QAA procedures, two failed to answer questions 7, 13 and 14 which were aimed at extrapolating their understanding of the Quality Code. The Quality Code document under discussion is clear on these issues, yet the questions were not answered appropriately. This indicates that there is a lack of understanding of the QAA subject benchmark statements. The respondents could not even answer which subject benchmark statements they were following; hence, inconsistencies are inevitable.

### 3 Assessing the Islamic Banking and Finance lecturers' interest in developing some level of standardisation for Islamic Banking and Finance

It is important to find an answer to this question because it shows firstly whether there is an awareness about the curriculum diversity and secondly whether there is the willingness to resolve this diversity. Three out of five participants answered in the positive and two did not provide an answer. Though it seems that the majority want standardisation, in the absence of further data one cannot be sure that this is what is wanted by all universities because different universities are teaching the subject in different faculties. Hence, standardisation can be an unrealistic proposition until QAA formulates a specific subject benchmark statement for Islamic Banking and Finance. However, it is submitted that this is not realisable in the near future. Again, depending on which faculty wants to take the lead, this still remains problematic as we do not have a Masters subject benchmark for Economics, Finance, Banking, Law or Islamic Studies.

## Research limitations

The research was faced with some limitations.

Firstly, no study has been carried out on this topic of research to consolidate the literature review. Secondly, there was insufficient time to carry out a wider spectrum of sampling. Only five out of 32 universities / institutions could be sampled. Unfortunately, many universities contacted were not willing to co-operate. The third limitation was that some of the participants to the survey did not send back their response on time or submitted incomplete responses to the questionnaire. Finally, due to lack of co-operation from some universities, their websites were used to generate information and primary data but this is not adequate to generate in-depth analysis.

## Conclusion and recommendation

From the above analysis, it is clear that the Masters degrees in Islamic Banking and Finance offered in various British universities are not consistent for many reasons. Firstly, the degrees offered are of four categories – MA, MSc, MBA or LLM – and each one has a different approach to its curriculum / syllabus. Secondly, there is no clear-cut approach regarding the department in which it should be taught. Various departments have been identified: Economics, Finance, Law and Business. Hence, the subject benchmark statements to be followed become problematic because, besides Business and Management, there is no appropriate subject benchmark statement to map out Islamic Banking and Finance. All the academic disciplines mentioned above have subject benchmark statements at the Honours level, but these have different learning outcomes and assessments compared to a Masters degree. Secondly, the lecturers for Islamic Law and Finance appear to be insufficiently qualified to be able to enhance the curriculum development. Finally, it is not certain whether the academics want to have a standardised version of curriculum in the absence of a QAA subject benchmark.

As a result of internal rather than external benchmarking, diversity in syllabi was observed. The differences in the external subject benchmark statements adopted do have an impact on the future trajectory of Islamic Banking and Finance. However, it is clear that there are other degrees that do not have Masters level subject benchmarks statements but yet are being offered at Masters level such as Finance, Law and Economics.

Using Zairi's model of benchmarking, it can be said that the gaps in standards and performances are quite clear. Universities like Durham and Aston seem to attract more

students firstly due to their high ranking and also because of their more up-to-date syllabuses.

Yet, their syllabuses do not converge except for two modules.

In the light of the above research and discussions, the following recommendations are made:

1. There is a need to establish a panel of experts to guide towards the development of an appropriate programme in tandem with the requirements of the industry. This will be a guide towards the employability criteria of students and also it can bring in some level of standardisation.

2. Institutes offering exemption in financial qualifications such as ACCA, CIMA or the Law Society can be consulted for further recognition of the curriculum. These professional bodies often provide some alternative for Masters programmes in the absence of QAA subject benchmark statements.

3. There should be more elements of Islamic finance, banking and economics in the programme to reflect the coherence and identity of the subject. Conventional subjects can be added to the programme provided that their application is geared towards Islamic Banking and Finance.

This research is just a preliminary attempt to identify the problems in curriculum development for Islamic Banking and Finance. However, it can be used as a stepping-stone for further research such as developing module descriptors and creating appropriate pedagogical training for the lecturers.

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# Appendix A

PERSONAL INFORMATION

1. At which level/s do you teach?

NVQ Level: 4 5 6 7

2. Have you ever taught Islamic finance before?

Yes/ No

3. If your answer is yes to question 2, then what qualification you have in Islamic finance?

Certificate Diploma BA MA/MSc/MBA/Other

QUALITY ASSURANCE AGENCY (QAA) Rules

4. Are you conversant with the UK Quality Code for Higher Education issued by the QAA "Part A Setting and maintaining threshold academic standard for National level"?

Yes/ No/ Superficially

5. Are you confident that you have understood the Framework for Higher Education Qualifications in England?

Yes/ No/ Superficially

6. Are you conversant with the QAA subject benchmark statements?

Yes/ No

7. If your answer is yes to question 6, then state which QAA documents you would turn to in order to find out the guidelines of subject benchmark statements for developing your module descriptors?

1. ……
……

2. ……
……

3. ……
……

4. ……
……

8. When developing your Islamic finance courses which subject benchmark statement did you use?

……
……

9. What are the reasons for choosing this specific benchmark?

……
……
……
……
……
……

10. What modules are being taught at your university for Islamic finance?

1. ……
2. ……
3. ……
4. ……
5. ……
6. ……
7. ……
8. ……

11.Roughly what percentage of "Islamic" aspects forms part of your curriculum?

10%–39% 40%–59% 60%–79%

12.Do you think Islamic law is an important ingredient for Islamic finance?

Yes No

13.What are the special features of your Islamic finance course as compared to other curricula offered by other British universities?

1. ……
2. ……
3. ……

14.What criteria did you consider when developing your learning outcome for the module descriptors?

1. ……
2. ……
3. ……
4. ……

5. ……

15.What assessment criteria do you use to meet the learning outcomes and academic standards in line with FHEQ guidelines?

1. ……
2. ……
3. ……
4. ……
5. ……

16.Do you feel that the QAA subject benchmark statements are adequate for developing Islamic finance?

Yes/ No

17.If your answer is No for question 16, propose some solutions for improvement.

1. ……
2. ……
3. ……

18.Do you feel there is a need for standardising the Islamic finance curriculum at post graduate level for all British universities because of the Islamic elements?

Yes/ No

19.If your answer is No to question 18, then give reasons.

1. ……
2. ……

# A comparative study of student and tutor uses of technology

Joanna Richardson MA ODE (Open), PGCHE

## Abstract

This project investigates technology usage of students and tutors/academics at ***ifs*** *University College*. Findings are reported from a survey of 102 participants and these are used to examine access to technological devices, the different types of tasks carried out online and frequency of internet usage. The study compares the data and identifies any differences in usage between the two roles, with particular consideration given to whether there is evidence of a digital divide. The analysis and discussion considers the potential impact of those differences and how the findings compare to previous studies conducted in the wider higher education environment.

Both groups were found to be confident users of internet resources for their own purposes. Some differences between the groups were found, particularly in the use of mobile technology and the types of online activities most frequently carried out. A small digital divide was identified, but this seems more indicative of different user motivations rather than any lack of technology skills. Greater understanding of student and tutor usage of online resources will help to inform institutional decisions about the use of technology for teaching and learning.

### Introduction

The term 'digital divide' is used in a number of contexts – for example, the global divide, where access to technology might be limited in developing countries; or the social divide, where some individuals might not be able to afford the necessary equipment. However, this project focuses on investigating potential differences in terms of technology skills and the ability to utilise online resources, often referred to as a 'secondary digital divide' (Hargittai, 2002). The concept of a digital skills divide between academics and students, and the potential impact of this on teaching and learning, has evoked much debate in higher education research (Prensky, 2001; Bayne and Ross, 2011; Bennett et al., 2008).

Despite growing criticism of the digital divide model within educational research, the ideas and terminology still persist. This can have a negative impact, particularly if the ideas persist among policy-makers and those responsible for educational strategy (Jones et al., 2010). It is therefore important that assumptions about students' skills and confidence in using technology are explored and backed up with evidence, not least because so much is invested in e-resources such as virtual learning environments and e-books and journals. This understanding contributes to a bigger picture of student engagement, motivation and learning preferences (Dahlstrom, 2012). Understanding tutors' relationships with technology is equally as important, as it is they who are at the forefront of delivery and pedagogy, which is increasingly focused on online approaches. Digital literacy skills are becoming ever more important for students, both in their studies and for them to be successful in the workplace (Hall et al., 2012) and the development of these skills for staff and students is a QAA requirement (Quality Assurance Agency for Higher Education, 2012).

The effective implementation of technology to deliver high-quality and engaging learning can also provide an advantage in an increasingly competitive environment. Higher education is now more marketised, with the relationship between students and institutions becoming more like that of customer and service provider (Blackmore, 2009), and student satisfaction levels are an important performance indicator.

The author has been working with tutors, assisting them in the use of technology for teaching and learning for over five years. At the start of this period there seemed to be very low skill levels in using technology and understanding of basic associated terminology. However, the impression gained from more recent training sessions is that knowledge and skills have improved. This may be due to longer-term use of technology, increased motivation and development opportunities provided by the institution. This study hopes to confirm if this anecdotal evidence is an accurate assessment of the situation.

## Literature review

### The digital natives debate

The idea of a digital divide between current students and older generations was proposed in work by Tapscott (1998) and Prensky (2001). Prensky's ideas were particularly influential and he introduced the term 'digital natives' to describe those born after 1980, in a world where digital technologies were becoming ubiquitous. These learners were immersed in the digital world and later became associated with the use of Web 2.0 technologies (Lorenzo et al., 2007). It was suggested that this had an impact on their preferred learning approaches, which were claimed to be experiential, collaborative team-working and via social networks (Oblinger and Oblinger, 2005). This idea was juxtaposed with 'digital immigrants', used to refer to anyone older who learnt how to use technology as an adult, which included academics teaching at higher education institutions. According to Prensky, immigrants would never be able to 'speak the language' as well as natives (2001, p2). It was argued that this created a barrier between tutors and students and that this was causing dissatisfaction among students in higher education, who did not feel that the traditional educational approach was relevant to them. Bayne and Ross (2011) summarise the terminology associated with the digital natives and immigrants discourse:

| Native | Immigrant |
|---|---|
| Student | Teacher |
| Fast | Slow |
| Young | Old |
| Future | Past, or 'legacy' |
| Multi-tasking | Logical, serial thinking |
| Image | Text |
| Playful | Serious |
| Looking forward | Looking backward |
| Digital | Analogue |
| Action | Knowledge |
| Constant connection | Isolation |

Source: Bayne and Ross, 2011

The natives and immigrants terminology became adopted in educational research discourse, with little questioning of the evidence base for the ideas (for example Toledo, 2007; Barnes et al., 2007). However, many of Prensky's ideas are based on generalisations and have since been criticised for lacking evidence and over-simplifying the situation (Bayne and Ross, 2011; Bennett et al., 2008).

### Trends from empirical studies

The main empirical studies carried out into student usage of technology have focused on undergraduate students who have just entered university. Results from one Australian study (Kennedy et al., 2008a) found considerable diversity within the participant group in terms of technology preference and usage, although established technologies such as email were fairly universal. Other research has shown that although students are heavy users of technology, they are not necessarily equipped with the right skills to use technology for academia (Selwyn, 2008). Many lacked the ability to assess and critically analyse online sources and were often only passively interacting with text (Margaryan et al., 2011).

Studies have found little evidence to suggest that students are heavy users of the participatory web, and those using tools such as blogs and wikis are in the minority (Waycott et al., 2010). Social networking is used widely by students but mainly for personal rather than academic goals (Dahlstrom, 2012).

In terms of device usage, portable technology has been found to be important to students. A study carried out by Educause in 2012 found that students want to be able to access information such as results and course materials on mobile devices (Dahlstrom, 2012). A 2008 study comparing technology usage between students and tutors found that mobile phone usage was one of two main areas where student usage was significantly higher than tutors', along with using technology for gaming (Kennedy et al., 2008b).

Findings from studies examining the use of technology by academic staff suggest that most are willing and able to use technology when there are perceived benefits for personal usage or teaching practice (Panda and Mishra, 2007). Waycott et al. (2010) explored staff attitudes to technology and found that knowledge of technology was often good and many had positive views of the benefits that technology could bring to their personal lives and teaching practice. Another study found evidence of pockets of effective technology use for teaching within institutions but not widespread good practice (Selwyn, 2007).

Overall, the trends from this body of research found little evidence to suggest that students were behaving as digital natives and tutors as digital immigrants. However, there is some evidence of a small digital divide in terms of how technology is used and the extent to which it is used (Waycott et al., 2010; Kennedy et al., 2008b).

### Digital visitors and residents model

One recent paradigm that more effectively represents the complexity of the situation is the 'digital visitors and residents' model (White and Le Cornu, 2011). Technology usage in this model is not age-related or skill-related but governed by individual motivations and context (White, 2011). Digital visitors mainly use the internet for tools and resources; they select the information they need or use the service that they require but do not interact online. Digital residents participate in online communities and may spend a significant amount of time interacting socially in online 'places', for example

Facebook, Twitter or blogs. Visitors leave little trace of themselves online, whereas residents leave evidence of their presence behind:

Clearly, some people may operate entirely as Visitors, visiting specific Web places for specific purposes, entirely on their own and never leaving a footprint behind. At the other extreme, 'total' Residents (equally small in number, we suggest) spend all their online time in social interaction, never using the Internet for information-gathering yet leaving behind significant evidence of their presence. (White and Le Cornu, 2011, para.35)

Figure 1: The digital visitor–resident continuum


Source: White and Le Cornu, 2011

This model predicts that most internet users will fall into the box in the centre of the continuum on Figure 1; many will move around the scale, at some stages behaving as visitors and sometimes as residents.

## Hypothesis development

Following from ideas explored in the literature review, the title of this project will be: A comparative study of student and tutor uses of technology. This will allow exploration of the ideas discussed in the literature review, for example whether there is a digital divide at ***ifs*** *University College*. Access to different technological devices, frequency of internet use, the range of online activities and the self-assessed confidence levels of participants will inform this study. Findings relating to online participation and content creation and sharing will also be used to determine where tutors and students might sit on the digital visitor–resident continuum. These issues will be explored by testing the following hypotheses:

1. The majority of both groups, students and academics, are (a) confident and (b) frequent users of the internet for personal and academic activities.

2. Access to different technological devices will be higher among students.

3. Both groups will sit more in the digital visitors group, rather than residents.

4. A small digital divide will exist, with students using the internet for a wider range of activities than tutors.

## Research methods

Following the literature review and hypotheses design, primary research via a survey was identified as a suitable methodology to provide empirical evidence and build a picture of technology usage within the author's specific context. This approach was designed to extend and contribute to previous studies done in this area, rather than rely on secondary research carried out in other higher education institutions. The approach was mixed method; the majority of data collected was quantitative, but some qualitative data was also collected to add insight and enrich the picture of technology usage.

The survey questions were developed after reviewing literature containing examples from similar studies and adapting those for the specific purposes of this research (Davis, n.d.; University of Bath, 2011; Macleod and Patterson, 2012). The questions selected explored usage of technology, including types of devices that participants access regularly, confidence in using common software, activities and tasks that respondents use the internet for, and the frequency of that use. Questions also explored accessing information online versus participation and the generating and sharing of their own content on Web 2.0 sites, to build up a picture of where participants fell on the digital visitor–resident continuum. Qualitative data was collected about tools that participants found essential for their studies, to enrich the information about how online resources were being utilised for academic work.

A five-point Likert scale was used to indicate agreement with statements and frequency of use. This scale selected fitted with the approach used in previous studies (Macleod and Patterson, 2012) and kept data manageable for the scale of the project.

The main variable used for analysis in this study is that of role, enabling comparison between tutor and student usage of technology. Some additional data was collected that will not be included within the scope of this project but will be used to inform learning technology strategy within the organisation. The full survey is provided in the Appendix.

The survey was distributed to ***ifs*** *University College* students across a range of levels, both part-time and full-time, and all respondents were informed that participation was voluntary and confidential. To ensure that participants at all levels of study were represented, specific workshops were targeted covering Level 4, 5 and 6 modules. An online version of the same survey was sent to full-time students and distance-learning Level 7 students who were unavailable in a face-to-face context. An online version of the questionnaire was also distributed to 40 academics. Data was collected from 102 respondents: 73 students and 29 academics. Although small-scale, the responses represent around 5% of higher education students and 25% of tutors within ***ifs*** *University College*.

The results for the two roles of student and tutor were kept separate to enable comparison between the two. Results are presented as either tables containing the percentage of responses against each answer on the Likert scale or the total average scores for each group.

## Participants

A breakdown of the demographic information collected about participants within each role (student or tutor) is shown in Tables 1 and 2. The majority of students were aged 30 or under and only a minority of tutors were under the age of 40. Full results from the survey are available on request.

Table 1: Participant gender and study level (%)

| | Gender | | Study level | | | | Study mode | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | 4 | 5 | 6 | 7 | Part-time | Full-time |
| Students | 55 | 45 | 25 | 53 | 18 | 4 | 93 | 7 |
| Tutors | 69 | 31 | N/A | | | | N/A | |

Table 2: Participant age ranges (%)

| Age range | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16–20 | 21–25 | 26–30 | 31–35 | 36–40 | 41–50 | 51–60 | Over 60 |
| Students | 6 | 52 | 12 | 25 | 1 | 4 | 0 | |
| Tutors | | | 3 | 7 | 0 | 21 | 31 | 38 |

## Data analysis and findings

**Hypothesis 1: The majority of both groups, students and academics, are: (a) confident and (b) frequent users of the internet for personal and academic activities**

### 1(a) Confidence in use

Findings show that:

- confidence in using the internet is high, with 95% of students and 93% of tutors either agreeing strongly or agreeing that they found it easy to locate useful resources online;
- 100% of tutors and 96% of students either agree strongly or agree that the internet is important for their academic work;
- 95% of students and 93% of tutors agree strongly or agree that internet usage is an important part of their life.

These findings support hypothesis 1(a). However, the qualitative data collected regarding essential resources for academic work paints a slightly different picture of student uses of the internet for study. Google and Wikipedia were mentioned most frequently and other studies have found that these tools are used by students to gain an introduction to a topic (Waycott et al., 2010). It is possible that some students may not be fully exploiting the more academic and specific business and finance tools available. This is an area that warrants further investigation in the future.

Table 3: Students' reported essential tools for academic work

| Resource | Number of mentions |
|---|---|
| Google, search engines | 14 |
| Wikipedia | 7 |
| *KnowledgeBank* (institution e-library) | 6 |
| Online journals (e.g. Ebsco, J-Stor) | 4 |
| BBC, news sites | 3 |
| Google Scholar | 2 |
| Student forums | 2 |
| Investopedia | 2 |
| *Financial Times* online | 2 |
| **my *ifs*learning** (institution website) | 2 |
| *Financial World* magazine | 1 |
| Lead tutor articles (institution publication) | 1 |
| Bank of England website | 1 |
| Work intranet | 1 |
| Mintel database | 1 |
| YouTube | 1 |

Tutor responses to the same question were limited in number, and while Wikipedia and Google search were mentioned, it seems that a wider range of specialist resources are being utilised by this group. There may be an opportunity for them to encourage their students to use these specialist resources if they do not do so already.

Table 4: Tutors' reported essential tools for academic work

| Resource | Number of mentions |
|---|---|
| Google Scholar | 4 |
| *KnowledgeBank* (institution e-library) | 3 |
| Business research sites | 3 |
| Online journals (e.g. Ebsco, J-Stor) | 3 |
| International specialist organisations | 3 |
| Wikipedia | 2 |
| Google | 2 |
| **my *ifs*learning** (institution website) | 2 |
| *The Economist* | 1 |
| BBC, news sites | 1 |
| Membership bodies | 1 |

### 1(b) Frequency of use

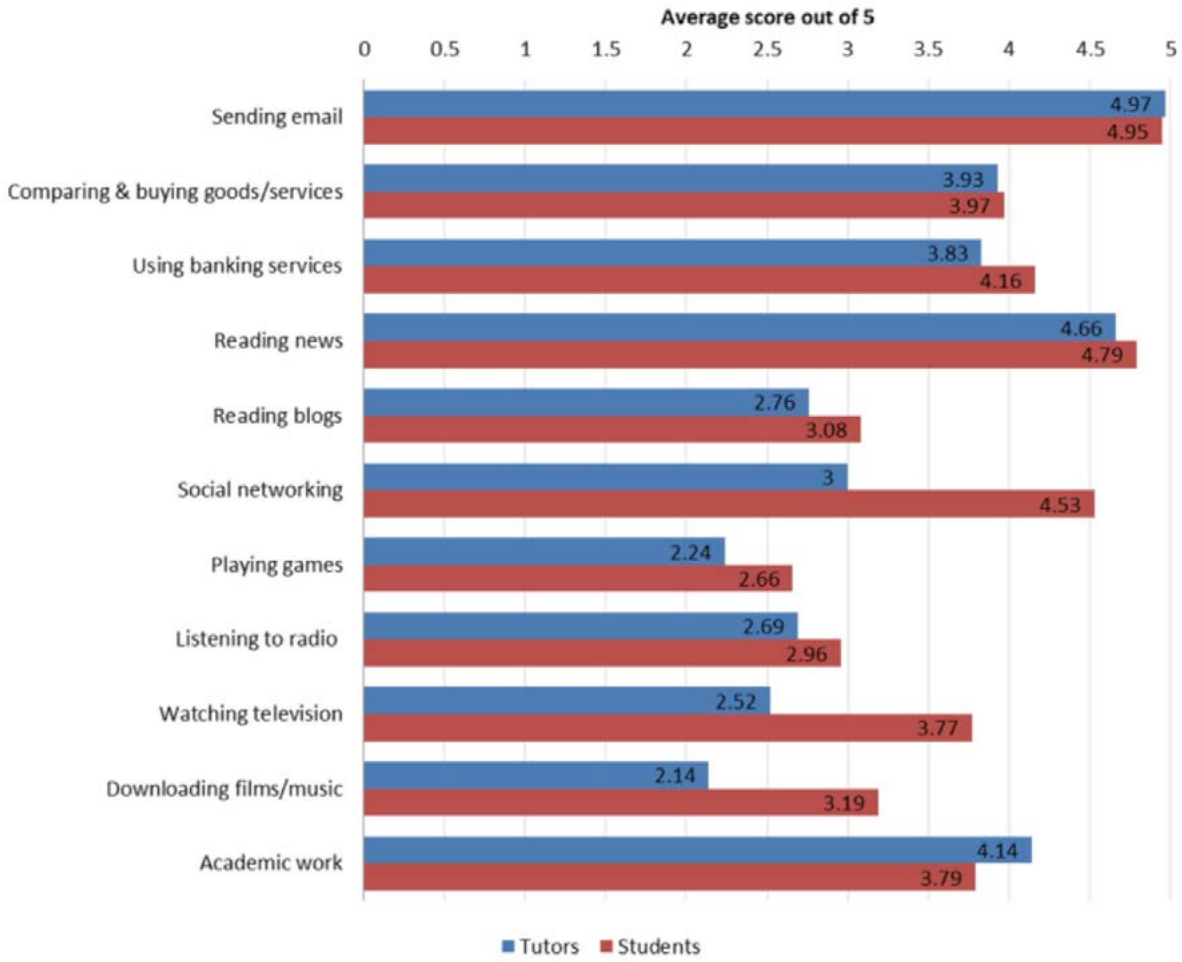
The findings support hypothesis 1(b) and both tutors and students use the internet frequently for a wide range of activities. Email, reading news and shopping online for goods and services are all frequent online activities by both groups. There is some disparity between activity types, with students more likely to use the internet frequently for social networking and watching television. Tutors carry out academic work online more frequently than students but this is perhaps to be expected, given that they are subject matter experts and are likely to devote a larger proportion of their time to academic work.

These findings are promising for digital literacy levels. Digital literacy can be defined as "the confident and critical use of ICT for work, leisure, learning and communication" (JISC InfoNet, 2010) and it is clear that both groups are using online resources for these purposes. The importance of internet usage to the vast majority and the frequency of use are also likely to equate to continuous improvement in skills; the more people are online, the more skilled they become (Hargittai, 2002).

Table 5: Student and tutor frequency of online activities (%)

| | Daily | | Weekly | | Monthly | | Rarely | | Never | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Student | Tutor | Student | Tutor | Student | Tutor | Student | Tutor | Student | Tutor |
| Sending/ receiving email | 98 | 97 | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 0 |
| Comparing/ buying goods and services | 22 | 17 | 56 | 62 | 19 | 17 | 3 | 4 | 0 | 0 |
| Banking services | 33 | 31 | 58 | 48 | 5 | 7 | 1 | 0 | 3 | 14 |
| Reading news | 85 | 83 | 12 | 7 | 0 | 3 | 3 | 7 | 0 | 0 |
| Reading blogs | 16 | 10 | 26 | 21 | 18 | 24 | 29 | 24 | 11 | 21 |
| Social networking | 75 | 24 | 14 | 28 | 1 | 3 | 8 | 14 | 1 | 31 |
| Playing games | 10 | 10 | 15 | 10 | 19 | 14 | 44 | 24 | 12 | 42 |
| Listening to radio | 16 | 10 | 21 | 24 | 18 | 10 | 33 | 35 | 12 | 21 |
| Watching television | 32 | 0 | 38 | 31 | 11 | 14 | 14 | 31 | 5 | 24 |
| Downloading music/films | 14 | 3 | 27 | 21 | 32 | 14 | 19 | 10 | 8 | 52 |
| Academic research/study | 19 | 31 | 48 | 55 | 26 | 10 | 7 | 4 | 0 | 0 |

Figure 2: Comparison of student and tutor frequency of online activities (average score)

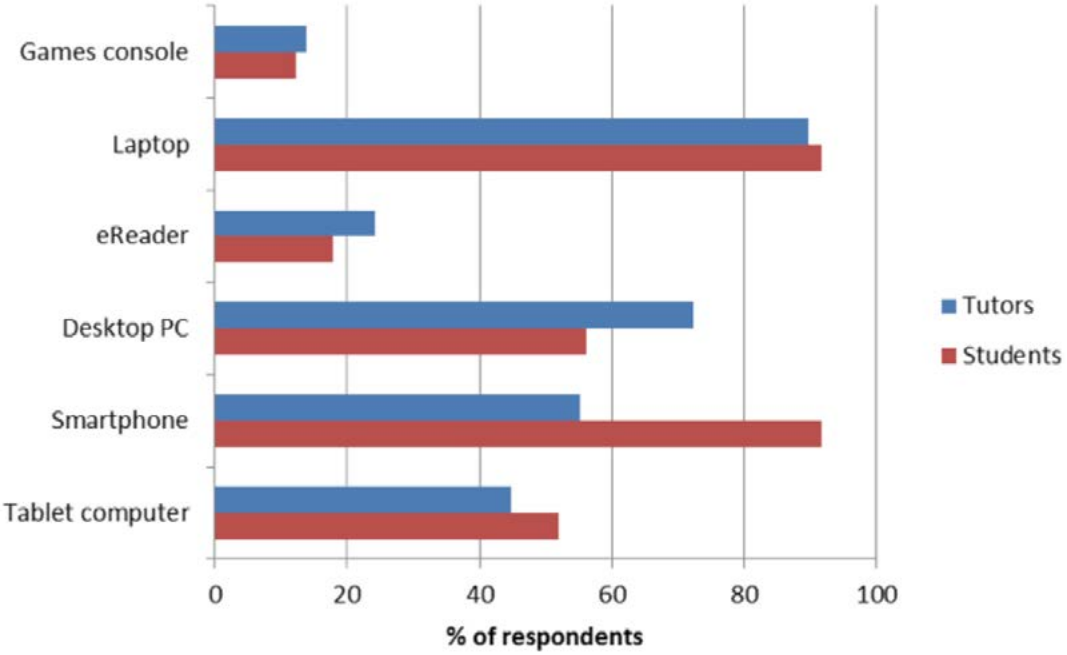


## Hypothesis 2: Access to different technological devices will be higher among students

On average, students used 3.22 different devices; for tutors this figure was lower at 3.0. However, the discrepancy is not significant enough to support this hypothesis.

The devices most accessed by students were smartphones and laptops, with only 6% not using the latter. For tutors, laptops were also the most-used devices, at 90%, followed by desktop PCs at 72%.

Figure 3: Comparison of student and tutor device access (average score)




Tablets have become popular because of the ability to personalise them and access to this type of technology is very close between the two groups, at 52% for students and 45% for tutors. Their usage among a significant proportion of tutors suggests that many in this role are engaged with and following technological advances and are utilising technology to suit their needs.

One of the significant disparities in device usage is for smartphones. Smartphone usage among students was almost universal at 92%, but for tutors it was only 55%. These figures for students are similar to those reported in other studies (Jones et al., 2010).

## Hypothesis 3: Both groups will sit more in the digital visitors group, rather than residents

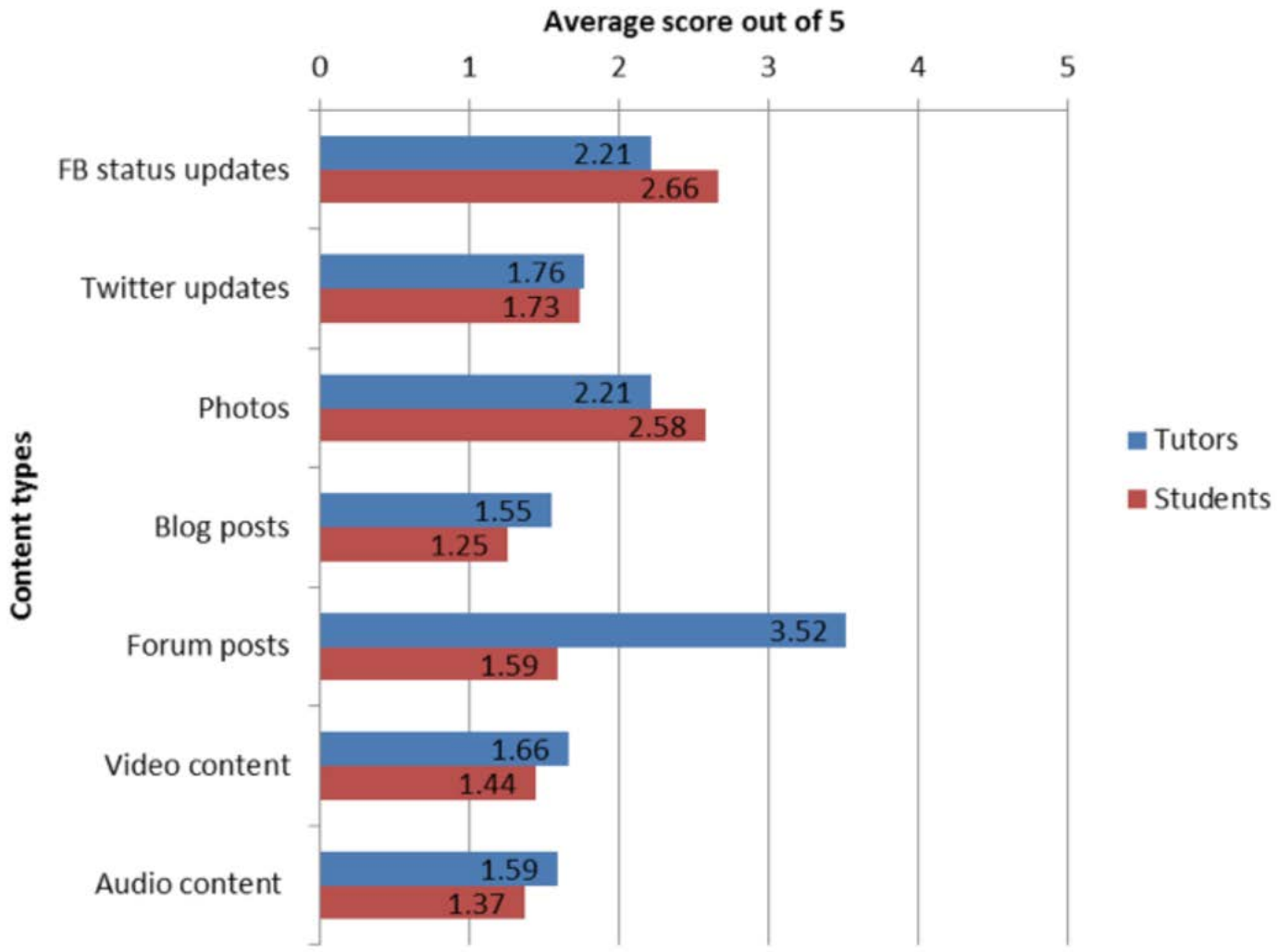
The data collected about the addition of content online supported this hypothesis to some extent. The majority of students and tutors are not leaving a significant online footprint, which is a key feature of a digital resident (White and Le Cornu, 2011).

Although some students are participating in social networks, as previous studies have found (Dahlstrom, 2012), this seems to be for personal purposes rather than academic. There is little evidence of students creating and sharing content or participating in online communities of practice (Wenger, 2006) through forums or blog posts. This finding is in line with some other studies that found the likelihood of students engaging in content creation was low (Kennedy et al., 2007).

Table 6: Student and tutor frequency of adding content online (%)

| | Daily | | Weekly | | Monthly | | Rarely | | Never | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Student | Tutor | Student | Tutor | Student | Tutor | Student | Tutor | Student | Tutor |
| Facebook status updates | 7 | 3 | 19 | 24 | 26 | 10 | 29 | 14 | 19 | 48 |
| Twitter updates | 3 | 3 | 5 | 10 | 16 | 10 | 12 | 10 | 63 | 66 |
| | | | | | | | | | | |
| Photos | 3 | 3 | 21 | 7 | 27 | 34 | 27 | 17 | 21 | 38 |
| Blog posts | 1 | 3 | 1 | 3 | 1 | 7 | 12 | 17 | 84 | 69 |
| Forum posts | 1 | 7 | 5 | 66 | 8 | 10 | 21 | 7 | 64 | 10 |
| Video content | 3 | 0 | 3 | 7 | 3 | 10 | 19 | 24 | 73 | 59 |
| Audio content | 3 | 0 | 3 | 3 | 5 | 3 | 7 | 41 | 82 | 52 |

Figure 4: Comparison of students and tutors adding content online (average score)



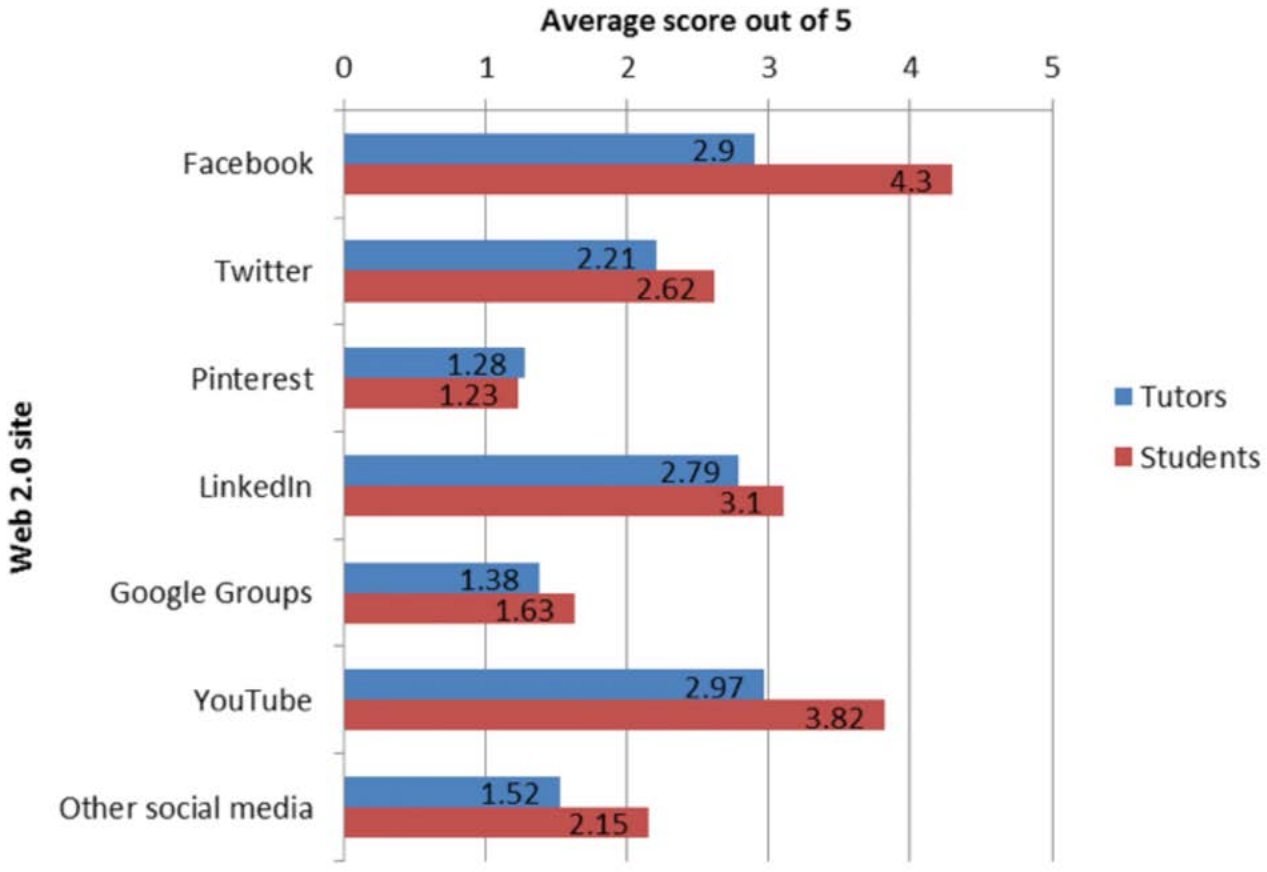
The findings here may also be affected by the nature of the students' subject matter – sharing of information between different financial institutions is discouraged for competitive reasons and this culture may also pervade banking and finance studies. Information relating to individuals' organisations, case studies and other useful experience may not always be suitable to share with peers.

Tutors add forum posts much more frequently than students and this is likely to reflect the requirements of their role as online tutors. Tutors are also slightly more likely to be adding blog posts and audio content. This may also be part of their role as a tutor but demonstrates that at least some are likely to be creating academic content and participating in online communities of practice.

### Hypothesis 4: A small digital divide will exist, with students using the internet for a wider range of activities than tutors

The findings from the previous three hypotheses have shown that there is little significant variation in the usage of technology between students and tutors, and tutors appear to be utilising technology more effectively for academic purposes. The only section of the survey that showed more significant difference between the two groups was that of viewing Web 2.0 sites. These include participatory sites such as YouTube and Facebook, where the content is largely user-generated and personalised for individual users.

Figure 5: Comparison of students and tutors viewing Web 2.0 sites (average score)




Only one participant mentioned using YouTube as an academic resource; therefore, the majority of student usage of this site indicated here is likely to be for entertainment purposes.

This hypothesis is supported, as there seems to be no age-related digital divide in terms of skills, just a relatively small divide in personal interests and activities, as might be expected among those at different life stages with different priorities (Dutton and Blank, 2011). Although tutors may not be using the internet as frequently as students for social and entertainment purposes, they are utilising it for their own academic practice.

## Conclusions and recommendations

There are a number of conclusions and recommendations for action that can be drawn from the findings of this study.

## Confidence and digital literacies

Assumptions that students' technological aptitude equates to digital and information literacies should be avoided (White, 2011). However, confidence in using the internet to find resources is high and the indication is that the majority of students and tutors have a good level of digital literacy. Students at ***ifs*** *University College* may not be typical of those at other higher education institutions, as many have first degrees and use computers on a daily basis in the workplace, which may mean that they are more adept at utilising technology for academic purposes. There does still appear to be scope to encourage exploration of the wide range of academic resources that exist online, both within the institution's e-library and on the wider web. An information literacy course was launched in 2012 and has since received good feedback from students, but taking it is currently optional. Since self-reported skill in this area is high, learners may not perceive the need to improve in this area and so consideration should be given to embedding this content in all programmes.

## Device usage and mobile learning

One unexpected finding relates to device access, as tutors were almost equal to students in terms of the number of devices they accessed. The discrepancy in smartphone ownership was also of particular interest. Mobile technologies are clearly important to students and ***ifs*** *University College* should take steps to ensure that its e-library, learning environment and course material can be accessed in a user-friendly way by mobile devices. Flexibility is of particular importance to part-time learners who are also likely to be working full-time; mobile devices can assist in anytime and anywhere learning.

## The impact of context on usage

The digital visitor–resident continuum provides a useful model for this study and for better understanding how ***ifs*** *University College* students and tutors fit in with equivalent groups at other higher education institutions.

Students sit more in the resident zone of the continuum when using technology in a personal context – for example, adding status updates or photos on Facebook – and networking and online discussion skills can be acquired in these informal settings (Stoerger, 2009). However, students act more as digital visitors when it comes to their academic context, for example when using discussion forums. This confirms the author's experience in supporting course forums, which are not well-used by this student group. Further investigation is required to identify ways in which the institution can bring the skills from personal networking to formal learning and encourage the development of learning communities.

## Use of multimedia resources

One notable finding was the frequent usage of YouTube by students. The institution should consider using more video and audio content, such as online lectures and podcasts. Students are engaging with these types of resources for entertainment purposes and this could be extended to academic engagement. Although this type of resource can be quite passive, if used in conjunction with discussion and reflective activities, it would add an interesting dimension to content delivery and support different learning styles.

## A digital divide?

The findings suggest that the majority of students are not behaving as digital natives. Evidence suggests a digital divide based on motivations, rather than any difference in skills relating to age; the two groups are utilising technology in different ways to achieve different goals. This finding is supported by those of previous comparative studies (Kennedy et al., 2008b; Waycott et al., 2010).

Suggesting that older generations are not adept at using technology underestimates the ability of people to learn and adapt to new situations. There may have been a divide previously, but frequent exposure to new technologies is likely to be one significant factor leading to a narrowing of the divide. Tutors are clearly able to utilise online resources for their own academic research and professional development, but in the author's experience there is still scope to encourage the implementation of this knowledge into their own teaching and learning. This research suggests that the technology skills base is already there and can therefore be extended to online pedagogy.

It is important that this finding should be disseminated through the institution as, in the experience of the author, many still believe that most students are digital natives who have different learning preferences and expect technology to be used extensively throughout their studies.

Findings from this study will contribute towards the institution's approach to e-learning delivery and teaching and learning. Students and tutors have the necessary digital literacies to be successful, but it remains important that the technology is used to underpin sound online pedagogy that produces high-quality and engaging learning experiences.

## Limitations of the project

During this project, the following limitations were identified.

- Many of the responses given to the survey questions are based on the self-perceptions of participants, thus making them subjective. This particularly applies to questions on confidence and finding information online.

- Although a significant percentage of the academic community participated in the questionnaire, a larger survey of students may be more informative, particularly seeking responses from full-time students who may differ in their online usage as they are not in employment.

### Areas for future research

Areas for further research include:

- identifying if self-perception of digital literacy skills is aligned with actual skill;
- further investigation of information literacy levels, in particular whether prevalence of student internet usage for entertainment purposes does equate to skills relating to academic work;
- analysis of more data collected from the survey to draw out further insights.

A useful starting point for research into current information literacy levels among students could be an analysis of the resources given in coursework assignment reference lists. This will be recommended as a worthwhile next project.

Ultimately, any further understanding that can be gained about our learners' and tutors' skills and learning preferences will enable better support and development to be provided where it is needed most.

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