



**Aston Business School**  
Birmingham

# **Good Practice Guide in Learning and Teaching**

**Volume 10  
Anniversary Edition**

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Aston Business School  
March 2013

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## EDITORIAL

This is a special issue of the Aston Business School Good Practice Guide which is now ten years old. As I reflect on the tenth edition it is almost unbelievable how much change there has been in the past decade in learning and teaching approaches. I have been using the Guides in my teaching on the Postgraduate Certificate in Professional Practice. I get participants to browse through the articles and critique them. The major themes are personalisation, intercultural learning and as ever, technology.

One student recently laughed at the early article on the use to Blackboard. They could not believe that there was a time when Blackboard was not a major part of our daily life and that of our students. (At this point it is worth pausing to pay tribute to Alison Halstead, Anne Wheeler, and their colleagues in CLIPP who have changed the life at Aston via inspiration and perseverance which has brought us to this position). I have no doubt that the same will soon be true for Aston Replay and other lecture capture technologies which are the subject of papers in this edition of the Guide (Jones and Olczak, Butler, Reddy, Senior and Wood, as well as Hutchinson). As I write, there is still quite a lot of scepticism about these technologies by staff, but they are enthusiastically embraced by students. When I am writing this editorial in ten years' time I am sure that Aston Replay will also be well developed, or even overtaken by yet another technology which students want more of. What can we learn from this? Listen to our students and do not think of reasons not to adopt learning methods which are forward looking? I hope so.

Some other key themes also come through strongly in the articles and perhaps the most important is the increasing need to move back to a more personalised environment. Things have gone back to the time when I was at University. Massification has had its day and students really do expect to be at the Heart of the System. The articles by Rudd and Hodgetts emphasise this, as does the sustainability of support outlined by Allsopp and Holt. They are about adapting learning to changing environments, but they are also about personalisation and partnership, and they reflect two constant themes at ABS - research led and real world focussed, yes it really is possible to have a reputation for both.

I am particularly proud of the story that has developed as a result of Gina Eckert's article on Intercultural competence. When Gina was first writing her articles for the Guide we did not have such a diverse student body. Now diversity, and the development of the most employable global citizens, is at the centre of Aston University's 2020 strategy. We are known for this work around the world - thank you Gina for starting us off on this journey.

And what will come next? If I had a crystal ball I would predict that we will still be arguing over new technologies in 2023, but that Aston's focus will still be on research and practical relevance to the world of work. I am proud to reflect back on what we have achieved and I thank Ilias who has agreed to take the tradition forward and to revitalise HELM. But what about the Guides? Julie and I have been reflecting on whether we need to move to a new format in future, one which reflects where we are now, technologically and culturally, rather than ten years ago. We are certainly going to have to do this, because Julie tells me that she is about to do more than contemplate retirement, so we cannot rely on her amazing work in the future. Thank you Julie, without you there would have been no Good Practice Guides, and nearly 100 people might never have had the opportunity to reflect on and share their teaching and learning practice.

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By request, we have included a short summary of each article below:

<b>The Impact of Aston Replay on Student Performance</b>	<p>Aston Replay is a tool that allows live lectures to be recorded and made available for students to view online. In the last few years, it has been increasingly widely used across the University. This paper addresses the following questions:</p> <ul style="list-style-type: none"> <li>• Does watching Aston Replay improve a student's module performance?</li> <li>• Does watching Aston Replay impact differently across modes of assessment?</li> <li>• Does watching Aston Replay only during the "revision period" impact upon student performance?</li> </ul>
<b>MSc Dissertations: An Update and Reflection on Supervisor Allocation and Student Supervisor Process</b>	<p>This is an update to the original paper (vol 6, 2009). The general approach adopted by Course Directors and the Group to these issues is unchanged since 2009. There were, however, two underlying principles expressed in the 2009 paper that were rethought. These were 1) "<i>Students require knowledgeable and structured supervision, based in theory</i>" and 2) "<i>It is helpful, but not essential, if students enjoy/like their dissertation topic.</i>"</p>
<b>Further Developments in Use of Electronic Processes within ABS Postgraduate Programme</b>	<p>This is an update to the original paper entitled, "<i>Paperless Examination Boards</i>", Vol. 6 2009. . This paper is a reflection on this process together with an update on additional processes that have been introduced into the Postgraduate Programme in the interim period.</p>
<b>Cultural Competence for First Year Undergraduates and a Lot More</b>	<p>This article reflects on a seminal piece of work which was produced in the 2006/7 (vol 4) Good Practice Guide by Regina Herzfeldt (now Eckert). It was an important article in many ways: because it looked forward to the needs of the multi-cultural business school we have become, but also because its findings have laid the foundation for major work with both students and staff across the University.</p>
<b>The Impact of Prior Study in Economics and Maths on First Year Performance</b>	<p>This study examines the performance of 1<sup>st</sup> year undergraduate students in an introductory economics module called Economic Environment of Business. One of the key difficulties with teaching this module is that whilst some students are seeing economics for the first time, a number of the students have already studied economics before. Indeed, a significant amount of the content covered is included in A-Level Economics. The key research question in this paper is whether prior study in Economics and Mathematics before enrolment at Aston has any impact upon student module performance. This is important because it has implication for pedagogy in terms of differentiation..</p>
<b>Revisiting Lecture Capture: Six Years on</b>	<p>This paper reflects on the original paper "<i>Video Nasties: Emerging Educational technologies</i>", Vol. 5 2008.</p> <p>In recent years the virtual learning environment (VLE) has become a core component in the delivery of courses at Aston University. This development has been instrumental in augmenting a range of innovative educational technologies. This contribution to the Good Practice Guide revisits the author's experiences in 2007, introducing video and MP3 lectures to a final year, Business Ethics module. The final part of this contribution considers alternative lecture capture tools currently available at Aston University.</p>
<b>Virtual Pedagogy Initiative Revisited</b>	<p>The paper revisits the original virtual pedagogy initiative (VPI) published in vol 6, 2009. Revisiting it is a salutary lesson in how much Higher Education has changed in four years.</p> <p>The promise of the VPI was twofold, technology that would transform learning, teaching and assessment and, something perhaps distinctive to Aston, a grassroots led, bottom-up approach to the adoption and application of the technology. The technology moves on, but have our expectations and attitudes to what it can do and where it fits changed?</p>

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<b>The Use of Activities in Lectures</b>	<p>This is an update to the original paper, <i>"The Use of Activities in Lectures"</i>, Vol. 4 2007. Whilst the authors continue to use activities within lectures, in recent years they have extended and adapted this approach in two particular ways. First, in longer, usually 3-hour postgraduate, lectures they have developed slightly longer group activities. Second, as they have developed more distance learning materials they have attempted to find ways to incorporate activities. In some ways activities can work well with distance learning students, but the remote nature of the students can also prove challenging.</p>
<b>Further Reflections on Reflective Learning for Corporate Clients</b>	<p>This paper revisits the original paper, <i>"Using Reflective Learning to Stimulate Comprehension and Application in Executive Education"</i>, Vol. 6. The original paper found evidence of significant value in the use of a form of Action Learning, engaging learning sets within a client group actively to apply their learning in their own work context, and to report back on their experiences and reflections. The approach worked well for a group of engineering specialists in the utilities sector, and it was concluded that the approach would be relevant across a range of client organisations and environments.</p> <p>The specifics of a programme design for a Centre for Executive Development client are dependent entirely upon the client's needs. As a result, it is difficult to recommend the widespread adoption of a specific approach to learning strategy which will be dictated by the requirements of the client organisation. Hence, while we remain enthusiastic regarding the use of structured and timetabled Action Learning interventions within a programme, we have yet to have the opportunity to apply a similar model to that discussed in 2009.</p>



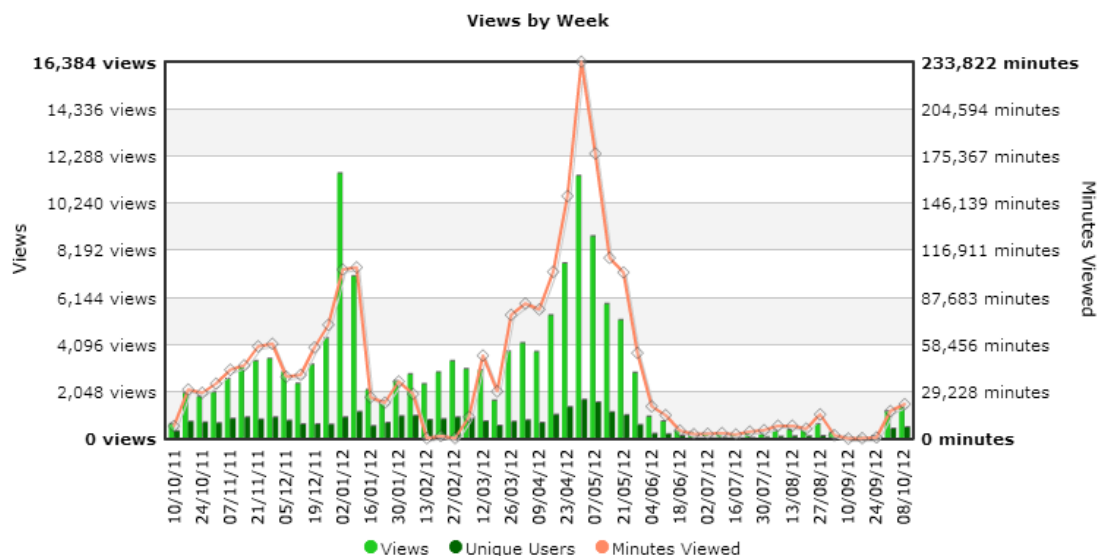
# THE IMPACT OF ASTON REPLAY ON STUDENT PERFORMANCE

CHRIS JONES AND MATT OLCZAK

## 1. Introduction

Aston Replay is a tool that allows live lectures to be recorded and made available for students to view online. In the last few years, it has been increasingly widely used across the University. **Figure 1** shows the total amount of views (light green bars) and the total number of minutes viewed (orange line) across the entire University for the 2011-12 academic year.

Figure 1: Aston Replay Data for the whole of Aston



There is one striking fact that jumps straight out from this figure; the number of views and the total number of minutes viewed peaks substantially during the two examination periods. A closer inspection suggests that the amount of views and the number of minutes viewed trends upwards prior to each examination period and then drops off significantly once the examination period ends. This information leads to a number of interesting questions which the remainder of this paper will address:

- Does watching Aston Replay improve a student's module performance?
- Does watching Aston Replay impact differently across modes of assessment?
- Does watching Aston Replay only during the "revision period" impact upon student performance?

Each of these questions will be analysed using multiple regression analysis on data for the module BS1102 Economic Environment of Business taught to 1<sup>st</sup> year undergraduates in teaching period 2 by Dr Chris Jones. The remainder of this paper is set out as follows: in **Section 2** we briefly discuss the sample size, module assessment and descriptive statistics of the student cohort. In **Section 3** we present the empirical methodology and report the results. Finally, in **Section 4** we compare our findings with the related previous literature and make some suggestions for professional practice.

## 2. Data

Economic Environment of Business is worth 10 credits and comprises 20 lecture hours and 5 tutorial hours. Assessment is via a two hour examination comprising of a 40 question multiple choice test and two essays (one on microeconomics and one on macroeconomics). The majority of the 424 students on this course are not from single honours business programmes. They comprise students from Marketing, Human Resource Management, Combined Honours Business, International Business & Modern Languages, Law with Management and Computing for Business.

Descriptive statistics for this module are presented in **Table 1**. Overall, 47% of students are male and 15% of students are from overseas. The average age at entry is just over 19 years. The average mark for BS1102 is 53% (70% for the multiple choice component and 51% for the essays) compared to an average year mark across all modules of 55%. The overall satisfaction score was 4/5 for this module, as determined by the Aston Business School student evaluation form. It might be the case that the use of Aston Replay in this module has had an impact on this satisfaction score. Indeed, many positive comments commended the use of Aston Replay.

**Table 1: Descriptive Statistics**

Variable	Observations	Mean	Std. Dev.	Min	Max
Gender (1 if male)	424	0.47	0.50	0	1
Overseas Student (1 if overseas)	424	0.15	0.36	0	1
Age on entry (in years)	424	19.19	2.57	17	42
BS1102 Mark (%)	424	53.33	20.47	0	95
Essay Mark (%)	346	51.16	15.88	0	93.2
Multiple Choice Mark (%)	348	70.30	14.94	15	100
1st Year Mark (%)	411	55.41	14.76	0	82.3
Watched Aston Replay (1if watched)	424	0.55	0.50	0	1

**Note:** It has not been possible to obtain some marks for all of the students and therefore in these cases the number of observations is less than 424.

Every live lecture was recorded using Aston Replay. In total there were 11 lectures, one of which was a revision session delivered at the end of the final lecture. Each lecture lasted between 1-2 hours. In total 55% of students watched part of at least one recording of the lectures between the recording of the first lecture and the examination. **Table 2** provides additional statistic for these students. On average, out of the 235 students who watched Aston Replay, students watched approximately five of the lectures. In terms of hours, the average student who watched Aston Replay watched for approximately 7.5 hours. Nevertheless, only 69 students watched Aston Replay at all prior to what we define as the revision period<sup>1</sup> with 166 students watching Aston Replay only after this cut-off date.

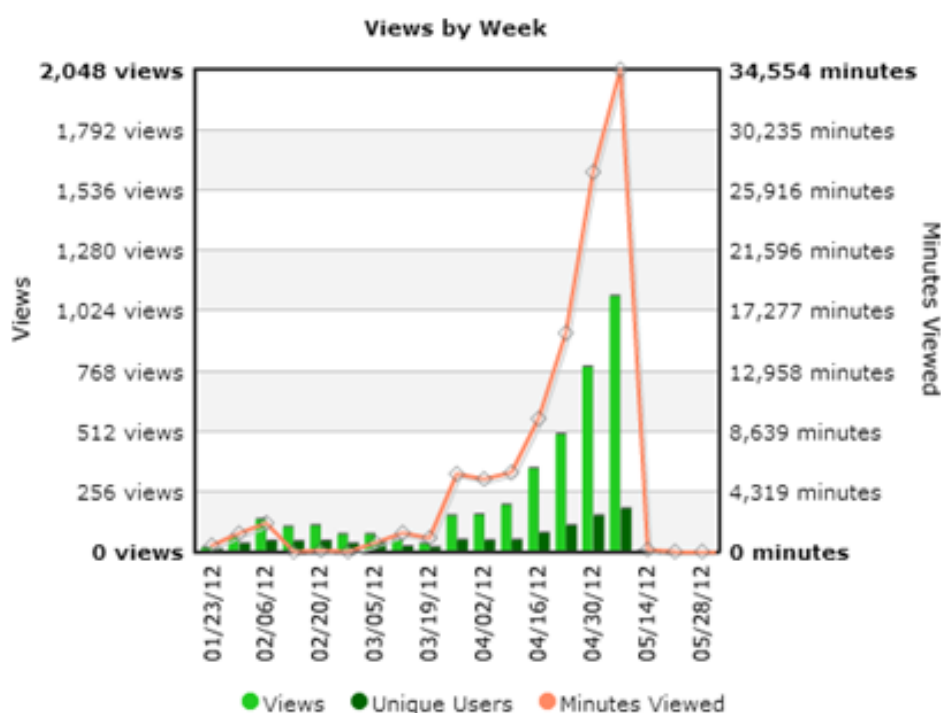
**Table 2: Descriptive Statistics for Students who Watched Aston Replay**

Variable	Observations	Mean	Std. Dev.	Min	Max
Number of lectures watched	235	5.28	3.45	1	11
Total amount of minutes watched	235	452.19	498.10	0.52	2668.27
Watched after the revision period only	235	0.71	0.45	0	1

**Figure 2** below shows Aston Replay data for module BS1102. As can be seen, the viewing data appears similar to **Figure 1** above. The use of Aston Replay peaks substantially leading up to the examination period (23/05/12).

<sup>1</sup> We define the revision period as beginning on the 23<sup>rd</sup> March 2012 (the last day of term prior to Easter).

Figure 2: Aston Replay Data for BS1102



### 3. Empirical Methodology and Results

We ran a number of Ordinary Least Squares (OLS) regressions in order to address the questions outlined above in the introduction. OLS allows the researcher to consider the impact of a unit change in an explanatory variable on the dependent variable of interest. In our model, the dependent variable we are interested in is student performance (measured by % module score). Most of the control variables included are called dummy variables, for instance the variable “Watched Aston Replay” equals 1 if a student has watched Aston Replay at any point in time over the duration of the course, it equals 0 otherwise. In this case, each coefficient estimate tells us the average impact (%) switching the variable from 0 to 1 has on a student’s module score holding all of the other control variables constant. When reading the results the most important thing to look at is the sign and the significance level as indicated by the stars next to the estimate. If there are three stars then the estimate is highly statistically significant. The additional control variables included are as follows: the 1<sup>st</sup> year average mark (%) across all 1<sup>st</sup> year modules in order to capture the students overall performance, whether the students has studied Economics prior to enrolling at Aston, the students age, the students gender, whether the student is from home or overseas, the students socio-economic status (measured via parental occupation), the students ethnicity, the students school background and the programme the student is enrolled on.

To ease the burden on the reader, we are not reporting estimates for a number of our control variables (instead we simply record below that they were included). In addition, we only report results for 3 model specifications. In practice we have run a number of robustness tests – some of which will be discussed<sup>2</sup>.

<sup>2</sup> These are all available on request.

**Table 3: Results**

Variables	(1) BS1102 Mark	(2) BS1102 Multiple Choice Test Mark	(3) BS1102 Essay Mark
1 <sup>st</sup> Year Mark	0.976*** (0.0396)	0.901*** (0.0856)	0.847*** (0.0684)
<b>Watched Aston Replay</b>	<b>3.722*** (1.119)</b>	<b>1.681 (1.224)</b>	<b>3.109*** (1.356)</b>
Economics	5.825*** (1.397)	6.184*** (1.291)	5.215*** (1.510)
Male	0.587 (1.013)	1.607 (1.136)	0.467 (1.375)
Overseas Student	-0.826 (2.034)	0.372 (1.411)	-3.168 (2.243)
Age (in years)	-0.493* (0.274)	0.0312 (0.302)	-0.598** (0.242)
Socio-economic Class Dummies	Yes	Yes	Yes
Ethnicity Dummies	Yes	Yes	Yes
School Dummies	Yes	Yes	Yes
Programme Dummies	Yes	Yes	Yes
Constant	6.968 (6.121)	13.24 (9.043)	10.62 (6.883)
Observations	382	340	338
R-squared	0.725	0.597	0.501

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

We will discuss our results (**Table 3**) by addressing each research question in turn:

### ***Does watching Aston Replay improve student performance?***

Model 1 above states that watching Aston Replay improves student performance on the module by 3.7% on average, holding all other control variables constant. In particular, this is controlling for the student's overall 1<sup>st</sup> year performance. The estimate is statistically significant. Indeed the 95% confidence interval (not reported) suggests that the estimate is between one and six percent. This is, therefore, quite an impressive result as it suggests that using Aston Replay may improve a student's module/degree performance by half a degree classification.

The coefficient estimate for the control variable that captures overall student performance (1<sup>st</sup> Year Mark) is positive and significant. This suggests that students who perform better across the year's additional modules also perform better in BS1102. In addition, the coefficient estimate for the variable Economics is highly significant. This suggests that studying Economics prior to enrolment at Aston improves a student's performance by 5.8%.

As robustness checks, we also ran two additional models (not reported here) which examined how the extent to which students used Aston Replay impacted on performance. First, we used the same specification as in (1) above, but now in addition including the number of minutes of Aston Replay watched across the period. Second, we included the total number of lectures watched on Aston Replay. The results suggest that neither of these variables has an impact on performance. One interpretation of this is that students were being selective in the material that they watched.

### ***Does watching Aston Replay impact differently across modes of assessment?***

Specifications (2) and (3) above run the model on the different components of assessment. Model (2) has the multiple choice test mark as the dependent variable, whilst model (3) has the essay mark as the dependent variable. The coefficient estimates are 1.681 and 3.109 respectively with only the latter being statistically significant. This suggests that watching Aston Replay only has an effect on the essay part of the exam compared to the multiple choice component. Very interestingly therefore, Aston Replay may only have an impact on assessment that captures deeper levels of understanding. This is a very interesting finding which needs further research, but if we use Klob's Learning Cycle (Klob, 1984) we can see that this finding confirms the fact that reflection on your learning is important and that Aston Replay is a tool to encourage reflection.

### ***Does watching Aston Replay improve performance if it is only watched during the revision period?***

To test this question we ran the same model as specification 1 with an additional control variable which equals one if a student watches Aston Replay only after the start of the revision period. The variable has a negative sign but is statistically insignificant. This contrasts to the variable "Watched Aston Replay" which remains positive and significant. This indicates that it doesn't matter when a student watches Aston Replay; it still impacts positively upon student performance.

### ***Self-Selection***

Overall, therefore, the above results suggest that Aston Replay has the potential to have a significant impact on a student's performance. Nevertheless, these results might be biased upwards. It might be the case that it is typically the more engaged and better performing students that are the ones who are using Aston Replay. Additional unreported results provide some evidence to suggest that this may be the case. If we estimate a model of the probability that a given student watches Aston Replay, this is significantly more likely for students with a high level of performance across all first-year modules. If this is the case it means that we may have a positive self-selection bias as these students may have performed better regardless of whether they made use of Aston Replay<sup>3</sup>. Consequently, our earlier results on the effect of watching Aston Replay should be interpreted with caution and are an upper bound on the size of this effect.

## **4. Related Literature and Implications for Professional Practice**

There is now a growing literature which tries to assess the impact technology has on student learning of economics (see Agarwal and Day, 1998, as an example of one of the first papers). Two recent papers which are closely related to our research questions are Chen and Lin (2012) and Savage (2009). Similar to our results, Chen and Lin (2012) found, in an intermediate microeconomics course in Taiwan, that watching online recordings increased student exam performance by around 4%<sup>4</sup>. Furthermore, here most lecture views also occurred during the revision period. Interestingly, their results suggest that viewings immediately after the lecture did not have a positive impact on student performance. Perhaps this is due to reflection also. Finally, their data also shows that it was the students with poorer attendance records that made the most use of lecture recordings. In contrast, Savage (2009) did not find that students for which recordings were made available performed significantly better than a control group in which no recordings were available. In addition, student attendance did not differ between the two groups.

Two additional papers highlight potential issues with increased reliance on technology for lecture viewing. Flores and Savage (2007) point out that the recording of lectures may reduce interaction between the lecturer and the student and that student engagement may also be affected. Their survey results show that students who substitute online recordings for attending the live lecture valued the availability of recorded lectures highly. Furthermore, watching the lectures improved performance.

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<sup>3</sup> See Greene (2003, p.788) for a formal demonstration that this results in an upward bias.

<sup>4</sup> Interestingly, Chen and Lin (2012) attempt to control for the possible self-selection bias described earlier by looking at the variation in a given student's lecture viewing and matching this with their performance on the relevant exam questions.

They also find, however, that a nontrivial subset of students do not use the technology in this way and, therefore, do not value its provision. This highlights that important trade-offs may be involved in increasing the use of technology in this way. Finally, Brown and Liedholm (2002) compare student performance when a course is taught live with the same course taught completely online. They find that student performance in the latter was inferior, especially on questions which aim to assess a deeper level of understanding. In addition, there was also some indication that the students taught online worked less hard on the course. This suggests therefore, that, whilst the availability of recorded lectures can be an extremely useful complement to live lectures, extreme caution should be exercised in any moves towards replacing these with recorded material.

## 5. Implications for Future Practice at Aston and Future Research

This research paper is the first of its kind for Aston students. Therefore, the implications of the results have to be interpreted with caution. At the beginning of each module, academics may wish to discuss student use of Aston Replay. For BS1102 the module leader explains to students how Aston Replay might be beneficial but emphasises the fact that Aston Replay is not a substitute for the reading list. Students are encouraged to attend lectures and only use Aston Replay to go back to parts of the lecture in which they have had the greatest difficulty. Anecdotal evidence suggests that students do this, yet more research is needed to determine whether this is actually the case. In addition, further research is needed to understand why a significant proportion of students do not use Aston Replay and also the impact that Aston Replay has on attendance. Finally, this research also needs to be extended to other modules across all of Aston's Schools to determine whether there is variation and if so explain why.

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Economics and Strategy Group  
Example used with Undergraduate Students  
on module BS1102 Economic Environment of Business



# **MSC MARKETING MANAGEMENT DISSERTATIONS: AN UPDATE AND REFLECTION ON THE SUPERVISOR ALLOCATION AND STUDENT SUPERVISION PROCESS**

**JOHN RUDD**

## **Update to:**

**Rudd, J.M. (2009) "Restructuring the process of dissertation supervision allocation", in *Aston Business School Good Practice Guide in Learning and Teaching*, Vol. 6, pp 2-9.**

<http://www1.aston.ac.uk/clipp/learning-innovation/ltr-good-practice-guides/>

## **Introduction**

It has been an interesting experience to re-read the 2009 paper, and to reflect on the changes made since then. The overall process (in terms of paperwork and deadlines) has changed little in this time. Some subtle changes and improvements have, however, occurred, and it is these (and the reasons for them) on which I will concentrate here.

Hence, the purpose of this paper is to present an overview of the changes made to the supervisor allocation and dissertation supervision process, specifically the context and drivers of these changes will be discussed.

## **Supervisor allocation and supervision process - update**

The general approach adopted by Course Directors and the Group to these issues is unchanged since 2009, and is as follows:

1. *Make an early start: Create the student / faculty partnership early in the academic year.*

Students and faculty are working together on developing ideas, and creating of an interesting and academically rigorous piece of work early in Term One. The very latest that a student will have agreed a dissertation project, and have an allocated supervisor, is week six of Term One. In this way, students are comforted by knowing they have qualified and experienced help in this area of their degree and, have started work on this important (and lengthy) project.

2. *Structured supervision: Clear deadlines to dissertation completion are set and agreed between supervisor and student early in Term One.*

It is important that in their initial (recorded) meetings, both student and supervisor set and agree clear and achievable goals. Of even more importance is that these are met, however, flexibility within the team is also often required.

By meeting regularly, and at agreed intervals, problems are easily identified and dealt with. Often, a lack of progress on the dissertation project is symptomatic of issues elsewhere, either academic and / or personal. As such the dissertation supervisor can help the Course Director in providing pastoral, as well as academic, support.

There were, however, two underlying principles expressed in the 2009 paper that were rethought. These were 1) “*Students require knowledgeable and structured supervision, based in theory*” and 2) “*It is helpful, but not essential, if students enjoy/like their dissertation topic.*”

1. “*Students require knowledgeable and structured supervision, based in theory*”

This remains largely true. There is much more of a focus, however, on the practical implications of research and engagement with practitioners. Many more of our students may now choose projects offered by organisations with which we have established links/dialogue. In this way, we can offer different forms of research help to our partner organisations, as well as creating more practically minded/focussed MSc Marketing graduates. It is our hope (and we have some anecdotal evidence to support this) that we enhance the employability of our graduates by creating stronger links with practitioners through MSc research projects. Additionally, there are examples where organisations who have initially wanted MSc-type research have, on completion, asked to conduct further work with members of faculty that may lead to publications in peer reviewed journals.

Since the 2009 paper we have also recruited three Teaching Fellows (for the first time) into the Marketing Group. This has been incredibly successful overall, but in relation to dissertation supervision their help, support and practical marketing knowledge, has been a source of motivation and inspiration to both students and faculty alike.

2. “*It is helpful, but not essential, if students enjoy/like their dissertation topic.*”

More flexibility and choice is now offered to MSc Marketing Management students. It is important that they “like” their dissertation topic, and their supervisor for that matter. History tells us that if students like their topic, they will engage with the process, and will work harder to achieve a better overall result (which everyone wants!). This choice has been facilitated, in part, by the employment of Teaching Fellows, who are able to supervise a much wider range of topics. Additionally, there has been a culture change in the Group that has meant faculty are much more open to alternative ideas on topics and flexible in their approach to topics they are willing to supervise. When the original paper was published it was not uncommon for students to be (in effect) given a topic and be told to get on with it. This would not happen now. Given the increasing importance of “word of mouth” (or social media based discussion forums), and the propensity of students to use them, it is important that in a very competitive marketplace we are mindful of the student experience, and adapt systems and processes accordingly

## Overview and reflections

The processes regarding the allocation of dissertation supervisors and the dissertation supervision process is now reviewed annually in the Marketing Group. In this review, we examine feedback from the perspective of the course director, programme administrators, Marketing Group faculty and students. In this way we try to ensure an effective, efficient and relevant process for all major stakeholders, with a focus on student satisfaction.

These processes have remained largely unchanged, since the original Good Practice in Teaching and Learning paper in 2009. The original restructure provided a strong and clear framework that continues to support students and faculty, to deliver interesting and relevant marketing research projects in the timescales allowed.

Since 2009 we have been successful in recruiting a number of excellent faculty, and this in turn has increased the scope of the projects offered to students; allowing more choice. Unfortunately, since 2009 student numbers on the MSc Marketing Management have reduced. A positive outcome of this however, has been that faculty have allocated more time to fewer students. As a result, the overall quality of dissertation projects produced has increased, and the number of student complaints relating to dissertation issues, are close to zero. Based on anecdotal evidence in this case, but nevertheless supported by marketing theory, the strategic implications regarding staff to student ratios and their relationship with student satisfaction are clear. It is of importance that in the push for greater incomes



and student numbers, business schools and universities consider the amount of faculty resource available against the level of "service" required or desired (Berry, Parasuraman, Zeithaml, 1994; Singh 2000; Salanova, Agut, Peiro 2005). Faculty costs may increase as a result, however this will be more than off-set in the medium to long-term, by rising student numbers driven by excellent output measures (such as NSS scores, employability etc). This is not to say that more resource is always desirable, but appropriate and competitor-relevant levels are important.

Practitioner engagement is now a central theme in the MSc Marketing programme, and in the dissertation process. We have been successful in connecting with a wide variety of industry partners to enhance the range of projects offered. This is something that we will concentrate on in future, as the incentives for this are great both for students and for faculty.

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Example used with Postgraduate Students on MSc Marketing Management

## **FURTHER DEVELOPMENTS IN THE USE OF ELECTRONIC PROCESSES WITHIN THE POSTGRADUATE PROGRAMME OF ASTON BUSINESS SCHOOL**

### **LINDSEY ALLSOPP AND JENNY HOLT**

#### **Update to:**

*Allsopp, L.A., Daly, R., Essex, A, Hawkrigde, L., Holt, J. (2009) "Paperless Examination Boards", in Aston Business School Good Practice Guide to Learning and Teaching, Vol. 6, pp 39-41.*

<http://www1.aston.ac.uk/clipp/learning-innovation/ltr-good-practice-guides/>

### **Introduction**

In 2008, the Postgraduate Programme reported on an innovation in the adoption of Paperless Examination Boards. This process involved the projection of student and module data on to a white board with the ability for lecturers to review the information on a laptop in front of them. This paper is a reflection on this process together with an update on additional processes that have been introduced into the Programme in the interim period.

### **Paperless Examination Boards**

Since the implementation of paperless examination boards, the Postgraduate Programme has re-introduced a small amount of paper to the Exam Boards. This is in the form of summaries containing information relating only to those students who require an exam board decision such as referred in module, award of a lower qualification or award of degree.

The re-introduction of this summary information was due to the fact that the Exam Boards had become very automated in their delivery, and it was felt that the projection of information on to the white board alone did not encourage members of the Board to participate in deliberations with sufficient rigour, especially in the case of border-line students whose cases required more detailed attention.

This refinement to the processes has proved to be an effective compromise between paper and electronic processes and gives a balance between contribution of board members and due diligence and the efficient operation of the Board.

### **Further Developments in the use of electronic processes**

Since the application of electronic processes to the operation of the Board of Examiners meetings, the Programme has implemented further developments in the following areas:

- Electronic student files
- Electronic Approval Processes
- Exceptional Circumstances Boards
- Representation Boards
- Blackboard<sup>TM1</sup> VLE for use by External Examiners and Exam Board members

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<sup>1</sup> Aston University's Virtual Learning Environment

**Electronic Student Files**

From October 2010, the Postgraduate Programme dispensed with paper-based student files, in favour of electronic files which are stored on SITS via the mechanism of document manager.

All relevant information, including ethical approval forms, applications for extensions, records of student support meetings, requests for exceptional circumstances and copies of emails are uploaded to SITS<sup>2</sup> and stored against the student record in STU<sup>3</sup>. This information is easily accessible using a viewing pane and a hard copy can be printed if necessary.

Information that is confidential to the student can be recorded in SPD<sup>4</sup> and password protected so that access is limited to key personnel only.

Document Manger is also used to store copies of past exam papers and Exam Board transcripts in password protected files.

**Electronic Approval Processes**

Students in the Postgraduate Programme are now required to submit all requests for extensions of time, authorised absence, exceptional circumstances etc. electronically. All forms are provided on the Blackboard™ Programme Handbook module in word format so that students can complete and submit them to programme drop boxes in electronic format. These are then uploaded to the programme shared drive where the relevant person responsible for authorising the request uses an electronic digital signature to confirm the approval process. Completed authorised forms can then be uploaded to the electronic student file for future reference if required.

**Exceptional Circumstances Boards (ECB)**

The use of Document Manager and SPD to store confidential information has enabled the Programme to develop Business Objects reports for the purposes of Exceptional Circumstances Boards.

A document type query 'exceptional circumstances' has been created to enable the Programme to store information under password protection. Using this screen we store the details of the student's case including the assessments affected, a brief summary of the circumstances affecting performance and documentary evidence provided to support the case is uploaded using document manger.

A business objects summary report detailing the information recorded on SITS is provided to members of the ECB. If the Board requires to review the documentary evidence, this is projected on screen.

**Representation Boards**

A similar report has been developed for the purpose of Representation Boards. Again the details of the student's case is recorded on SITS and a summary report is produced. Documentary evidence to support the case is again displayed on screen and details of the students overall profile of marks can also be displayed on screen if necessary.

The development of these processes for both the Exceptional Circumstances and Representation Boards has significantly reduced the amount of time needed to produce the information required for Board members. Previously information had to be manually typed into lengthy word documents and photocopied together with supporting documents. As a result the amount of paper which is used and then disposed of has also been reduced appreciably.

**Blackboard™ VLE for use by External Examiners and Exam Board members****(i) Exam Boards**

The Postgraduate Examinations Office has developed a Blackboard™ VLE module to enable External Examiners and Internal Exam Board members to view the information for the Module Board and the Programme Boards, in advance of the Exam Board meetings.

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<sup>2</sup> Student Information System

<sup>3</sup> STU is a data screen within SITS

<sup>4</sup> SPD is a data screen within SITS

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**Further Developments in Use of Electronic Processes within ABS Postgraduate Programme.**

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Module lecturers are able to view the graphs giving the details of distribution of marks and Course Directors can access the information relating to individual student marks before the Exam Board takes place. As only a summary of the student marks are now presented to the Exam Board meeting, this allows consideration of individual students in advance so that these can be highlighted at the Board. It also allows the business of the Exam Board to proceed smoothly as there is no need to consider those students who are proceeding without issues on an individual basis.

**(ii) Approval of Examination Papers**

The Blackboard VLE™ is also used to enable External Examiners to access and approve examination papers and coursework assignments.

Draft exam papers and coursework assignments are uploaded to the VLE and adaptive release is used to give specific External Examiners access to only those papers they need to approve. The External Examiners can then use the Blackboard™ Journal facility on the VLE to feedback comments and approve the exam papers and coursework questions. External Examiners have found this system easy and convenient to use and are appreciative of the increased use of electronic processes to assist them in their role. To quote one External Examiner: 'Your VLE is fantastic – everything is so clear!' Other comments include: 'It seems to be a very good and easy system to use' and 'This new electronic system will certainly help me to carry out necessary duties'.

**(iii) External Examiner Moderation**

The new VLE has also been used on occasion to upload scanned copies of examination scripts and coursework assignments for External Examiners to moderate prior to the Board of Examiners meeting. Although this adds additional workload to the Examinations Office, it is an efficient and secure way for the External Examiners to undertake their duties at times when they are absent from their home institutions and are not available to receive the hard copies of the sampled scripts and coursework that would normally be posted to them for moderation. One External Examiner who is currently based in America on sabbatical uses this facility to access the scripts and coursework prior to each Exam Board meeting.

**Benefits and Feedback**

The new electronic processes that have been introduced into the programme have been well received by the members of staff and External Examiners involved in ECB, Exam Board and Representation Board meetings.

The Programme itself has benefited in terms of time saved in preparing and distribution of information for these Board meetings and there have been increased savings in terms of the amount of paper needed for the Boards to proceed, even with the reintroduction of small amounts of paper based information to the Exam Board meeting.

The introduction of paperless student files means that staff can now access information relating to students from the PCs in their own offices, rather than having to do this by viewing the paper files which used to be located in the Student Support Office. There has also been significant savings in terms of the usage of paper involved in the maintenance of paper based files, and it has enabled the Programme to remedy the issues that were arising in terms of the ability to store paper based files in overcrowded archive storage rooms.

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## **CULTURAL COMPETENCE FOR FIRST YEAR UNDERGRADUATES AND A LOT MORE**

### **HELEN HIGSON AND REGINA ECKERT**

#### **Update to:**

**Herzfeldt, R (2007) "Cultural Competence of First Year Undergraduates", in Aston Business School Good Practice Guide to Teaching and Learning, Vol. 4, pp 23-29.**

<http://www1.aston.ac.uk/clipp/learning-innovation/ltr-good-practice-guides/>

### **Introduction**

This article reflects on a seminal piece of work which was produced in the 2006/7 Good Practice Guide by Regina Herzfeldt (now Eckert). At the time Eckert was a PhD student in Aston Business School, working on a thesis which examined the effect of intercultural training for placement students. In fact she had already written an article on this work for the 2004/5 Good Practice Guide (pp.2-5). Since graduating from Aston, Eckert has been working for the Centre for Creative Leadership in Brussels.

The article in the 2006/7 Good Practice Guide (pp.23-29) on cultural competence for first year undergraduates was the result of research sponsored through one of HELM's<sup>1</sup> small research grants. It was an important article in many ways: because it looked forward to the needs of the multi-cultural business school we have become, but also because its findings have laid the foundation for major work with both students and staff across the University. In addition, it was a beautifully presented research paper. Many of the articles in these Good Practice Guides have been short reflections for practitioners. Eckert's work was a carefully developed research paper which, if she had had more time while writing up her PhD, would have found its way in to an international journal. It included a well constructed methodology, and as a result the findings are generalisable and have been the basis for work which has been published since. The article also is a precursor to the ones being produced by our colleagues in the third module of their Postgraduate Certificate in Professional Practice. So in many ways than one, this article was ahead of its time.

### **Cultural Adjustment**

In this paper Eckert looked back on the literature on adjustment to new cultures (Takeuchi et al, 2005 and Masgoret, 2006). She believed that the relationship "between prior cultural experience and cultural competence in general, ...has rarely been addressed" and so she set out to ask, with specific reference to Aston Business School undergraduates: "Is there a positive relationship between cultural experience and cultural competence in students starting at ABS?" (p.24).

In addition, Eckert looked at the work of (Van der Zee and Van Oudenhoever, 2000) which says that "besides cultural experience, a second individual characteristic potentially important for cultural competence is personality ... this research suggests that multicultural personality, specifically the facets of open-mindedness and social initiative, might be positively related to cultural competence" (p.24). This led to Eckert's second important research hypothesis: "Is there a positive relationship between personality characteristics and cultural competence in students starting at Aston" (p.24).

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<sup>1</sup> Centre for Higher Education Learning and Management

The data was collected from first year students studying on the Specialist Business Skills (overseas students) and Foundations of Management (Home/EU students) modules, and “students completed a test of cultural competence and measures of their prior cultural contact” (p.24). Nearly 300 students agreed that their data could be used for this research (163 were Home, 63 from other countries). The results showed that “on average, cultural competence rises linearly with each additional cultural experience ... An interesting finding emerged for nationality. It was related in cultural competence in such a way that students with a British nationality showed lower cultural competence than students with international background. ... Though this finding was startling, it could be explained by the different amount of cultural experience British and international students had.” (p.26)

## **Theoretical Framework and Practice**

The second finding which has had a great deal of influence on practice in Aston Business School is “positive relationships between personality characteristics and all facets of cultural contact. Students with much cultural contact have higher social initiative and open-mindedness. ... The experience of cultural contact (number of cultures, duration, and intensity of contact with them) changes and forms students’ personality such that they become more open-minded and show more social initiative” (pp.26-7). This is the really important finding for future work: learning a second language or studying or working or studying abroad increases your ability to perform well in intercultural groups, either at University or in the work place. In terms of my own research and practice Eckert’s work has been central. When I gave my inaugural lecture in 2008 I chose to showcase the work I had developed as a result of Eckert’s work (<http://www.youtube.com/watch?v=e47xmZ8eoFs>). This activity has been developed further since and forms the basis of a contribution to the Postgraduate Certificate in Professional Practice – this means that all new lecturers have the benefit of Eckert’s work and it can influence their own practice.

My work builds on Eckert’s in both research and practice. My own teaching practice encompassing an increasingly diverse student population got me thinking about how I could maximise the learning experience and achievement of both home and overseas students. The theoretical framework I built up started with Eckert’s paper. I had become concerned about the lack of engagement from our home students in group work which involved multicultural groups. I found myself increasingly having to sort out disputes in which academically high performing home students were side-lining international students allocated to their groups. Many of these students had had little experience of culture from overseas – many did not speak a second language, most had little experience of time spent outside the UK. These students reacted to the different learning styles and language. If Eckert was right, these students would be helped by increasing their cultural capital and we had to provide them with opportunities to do this.

At the same time I was concerned about the performance of our overseas students. Our statistics showed that international students perform very well in their first year, but their performance is less good compared with their home counterparts in the second year and also in their degree classification attainment. I wanted to explore the reasons for this and to find a way to rectify it. My reading brought me to the work of Ippolito at the University of Brunel (2007). Ippolito asserts that ‘deficit’ models are often used to describe international students’ relationship to their study in the UK. The discourse is often that international students need to be helped to use a different and more UK-centric way of learning because their ways of learning are not appropriate. Ippolito sought to challenge this approach and to engender the notion that an international student’s way of learning is different, but just as valid. In my mission to increase the performance of overseas students I saw this research as very valuable. Helping students to understand the learning approaches that they would meet in the UK, while valuing their own backgrounds and using them to increase the cultural capital of their home-based classmates seemed a good way forward. I wanted to incorporate opportunities to develop activities based on Eckert and Ippolito’s work into the classroom.

At the same I was aware that the diversity of the student population was more complex than the division between home and overseas discussed above would suggest. Many home students came



from backgrounds which intermixed the two elements and many overseas students had more awareness of UK-centric learning approaches than was at first apparent, e.g. because they had been to boarding school in the UK. This brought me to the work of Welikalia and Watkins (2008) from the Institute of Education. These authors saw that, in a diverse, multicultural society categories are blurred. We all bring a story which is a complex combination of our birth, upbringing, education and live experience. We each had a different story. Welikalia and Watkins used story telling techniques to explore this diversity and complexity. I liked this approach because it did not stereotype students and acknowledged an increasingly inter-culturally, diverse world and student population.

## **Implications for Practice**

Having established this theoretical background, I set about adapting it to the student learning experience at Aston. I found a group of actors and artists who could make the theoretical framework come alive in the classroom. The MAP Consortium is a group of practicing artists and actors who use their techniques to facilitate learning within companies. Their work is of high quality and they are thoughtful practitioners. Together we developed interventions for all first year students at Aston to help them increase their awareness of difference, ambiguity and to increase the ability to work in multicultural teams. For the last five years the MAP Consortium members have worked with first year students to develop their skills. The outcomes have been stunning. Rather than rehearse again the full details of what we found I would refer you to two papers that we have written (Higson, 2008; Higson and Liu, 2012). The findings of these are clear and make proposals for future practice: arts based practice allows students to learning in a deeper way and creates cultural change more quickly. The workshops created a unique opportunity for students to engage with each other in an arena where language ability was not important. Results showed that students improved on almost every cultural intelligence scale and that those home students who did not speak a second language or spend time abroad learning or working improved the most. Students immediately had something that they could add back into their group work.

While the results were fantastic, they were restricted to this module and we wanted ways in which we could embed what we had learned into the learning community at Aston. We managed to persuade the Centre for Learning Innovation and Professional Practice (CLIPP) to invite the MAP Consortium to contribute to the Postgraduate Certificate in Professional Practice which all new academics had to take part in. This meant that new staff, across all areas of the University had to take part in deep learning experiences which got them to think about their teaching practice to diverse student groups. The idea was that they would all take this back into the classroom and the techniques and ways of looking at things would permeate towards all learners. The results (to be found in Higson, 2009) showed that participants learnt important intercultural skills which they could and are using in the classroom.

Eckert herself realised that these findings had important implications for practice in terms of undertaking group work in the increasingly international/multicultural Aston Business School and in ensuring that we increased the cultural competence of our students via language learning and undertaking an international placement. This has influenced both individual academic practice, but also the whole strategy of Aston University today. In the current Aston 2020 Strategy language learning and international placements form two key KPIs for strategy. In 2012/13 the University offered free language classes to all first year students and 20% of them have taken it up. Also in 2013/14, 29% of those on placement are undertaking this work abroad, an increase of 4% from the previous year and a far larger increase in the Schools of Life and Health Sciences and Engineering and Applied Science. I wonder whether Eckert knew, when she was completing her PhD at Aston just how influential she would be.

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Example used with first year undergraduate students  
BS1101: Specialist Business Skills for International Students  
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# THE IMPACT OF PRIOR STUDY IN ECONOMICS AND MATHS ON FIRST YEAR PERFORMANCE

CHRIS JONES

## 1. Introduction

This study examines the performance of 1<sup>st</sup> year undergraduate students in an introductory economics module called Economic Environment of Business (BS1102). One of the key difficulties with teaching this module is that whilst some students are seeing economics for the first time, a number of the students have already studied economics before. Indeed, a significant amount of the content covered is included in A-Level Economics. The key research question in this paper is whether prior study in Economics and Mathematics before enrolment at Aston has any impact upon student module performance. This is important because it has implication for pedagogy in terms of differentiation. Perhaps unsurprisingly, there is almost no literature concerning differentiation in higher education. In contrast there is a huge literature at the primary and secondary level. For this reason it seems appropriate to use a definition of differentiation as defined by two of the key scholars in this field. Tomlinson and Allan (2000) define differentiation as:

*“a teacher reacting responsively to a learner's needs. A teacher who is differentiating understands a student's needs to express humour, or work with a group, or have additional teaching on a particular skill, or delve more deeply into a particular topic, or have guided help with a reading passage—and the teacher responds actively and positively to that need. Differentiation is simply attending to the learning needs of a particular student or small group of students rather than the more typical pattern of teaching the class as though all individuals in it were basically alike.” (Tomlinson & Allan, 2000)*

The results of this study have important implications in terms of streaming students based on prior ability in order to allow practitioners to differentiate their pedagogic approach. In addition, the results may also be applicable to other modules across all schools at Aston, in particular in those modules that use pre-university mathematics.

There are a number of past studies that look at the impact of prior study in economics and mathematics on student degree performance (see below for details). The evidence appears to be quite mixed. One of the key contributions of this paper is to analyse performance on a particular module as opposed to overall degree classification. In addition, this is the first paper to analyse performance in an Economics module for Business School students - students who have not chosen to study pure Economics or even do an Economics based degree.

The remainder of this paper is set out as follows: in Section 2 we briefly discuss the sample size, module assessment and descriptive statistics of the student cohort. In Section 3 we present the empirical methodology and report the results. Finally, in Section 4 we compare our findings with the related previous literature and make some suggestions for professional practice.

## 2. Data

Economic Environment of Business (BS1102) is worth ten credits and comprises 20 lecture hours and five tutorial hours. The majority of the students on this course are not from single honours business programmes. They comprise students from Marketing, Human Resource Management, Combined Honours Business, International Business & Modern Languages, Law with Management and Computing for Business. All of the data is taken from the Students Information System (SITS). Descriptive statistics for this module in 2009 and 2012 are presented in **Table 1** and **Table 2** below.

## The Impact of Prior Study in Economics and Maths on First Year Performance

In 2009 the examination for BS1102 lasted two hours and consisted of 100 multiple choice questions. As can be seen in **Table 1** there were 406 students who studied BS1102. The average mark was 55%. The sample is split evenly across gender and the average age was just over 20 years. Approximately 33% of the students were registered as overseas. In total 17% of students had some form of Economics training prior to enrolment at Aston. This training could have been from a range of qualifications with the most prominent being A-Level/AS-Level Economics or as a module of the International Baccalaureate. In addition, 24% of students had some training in Maths directly prior to enrolment at Aston<sup>1</sup>.

**Table 1: Descriptive Statistics 2009**

Variable	Observations	Mean	Min	Max
Mark	406	55.02	40	83
Maths	406	0.24	0	1
Economics	406	0.17	0	1
Age	406	20.10	18	36
Home	406	0.67	0	1
Male	406	0.54	0	1

In 2012 the examination for BS1102 consisted of a multiple choice test worth 40% and an essay component worth 60% (split between Microeconomics and Macroeconomics). As can be seen in **Table 2** there were 413 students who studied BS1102. The average mark was 53.3%. Approximately 15% of the students were from overseas. The number of students who had a background in Economics prior to enrolment at Aston is similar to 2009 at 15%. In addition, the number of students who have training in mathematics directly prior to enrolling at Aston was 22%.

**Table 2: Descriptive Statistics 2012**

Variable	Observations	Mean	Min	Max
Mark	413	53.34	0	95
Maths	413	0.22	0	1
Economics	413	0.15	0	1
Age	413	19.19	17	42
Home	413	0.85	0	1
Gender	413	0.47	0	1

### 3. Empirical Methodology and Results

This paper tests two hypotheses concerning the impact of economics and maths on modular performance:

**H1:** Students who have studied Economics at A-Level (or an A-Level Equivalent) prior to joining Aston University perform better in an Introductory Economics module than students who have not studied Economics before.

**H2:** Students who have studied Mathematics at A-Level (or an A-Level Equivalent) prior to joining Aston University perform better in an Introductory Economics module than students who have not studied Mathematics before.

<sup>1</sup> In 2012, 28 out of 413 students have a background in both Maths and Economics, suggesting that there is a small amount of overlap.

In order to test **H1** and **H2** we run two Ordinary Least Squares regressions (OLS). OLS allows the researcher to consider the impact of a unit change in an explanatory variable on the dependent variable of interest. In our model, the dependent variable we are interested in is student performance (measured by % module score). Most of the control variables included are called dummy variables, for instance the variable “Economics” equals 1 if a student has studied economics prior to enrolment at Aston, and it equals 0 otherwise. In this case, each coefficient estimate tells us the average impact (%) switching the variable from 0 to 1 has on a student’s module score holding all of the other control variables constant. For the variable Economics, the coefficient estimate is a direct test of **H1**. When reading the results the most important thing to look at is the sign and the significance level as indicated by the stars next to the estimate. If there are three stars then the estimate is highly statistically significant. The additional control variables included are as follows: (1) Maths is a dummy which equals 1 if the student has studied Mathematics prior to enrolment at Aston or 0 otherwise – the coefficient estimate here is a direct test of **H2**; (2) the students age; (3) the students gender; (4) whether the student is from home or overseas; (5) the students socio-economic status (measured via parental occupation); (6) the students ethnicity; (7) the students school background; and (8) the programme the student is enrolled on.

To ease the burden on the reader, we do not report estimates for a number of our control variables (instead we simply record below that they were included). In addition, we only report results for 2 model specifications. In practice a number of robustness tests were run to check the consistency of the results<sup>2</sup>. **Table 3** reports the results for the two years under investigation

The results in **Table 3** suggest that there is unqualified support for hypothesis H1. Studying Economics prior to enrolment at Aston improved module performance by 8.3 percentage points in 2009 and by 7.9 percentage points in 2012 holding all of the other control variables constant. This is a significant result and suggests that prior study in economics may improve a student’s module performance by nearly a whole degree classification (But, we might expect the effect of prior knowledge to wear off in later years)<sup>3</sup>. Indeed it is interesting that the result is similar across both years given the fact that the assessment changed in 2012 to an examination with an essay component which tests a deeper level of learning.

There is no support for hypothesis H2. Studying Maths prior to enrolment at Aston has no impact on module performance for BS1102<sup>4</sup>. It would be interesting to run this model for one of the mathematics modules. This result is somewhat surprising given the fact that much of the module’s content includes the inclusion of a number of equations and graphical interpretations that prior training in mathematics would in all likelihood prepare students for.

The coefficient estimates for the other variables tend to all be statistically insignificant. This suggests that age, gender, whether a student is from overseas, ethnicity, parental class, school background and the programme a student is on has no impact upon module performance. In many ways this is ideal. It suggests that Aston’s recruitment policy does not seem to be impacting upon student performance in a discriminatory way.

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<sup>2</sup> These are all available on request.

<sup>3</sup> It would be desirable to use a student’s past result in their pre-university economics studies. Unfortunately it is difficult to control for this due to missing data and the fact that students do different types of qualification which may have been assessed differently.

<sup>4</sup> Running the models without the Economics dummy and including only the mathematics dummy still results in a statistically insignificant coefficient estimate.

## The Impact of Prior Study in Economics and Maths on First Year Performance

**Table 3: Results**

Variable/Year	2009	2012
Economics	<b>8.309***</b> (1.238)	<b>7.907***</b> (2.658)
Maths	<b>1.335</b> (1.092)	<b>1.371</b> (2.317)
Age	-0.281 (0.293)	-1.646*** (0.575)
Home	-0.86 (1.081)	-1.833 (3.583)
Male	-0.045 (0.934)	-1.811 (1.834)
School Dummies	Yes	Yes
Ethnicity Dummies	Yes	Yes
Programme Dummies	Yes	Yes
Socio-economic Class Dummies	Yes	Yes
Constant	59.68*** (6.083)	83.78*** (11.10)
Observations	406	413
R-squared	0.118	0.186

Notes: Standard errors are provided below the coefficient estimates; \*\*\* indicates significant at the 1 per cent level, \*\* indicates significance at the 5 per cent level and \* indicates significance at the 10 per cent level.

## 4. Related Literature and Implications for Professional Practice

There is a growing body of literature which tries to assess the impact of a number of student characteristics on degree performance in Economics. Borg and Stranahan (2002) find that race and gender matters when it is interacted with a measure of temperament. Soper and Walstad (1988) and Heath (1989) find that males tend to outperform females in Economics. Durden and Ellis (1995) look at attendance and find a positive and non-linear effect – as non-attendance becomes excessive, performance drops significantly. Kherfi (2008) looks at nationality and finds that students from countries within the Gulf Cooperation Council perform less well in comparison to their peers; he attributes this to differing labour market incentives once degrees have been completed. Horn, Jansen and Yu (2001) look at the impact of 1<sup>st</sup> year performance as a predictor of second year performance. They find that the first year is a good predictor, particularly dependent on performance in 1<sup>st</sup> year economics modules.

In addition to these factors, there are a number of studies that look at the impact of the prior study of maths and economics on degree performance. There seems to be a lot of evidence to suggest that maths has a significant impact on economics degree performance (see Ballard and Johnson (2004) and Cohn *et al.* (1998)). This is consistent with other studies that look at the impact of maths on degree performance across all degrees (see Smith and Naylor (2001)). The evidence which looks at the prior study of Economics on performance on degree performance however, is quite mixed. Anderson, Benjamin & Fuss (1994) find that prior study in Economics has a positive impact on performance if a student was successful in their economics prior to the start of their degree. Naylor & Smith (2004) find no evidence that past study in Economics impacts upon degree performance. Whereas Wan & Cheo (2012) find that all though pre-university grades matter, studying economics has less of an impact.

## The Impact of Prior Study in Economics and Maths on First Year Performance

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There are almost no studies that look at the impact of prior pre-university study in Economics on 1<sup>st</sup> year modular performance. This is surprising considering the likely effects of past study are likely to be felt more prominently in the year directly after pre-university education. Indeed most of the above studies deploy regression analysis with the dependent variable measured as overall degree classification. This is a significant weakness, even more so considering Horn, Jansen & Yu (2001) finding that the 1<sup>st</sup> year is a very important determinant of second year performance. One might expect that second year performance is also likely to be a key predictor of final year performance. Because of this, performance in the 1<sup>st</sup> year might be crucial. More research is needed in this area.

The results of this analysis show that prior study in Economics has a very large and statistically significant impact on performance by a magnitude of around 7-9 percentage points. This suggests that prior study can move a student up a degree classification. The result is important because, in contrast to other studies, it does the analysis for Business School students that have not specifically chosen to study economics – economics is only a component of their degree. The implication of these results for professional practice comes on two fronts and may be applicable to other modules in the Business School and in other Schools of the University. Firstly, if timetabling is possible, it might be desirable to stream students based on pre-university study of Economics for lectures and tutorials. And secondly, once streaming has been implemented, it may be desirable for the practitioner to differentiate pedagogy and assessment to suit the needs of students with different backgrounds.

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Example used with Undergraduate Students  
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## REVISITING LECTURE CAPTURE: SIX YEARS ON

### ODETTE HUTCHINSON

#### Update to:

*Hutchinson, O (2008) "Video Nasties: Emerging Educational technologies", in Aston Business School Good Practice Guide in Learning and Teaching, Vol. 5, pp 8-12.*

<http://www1.aston.ac.uk/clipp/learning-innovation/ltr-good-practice-guides/>

### Introduction

In recent years the virtual learning environment (VLE) has become a core component in the delivery of courses at Aston University. This development has been instrumental in augmenting a range of innovative educational technologies. This contribution to the Good Practice Guide revisits my experiences in 2007, introducing video and MP3 lectures to a final year, Business Ethics module. The final part of this contribution considers alternative lecture capture tools currently available at Aston University.

### A Primer

I first encountered video lecturing whilst undertaking a PGCE in 2004. I was impressed with the potential application of the technology, but as a reasonably inexperienced lecturer I could think of few things more ill-advised than recording my inexperience for all to enjoy. Over the next few years the notion of recording lectures remained to my mind, something that only the supremely confident academic would ever consider. That was until 2007, when my final year Business Ethics module was scheduled to take place between 6pm and 8pm.

Having delivered this module twice previously, I had been able to identify a number of key themes, which together with the new unfortunate timing of the lecture, required both reflection and action.

1. A proportion of the substantive material for the module is dry and relatively technical. Students in previous presentations of the module appeared overly anxious about these technical subjects, particularly so during the lead up to the examination.
2. Office hours for this final year module were increasingly dedicated to international students, struggling with technical terminology.
3. Student absence from key sessions on coursework preparation and examination preparation annually reduced me to endless, repetitious, conversations and emails attempting to re-deliver core information.
4. A sense that the module and the student experience would be significantly enhanced if the module were less didactic and more participatory in nature. A point that likely has resonance across the disciplines, as Institutional squeeze, increasing lecture group sizes and limited resources challenge us to juggle the delivery of substantive material, with more effective pedagogical methods.



## The Technology

Anticipating that the unfortunate timetabling of the module would have a negative impact on lecture attendance and mindful of the points outlined above, I set about recording a number of core lectures with the support of Steve Ellis in CLIPP<sup>1</sup> and Gillian Bishop in Information Systems Aston (ISA). This initial pilot of lecture capture used PowerPoint Producer™, a package that enabled PowerPoint presentations to run alongside digital video of the presenter. The software was free and we used a standard digital camera to record the lecture images.

The mode of delivery for Business Ethics differed from previous approaches adopted by colleagues in LHS, who had created MP3 recordings of lectures delivered during the course. The video lectures for Business Ethics were not available in addition to the 'real time' lecture. They were used as an alternative to 'real time' delivery. My objective primary objective was to weave the video lectures into the module in order to liberate the lecture slot. This would create a safety net in the event that attendance was poor. It would also enable me to schedule more frequent interactive sessions for the group.

## Positive Aspects

Anecdotally, I felt that I received fewer questions from students seeking clarification on what was presented in the video lectures. Certainly fewer than I would encounter had the lectures been delivered in 'real time'. Students were able to revisit the lectures as frequently as required and this may have enabled them to clarify their own understanding.

The blended approach adopted in this module enhanced student autonomy and encouraged the cohort to take greater ownership for their learning experience. Students were given a degree of independence to learn at their own speed. Their autonomy was not, however, unlimited, as there were a number of benchmarks within the course, which required students to have acquired knowledge for contact sessions. This was a deliberate attempt to mitigate the likelihood of students leaving it all to the last minute.

International students and students with more complex learning needs seemed to benefit from the ability to pause the lecture and repeat particular sections. In addition, attendance for the contact sessions, despite the unfortunate timing of the lecture, was very close to 100% for each contact session.

The lectures were uploaded in several formats: MP3 format to allow students to download the audio and learn/revise whilst on the move; pure video format with no accompanying PowerPoint presentation; and finally PowerPoint Producer format.

Students expressed a preference for the MP3 format due largely to its inherent portability, but most students felt that the lecture in the first instance should be viewed with the PP presentation.

A short comments section on the module feedback form highlighted the following positive responses:

- "You never know when you need to clarify something and could do with hearing the lecture again; the lectures were really helpful for revising from."
- "I don't always get things the first time, so this was particularly helpful for the complex stuff like law."
- "I had an interview one week, but because that week was delivered by video lecture I didn't miss anything and didn't have to rely on my friends' illegible notes!"
- "I was able to go at my own speed" "The video lectures made up for the timing of the lecture slot".

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<sup>1</sup> Centre for Learning Information and Professional Practice

## Negative Aspects

As this mode of delivery did not involve recording a live lecture, rather the creation of a lecture for delivery by video, there was a good deal of additional and perhaps unexpected preparation needed to achieve this. In the first place, I felt that some of the material needed to be modified and I was conscious that I was frequently omitting more controversial material. I was mindful of the fact that my lecturing style was perhaps as a direct result, less engaging.

A very small group of students acknowledged that the option to view the lectures at their own leisure had resulted in their leaving this task to the end of the course. As a result their participation in group activities was limited.

This mode of delivery does not enable two way participation and students were not able to ask questions during video lectures however, the use of online forums allowed me to address common issues in contact sessions and to tailor those contact sessions accordingly.

This blended approach was founded on the premise that the students 'possessed the necessary IT skills to access and utilize the material'. A handful of comments from the students at the end of the module suggested that students attending this module would have benefited from more detailed information on how to make effective use of the technology.

The 2008 presentation of this module included a computer lab session demonstrating how to access recorded lectures, how to download lectures onto MP3 players, and how to burn the files onto CDs. This enabled students in later presentations of the module, to utilize the material more effectively. In more recent years the demand for an introductory session on using these materials has diminished significantly.

Negative responses included:

- "The download time was awful...it took ages"
- "On one of the lectures I couldn't navigate through the slides properly."
- "I am awful with IT"

The technology utilized in this pilot in 2007 was by current standards limited, as was our ability to stream large video files through Blackboard™. The consequences of these limitations were that students often experienced significant delays downloading the lectures, (particularly in the case of the video format). These issues have since been addressed and students are able to review recorded lectures almost instantaneously through Blackboard™.

## Bonus Material

During the first two years of this module's presentation, a significant proportion of contact time with students was 'high-jacked' by individuals wishing to address and re-address foundational knowledge, for example how to research coursework; how to reference coursework, writing from a committed standpoint and so forth. In anticipation of this in future presentations of the module, I pre-recorded several short MP3 lectures, which addressed these issues, entitled:

- Research and preparation for ethics coursework
- Essay writing for ethics
- Exam revision and preparation
- How to debate.



The core lectures were recorded and edited by Aston Media and as a consequence I experienced no difficulties producing the video lectures. I did, however, record the foundational knowledge lectures myself in MP3 format. Some of these lectures did require editing, which I found to be a time consuming and laborious task. Ultimately, I relented and allowed imperfections in delivery to remain.

## **Feedback**

A short anonymous survey was distributed at the end of the module to gather feedback. When asked whether they felt that the video lectures had complemented the module: 29% strongly agreed; 57% agreed and only 14% were neutral. No students disagreed or strongly disagreed with this statement.

When asked whether they felt that the video lectures and MP3 lectures were useful for revision purposes: 50% of the cohort surveyed agreed strongly and 47% agreed. Only 3% of the students surveyed, disagreed with this statement.

Finally, at the end of the module: 45% of the cohort had watched each lecture at least once; 36% of those surveyed had watched the lectures twice and 19% of the students had watched the lectures three or more times. It is not unreasonable to suggest that the average number of downloads by the cohort further increased during the revision period. Similarly, the lengthy download times experienced by students using this early technology, may have acted as a disincentive for repeat viewings.

## **2007 and Beyond:**

As time has passed since my original contribution to the Good Practice Guide, the array of technologies available to record lectures has increased significantly, as too has our students desire for the availability of some form of lecture capture on each module.

The University now supports two primary methods for lecture capture: Adobe Presenter™ and Aston Replay (Panopto) (see earlier paper).

### **Adobe Presenter™**

Adobe Presenter is best described as personal capture software. It allows staff to record video and/or audio narration for individual PowerPoint presentations. Once published, these presentations can be uploaded onto the VLE where students can access the content. Adobe Presenter outputs to Flash™ format, allowing PC and Mac users to access the recorded lectures through the VLE (Virtual Learning Environment).

The software itself is easy to use, as it imports directly into PowerPoint. Initially, much like my original pilot, this medium requires an investment of time. Adobe Presenter recordings generally take place 'outside' of the lecture environment. This for many staff will mean some duplication of work. Once the presentation has been recorded, it is a straightforward process to edit individual slides in order to update the content. Thus this tool is particularly well suited to disciplines susceptible to frequent change. The ability to easily edit individual slides, affords Adobe Presenter lectures an excellent lifespan.

Users are able to navigate around the presentation easily, by jumping to individual slides, searching for particular terms, reading attachments and notes embedded within the presentation itself.

CLIPP offer one-to-one training for staff interested in using this technology. There are also a number of informative online tutorials at: <http://tlc.aston.ac.uk/tool/adobe-presenter>. A copy of the user guide for Adobe Presenter™ can be found at: [http://www.adobe.com/support/documentation/en/presenter/quick\\_start/](http://www.adobe.com/support/documentation/en/presenter/quick_start/) Staff who do not currently have a copy of Adobe Presenter installed on their university computer should contact ISA.

### **Aston Replay:**

Aston Replay (once known as Panopto) is the second supported lecture capture technology at Aston University. As with Adobe Presenter, staff can arrange training directly with CLIPP. A range of supporting material and online tutorials can be found at the following location: <http://tlc.aston.ac.uk/aston-replay/guides-and-tutorials>

Aston Replay is well suited to capturing live teaching sessions. It is however, important to ensure that students are aware that a session is being recorded. A copy of the slide to display to students at the start of a recording session can be found at: <http://tlc.aston.ac.uk/aston-replay/inform-your-students-lecture-being-recorded>

Registered students can search and replay sections of a lecture to enhance understanding and review recorded sessions for revision purposes. Aston Replay also allows students to make time-stamped notes while a recording is in progress, or while viewing a presentation on-demand.

The key benefits of this technology are its ability to capture the lecture theatre environment and subject matter, without distilling the content. As the medium captures live lectures there is a limited time investment required by staff. The technology is also straightforward to use and the presentations can be managed and edited by the author/creator. Adobe Presenter™ is perhaps more suited to large group teaching sessions, where students can retain a degree of anonymity. It is possible that the recording of live lectures/sessions may impact on group dynamics and staff may wish to consider this when determining the most appropriate form of lecture capture.

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# THE VIRTUAL PEDAGOGY INITIATIVE REVISITED

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### Update to:

Peter Reddy, Jon Wood, Michael Butler and Carl Senior *Herzfeldt, R (2009) "The Virtual Pedagogy Initiative Revisited", in Aston Business School Good Practice Guide to Teaching and Learning, Vol. 6, pp 18-30.*

<http://www1.aston.ac.uk/clipp/learning-innovation/ltr-good-practice-guides/>

### Introduction

The VPI paper (*The virtual pedagogy initiative* Senior, Butler, Wood and Reddy) was published in 2009 and revisiting it is a salutary lesson in how much Higher Education has changed in four years. The new funding strategy for student loans and fees, year-on-year changes to core and margin admissions procedures, the adverse economic situation and visa restrictions have radically changed the parameters in which we operate. The full effects are yet to be felt and may not be those anticipated. The results of the National Student Survey (NSS) and the league tables it informs have become very important, perhaps eclipsing even the impact of the research excellence framework.

### Technology Development

The VPI responded to calls for expansion and widened participation in HE and advocated e-learning strategies to facilitate flexible learning around the needs and expectations of students. It suggested that contemporary undergraduates could be considered 'digital natives' and may therefore be qualitatively different. Four technologies were proposed (podcasts, vodcasts, mobile telephony and campus wide remote broadcasts). Leaving aside the debate over the extent to which current students really are different and 'digitally native', what was proposed in the VPI is in good measure now established and routinely expected by students. The recording of lectures at Aston and elsewhere is widespread and increasing, both as audio (previously podcast) and video (vodcast) files and these are available on the Aston Blackboard™ VLE. Two systems are in operation, one lecture capture system records teaching events so that those present can revise and re-listen, and absentees can catch up. The other creates dedicated A/V resources for distance learning students and overseas partners.

There has not been much demand for campus-wide remote broadcasts and the potential of mobile telephones and related devices has yet to be realised. Senior (2009) explored the educational potential of text messages but found that students experienced them as an intrusion into their personal lives and a breach of privacy. What we thought of then, however, as a telephone has become an increasingly sophisticated palm-top computer embracing the functions of camera, video camera and player, photo-album, music, video and personal data store, calculator, portable television, portable music player, voice recorder, video phone, diary, bar-code reader, and payment card. Just as the take-up of text messaging was a surprise, the coming together of mobile phones and lap-top computers and the growth of e-readers and two sizes of tablet device may open up a range of uses that are not presently apparent.

The promise of the VPI was twofold, technology that would transform learning, teaching and assessment and, something perhaps distinctive to Aston, a grassroots led, bottom-up approach to the adoption and application of the technology. The technology moves on, but have our expectations and attitudes to what it can do and where it fits changed?

## Expectations

A first change follows from the monumental importance of NSS. Four years ago many academics thought little and talked less about NSS, league tables, assessment and feedback and the student experience. This was left to specialists and grassroots enthusiasts. Now we all own NSS, I used to tell sceptical programme directors how important NSS was, now they tell me. It has become the performance indicator all watch. Every academic teaching a module, each year tutor, undergraduate programme director, subject lead, head of a school or department feels that their performance is judged and is important. Before NSS, or while scores rose, grassroots initiatives could blossom at will. Once NSS became noticed, or scores stagnated, or (heaven forbid) declined, it was much too important to be left without direction. Grassroots initiatives let a hundred flowers bloom but once the potential of a technology has been established someone has to decide how many parallel software systems a modest university can sustain, establish the benefits of internal cooperation and a common face to the market place and ensure that the student experience is a good and consistent one.

The growing potential of technology has also opened up a window for all not only to provide flexibility to their full-time students (notionally full-time, almost all work part-time) but also to enter the distance learning market. This has raised many issues. Doing distance learning well is demanding and time consuming, as the Open University experience shows. This is a specialist area, recording teaching, and making it available because the technology allows it, is only a part of what is required. Skimped distance learning will inevitably lead to very low completion rates and poor student satisfaction. A comprehensive package is necessary. Interestingly the Open University has some of the best NSS scores in the country.

The risk of a technology-led approach, and not only in distance learning, is that it may fail to recognise two key features of higher education; that it is much more than the transmission of information and that relationships are critical to learning. Information and ideas require working on, through discussion, debate, analysis and application, in order to really become part of our mental furniture. This really benefits from relationship honed through tutorials, seminars, project work and informal discussion. Interestingly the best Distance Learning programmes provide a great deal of this, the Open University for example through open tutorials, telephone calls to tutors, and summer schools as well as email and VLE based discussion forums. The lecture can be replaced, but it is not the heart and soul of education. One logical consequence of this line of reasoning is the development of the MOOC, the massive on-line open course of the kind being made available by some very high profile North American universities. This is early days to pin the MOOC phenomenon down. Are they about allowing the masses to access elite education? A widening-participation political statement? Strengthening the brand so that Yale or MIT remain as well known and bankable as IBM and Apple? If many sign up and pay only for assessments will they do to less celebrated universities what Amazon are doing to the British high street? (It is goodbye to HMV as I write this).

Whatever the ultimate business model, the existence of MOOCs should remind us that global university brands are powerful. If they want to attract our students we need to be clear that the university education we offer embraces the whole experience. A 'course' is much more than access to on-line materials, a reading list and an exam at the end. By all means embrace the technology but this is a good time to celebrate and reinforce the central importance of relationships, personal contact, debate and discussion in producing deep learning.

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## THE USE OF ACTIVITIES IN LECTURES

STUART COOPER AND MATT DAVIES

### Update to:

Cooper, S., Davies, M. (2007) *"The Use of Activities in Lectures"*, in *Aston Business School Good Practice Guide to Teaching and Learning*, Vol. 4, pp 30-32.

<http://www1.aston.ac.uk/clipp/learning-innovation/ltr-good-practice-guides/>

*"I hear and I forget. I see and I remember. I do and I understand".*  
(Confucius, a long time ago!).

### What has changed?

It has been interesting reflecting on our work. Whilst we continue to use activities within lectures, in recent years we have extended and adapted this approach in two particular ways.

First, in longer, usually three-hour postgraduate, lectures we have developed slightly longer group activities. As discussed in our original article group activities provide an excellent opportunity for students to learn from each other. With these longer activities, which can take 20-30 minutes to complete, students are required to work together in order to complete the activity. It provides more time for students to discuss and learn from each other, but the role of the lecturer is perhaps even more important. With these longer activities there is a greater likelihood for students to disagree or become confused. The lecturer must, therefore, remain available and the resulting student/lecturer interactions are very important.

Second, as we have developed more distance learning materials we have attempted to find ways to incorporate activities. In some ways activities can work well with distance learning students, but the remote nature of the students can also prove challenging. We have integrated short activities such as multiple choice tests and quizzes into e-learning packages that we have developed to support distance learning versions of our modules. One advantage of the e-learning format is that we can design activities which provide a student with tailored feedback based on their particular response to a question posed. Longer activities can also be used, but these usually require the students to go off-line in order to complete the activity. With longer and more research-based activities it is less easy to provide tailored feedback. For these types of activities we see discussion boards and webinars / virtual classroom sessions both to promote student engagement and also to provide us with immediate feedback on the level of students' understanding of and engagement with key concepts. We are still learning how to better utilise the many different ways of interacting with and providing feedback on activities to distant learning students, but activities once again appear to be an important way of engaging students and enhancing their learning.

### Research Informed Practice

The approaches discussed here appear to be at the very centre of good learning practice, developed and run by reflective practitioners. Taking as a starter Kolb's learning cycle (1976), we can see the importance of giving students the opportunity to reflect on what they learn, to assimilate it, put into practice what they have learnt, and to have their learning confirmed. This is what deep learning is all about. It engages the students and makes them take responsibility for their own learning. It is a demonstration of what Biggs and Tang (2011) call 'constructive alignment', as the lecturers have

purposefully developed the teaching and assessment strategy for this module by reflecting on where their students are coming from and where the lecturers want the students to move to in their learning by the end of the module. In this case study you see the lecturer's thought processes as they mediate between these two points. This demonstrates another of Bigg's points. There are three kinds of lecturers, he says, those who blame the students, those who blame themselves, but the best lecturers are those who work on the learning partnership. These lecturers take time to find out the students' starting point, they have a clear understanding of where they want them to get. They know the only way to get there is to learning experiences which are led by the students, mentored by the staff.

This is not an easy way of teaching. It involves a great deal of planning and research. Passive learning experiences are much easier to deliver. They rely on content rather than the learning process. The lecturer does less work, but does not check whether the student is benefitting. The student does less work and so does not learn so much. It would be easy to conclude that a student paying more for their education wants to do less, but that is not true. Anecdotal evidence at Aston this year indicates that first year students paying higher fees and in the library more, they are going to see their personal and module tutors more, because they want value for money. They want to learn, and they particularly want to learn the things that make them more employable. This is not content: they can get that in a book, or off the Internet. The real value they seek is from the personalised mentoring through activities like those described above. As Schreiner et al (2009) "Students who feel both challenged and supported by persons who matter to them and believe they are capable of performing discover an environment that fosters the development of their intrinsic goals." (p.573)

## Conclusion and the Future

Finally, a reflection on what has happened since the original article has been written. Ten years ago the majority of our teaching was on campus, face to face. Now blended and distance learning is very much more prevalent, even for on campus students. The principles of best practice in active learning are the same but the constructive alignment has to be different. Controversially for some, the preparation by the lecturer is probably even greater, but the rewards are also enormous. Activities like these can literally change a student's life, in a way that a passive power point presentation cannot.

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Examples used with various students



## **FURTHER REFLECTIONS ON REFLECTIVE LEARNING FOR CORPORATE CLIENTS**

**TERRY HOGETTS**

### **Update to:**

*Hogetts, T., Martin, R. (2009) "Using Reflective Learning to Stimulate Comprehension and Application in Executive Education", in Aston Business School Good Practice Guide in Learning and Teaching, Vol. 6, pp 11-12.*

<http://www1.aston.ac.uk/clipp/learning-innovation/ltr-good-practice-guides/>

### **Introduction**

In 2009 Professor Robin Martin and I discussed the use of reflective learning in the delivery of programmes for corporate clients. We found evidence of significant value in the use of a form of Action Learning, engaging learning sets within a client group to actively apply their learning in their own work context, and to report back on their experiences and reflections.

The approach worked well for a group of engineering specialists in the utilities sector, and we concluded that the approach would be relevant across a range of client organisations and environments.

The specifics of a programme design for a CED (Centre for Executive Development) client are dependent entirely upon the client's needs. As a result, it is difficult to recommend the widespread adoption of a specific approach to learning strategy: the learning strategy for each programme will be dictated by the requirements of the client organisation. Hence, while we remain enthusiastic regarding the use of structured and timetabled Action Learning interventions within a programme, we have yet to have the opportunity to apply a similar model to that discussed in 2009.

A formalised action learning component, however, is but one means of supporting the application and embedding of learning with groups, and there are a range of approaches which fall within the broad headings of Action Learning and Action Research and which can usefully be applied in the CED environment. In particular, designing programmes in such a way as to encourage Reflective Practice (and perhaps especially Brookfield's (1995) concept of "Four Lenses", to incorporate theoretical, philosophical and research literature) presents the opportunity to provide participants with a more relevant context to their learning; and it offers sponsoring organisations the opportunity to identify impact and value generated for the business from the programme.

Two recent client programmes stand out as demonstrating the value of designing-in reflection: one in the global automotive sector, and the other in the health insurance sector. In both cases, the participant groups were truly international, representing the UK, Western and Eastern Europe and Africa.

### **Client 1: Embedding learning and impact through participant-selected project work.**

This client is a major tier one supplier to the automotive sector globally, and CED were engaged to deliver a programme to high potential middle and senior managers from plants across Europe. Based

on discussions with the client, it was decided to offer the Aston Certificate and Diploma to provide a clear development pathway to participants.

In this programme, participants would firstly complete a 15-day certificate programme built around five three-day modules, and would then submit a work-based project in order to achieve the certificate award. After successfully completing the certificate, participants would be eligible to continue on to the diploma, comprising four modules from our MBA programme.

The brief for the work-based project was deliberately left vague. There was no list of projects to select sponsored by senior management, and no specific academic requirement in terms of the amount of material from the programme to be referenced or utilised. Rather, participants were instructed to identify a project *of interest to them* and to enlist the agreement of their line manager, and they were given some guidance on the writing of their project report. The rest was up to them. This “light touch” approach to project identification requires a degree of commitment from the client organisation: in addition to the support of the participant’s line manager, it is important that there is executive oversight to create an expectation on the part of participants that their work will be seriously considered. Since each module included a visit from an executive sponsor, and since the programme had the strong support of the European CEO and HR Vice President, we had little difficulty in impressing upon participants the importance of their project work.

The Certificate programme includes modules on Strategy, Marketing, Operations, Accounting and People Management. Since the majority of participants came into the programme with an engineering background, we anticipated that the primary focus of the projects would be on operations. In the event, thirteen out of twenty seven projects had a distinct operations focus: Others looked at strategy, financial reporting, HR, client relationships, portfolio management issues and other areas. We were reassured that all elements of the programme were represented in the project reports, as this demonstrated that a “general management” programme could be seen to be beneficial in its entirety by a group of (largely) technical specialists.

In assessing the project outputs, we noted the following:

- Some low scoring project submissions were nonetheless of significant value to the business. For the first cohort in particular, several projects achieved disappointing grades, in spite of being good enough to pass. To an extent, this is an expected limitation of the certificate project approach. We are using the projects, in part, to prepare participants for the academically more rigorous diploma to follow, and we, therefore, apply academic standards to our marking – albeit to a lesser extent. We found, however, that by providing a more comprehensive brief to participants on the second cohort, the overall grade increased significantly. This suggests that for a typical certificate audience, where participants have perhaps not undertaken academic study for some time, we should take care to ensure that they fully understand the academic standards and expectations that the project represents.
- We also found that, perhaps as a result of a more comprehensive briefing, projects from the second cohort provided a more robust business case, and were more often supported by at least a rudimentary financial assessment of their recommendations. This is of particular importance for client programmes, since we can provide a more convincing argument for investment in executive development if we can demonstrate a return on that investment. There has been much written regarding the ROI of executive programmes, but a generally accepted model for demonstrating ROI remains elusive. If specific projects, inspired by participation on a specific programme, can be shown to generate specific savings or revenue, then we would argue the case has been unequivocally made.
- Projects generally scored more highly where a limited number of tools and theories were applied. This is to be expected, since we place an emphasis on the critical application of the materials presented.



Two cohorts have completed their projects at the time of writing, and among the outputs have been some extremely impressive pieces of work. Completed projects have covered a diverse range of issues, including:

- Exploring the possibility of co-opetition in order to enter a new market segment whilst maintaining target margins
- Assessing the impact of the increasing globalisation of OEMs in the automotive sector, and the impact for sales and engineering operations to support new, global client organisational forms
- Analysis of the issues surrounding transfer of business operations across European sites, identifying the potential for seven figure cost savings
- A review of the German premium car segment, with emphasis on business planning and strategy across differing product families
- A detailed financial justification for the purchase of process simulation software to support new product launches
- The development of a corporate ethics guideline
- A review of the product mix and portfolio strategy for a struggling plant, with recommendations for improvement
- A comparison of the request for quotation processes in Europe and the USA, with recommendations for adoption of best practices across both regions
- Development of an operational strategy for a specific plant, offering the possibility of the approach being used as a blueprint for other plants
- A detailed analysis of Kaizen events across the business, identifying the critical success factors to be considered to ensure such events are successful in future
- Recommendations for an employer branding strategy and associated HR KPIs

Overall, we believe that the application of individual projects offers a highly effective means of encouraging the adoption of new tools and theories, and provides a mechanism for the demonstration of real impact for the business. In an increasingly competitive Executive Development market, and in the face of continuing economic uncertainty and pressure on discretionary spending, the promise of delivering – and demonstrating - real business impact cannot be underestimated.

## **Client 2: Embedding learning through engagement in the design of modules as the programme progressed and application to leadership team priorities.**

This client is a division of a household name, focused on the provision of health insurance services to multinational clients and expatriates. They had identified a “high potential” group, and had selected a supplier for the first cohort from this group to deliver a development programme over several months. As this programme continued, the client became concerned at the lack of clear development or “growth” on the part of participants, and as a result they were directed to us via one of our academic colleagues to discuss possible alternative approaches.

After discussions, we proposed an alternative model of development compared to their original supplier, and we were engaged to run a three-module programme for their second cohort. Our design made “co-creation” a key selling point, and the programme design overall included some features which we had not implemented in such depth previously:

- Provision of learning support via a customised portal, which was subsequently modified to utilise the client’s own internal social networking solution, based on a Jive platform.
- The development of a “U” shape programme, beginning and ending with high level strategic issues, and focusing more on individual implementation in the middle.

- Engaging participants directly in the design process by making the design of the final module dependent on the outputs from the first.

This was the first client engagement where CED had relied explicitly on the client's own technology infrastructure to deliver part of the programme. We were pleased to find that using the client's social networking solution proved to be entirely painless. Indeed, we have concluded that we should recommend using the client's platform in future proposals, since this removes many of the issues surrounding access, compatibility or security which we would encounter were we to host client projects and data on our systems.

The client set up a closed discussion group, accessible only to programme participants, course tutors and their own Learning and Development team. This facility was used from the outset as the primary channel for distribution of joining instructions and course materials, and for the encouragement of networked discussions and asynchronous group communication. For a geographically dispersed group, the platform proved an ideal solution to ensure ideas were tested and shared between participants, and the richness of discussion seen on the network served to enhance opportunities via conference calls and in the classroom to develop concepts and ideas further. In addition, Tutors were able to contribute to online discussion, and add relevant materials for further learning.

As a part of the programme design, the group were given "big issues" by their leadership team, focused on strategy development and execution. As the programme progressed, the focus on these issues became more intense, with the final module largely dedicated to working through the issues in a workshop environment. The issues being studied resulted in two presentations by the group during the final module being recorded and posted on the closed discussion group site for reference going forward. These presentations will be further developed with the intention of recommendations being presented to the leadership team following the close of the formal programme. Engagement of participants throughout the process indicates the programme design was effective at encouraging integration of learning into business practice. The programme engendered very high levels of positive feedback as participants could palpably see the value of what they had learned and were able to use it effectively on business challenges which are both immediate and pressing. Anecdotal feedback from the client organisation suggests that this programme demonstrated a step-change in activity and individual development compared to its predecessor.

The involvement of the leadership team throughout the programme, including detailed 1-1 design discussions at the outset and one-to-one participant contracting discussions prior to programme commencement, ensured the participants felt appropriately supported and "sponsored" throughout the programme, and their interest in the outputs from working on the issues provided an environment where the participants were able to feel a level of positive stress which served to focus their performance as the programme progressed.

At the time of writing, the delivery phase of the programme has just concluded, and participant feedback is among the best any programme has received. We plan to submit the programme as a case study for the EFMD Excellence in Practice Awards later in the year.

## **Conclusions**

As we work with an increasing variety of clients, it becomes ever more apparent that there is no "one best way" to develop managers. What is emerging as a theme is the importance of designing-in a process for reflection around the programme content, and a mechanism for implementation and measurement. In such a way, programmes cease to be perceived to be a "reward" for managers who attend, and instead participants become aware of their own responsibility to maximise personal and organisational benefit.

We are seeing clear evidence that facilitating deep reflection around and application of programme content speaks powerfully to the concepts of autonomy and mastery as described by writers such as Pink (2011). The fact that such high quality and impactful work can be done without extrinsic reward,

by a range of participants from a range of backgrounds, suggests we should increase our focus on the pragmatic application of and reflection upon the tools, models and theories covered on our programmes.

The Business School already enjoys a strong reputation for practical excellence: witness our graduate employability percentages, for example. What is clear from our work in CED is that the practical application of peer-tested insights has the potential to truly differentiate our programmes, and to provide a more compelling participant experience.

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## APPENDIX 1: HIGHER EDUCATION JOURNALS

### Education Journal Rankings

Journal Title	Impact Factor	Aston Ranking
Review of Educational Research	3.361	4*
Academy of Management Learning and Education	2.889	4*
Journal of Learning Sciences	2.433	4*
Health Education Research	2.31	4*
Computers and Education	2.19	4*
Sociology of Education	1.594	3/4*
Journal of Higher Education	1.25	3*
Educational Evaluation and Policy Analysis	1.133	3*
British Journal of Educational Technology	1.041	3*
British Journal of Educational Studies	0.977	3*
Studies in Higher Education	0.938	3*
Journal of Educational Policy	0.933	3*
Research in Higher Education	0.871	3*
British Educational Research Journal	0.791	3*
Journal of Educational Research	0.667	3*
Higher Education	0.6	3*
Harvard Educational Review	0.619	2/3*
Economics of Educational Review	0.804	2*
Educational Research	0.75	2*
Comparative Education	0.741	2*
Review of Higher Education	0.613	2*
British Journal of Sociology of Education	0.573	2*
Journal of Economic Education	0.237	2*
Educational Studies	0.516	1*
Education and Urban Society	0.5	1*
Educational Administration Quarterly	0.477	1*
Educational Review	0.473	1*
Educational Policy	0.4	1*
Adult Education Quarterly	0.387	1*
Innovations in Education and Teaching	0.25	1*



Good Practice Guide in  
Learning and Teaching  
Volume 10

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**ISBN: 978 185449 442 9**

