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The Design of E-Learning Resources for Part-time Distance Education Students

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Abstract

This research assessed the current e-learning provision for Ibec postgraduate students at DIT. The current e-learning resources are delivered using Webcourses (Blackboard), which is the Institute's Learning Management System (LMS).[1] The first stage of the research involved an audit of the existing e-learning resources on Webcourses, discussions with colleagues and a review of the e-learning literature. This research indicated that there were **five key elements** required in the programme's e-learning design, namely: user experience, assessment, module content, interactivity of content and the updating of module content. A number of amendments were made in order to provide standardisation and to enhance the user experience. During the programme committee review meetings with student representatives details of the e-learning design project work were shared to keep students informed of the developments.

The second part of the research involved a student survey to ascertain students" views on the five key elements and to measure student satisfaction and feedback. The research validated the five key elements which should be used for effective e-learning design. Five recommendations are made to the institute: (1) provide further details to support the five key elements, (2) include support material to assist programme and teaching staff in developing and implementing these elements in day-to-day activities, (3) continue to improve e-learning design and (5) regularly collect feedback specifically on the e-learning/LMS provision for the Ibec Global Graduates programme.

Keywords: e-learning; distance education; e-learning design; learning management system (LMS); virtual learning environment (VLE); distance education students; blended learning; virtual learning

Introduction

The Ibec Global Graduates (IGG) programme was developed in 2015 as a rebranding and redesign of the Export Orientation Programme (EOP), which had run successfully since 1983. The programme involves both a structured work placement and a formal educational programme delivered by DIT. Students are grouped into a Food and Drink cohort (as the programme has a long history in the food and drink industry) or a cross-sectoral cohort (with a large representation from multinational companies and tourist bodies). The majority of placements involve an overseas work placement, with students operating in over 35 countries globally. The qualification attained is a Postgraduate Diploma in Global Business.

Currently (April 2017) there are 118 students registered on the programme, with 64 registered for the general programme and 54 registered for the Food and Drink programme. Cohorts of students begin up to four times a year, normally in January, June, August and October. The programme is offered using a model of Flexible and Distributed Learning (FDL).

In their guidelines document on Flexible and Distributed Learning the Quality and Qualifications Ireland (QQI) define FDL as:

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[1] Webcourses is the Virtual Learning Environment used within DIT, providing students with a blended learning experience. It runs in the Blackboard 9.1 environment. See http://www.dit.ie/lttc/webcourseslogin/student/

A programme or module that offers a wholly at a distance, on-line, or blended learning experience, rather than requiring the learner only to attend classes or events at particular times and locations. Typically, it may not involve face-to-face contact between learners and tutors but instead uses technology such as the internet, intranets, broadcast media, CD-ROM and video, or traditional methods of correspondence – learning "at a distance".(QQI, 2015)

The IGG Students attend DIT in person 1–2 times during their placement, attending classes for 2–3 weeks – usually at the commencement of their placements. During these sessions the distance/distributed learning part of the programme is explained.

QQI also recommends that "Learners are supported to make informed choices about participating in a FDL programme; and to develop the necessary independent study skills to successfully progress towards becoming an autonomous learner". Adding that "The benefits of flexibility offered by FDL for learners is balanced by its demands for autonomy, commitment and self-regulation. It is important that learners understand how FDL may differ from previous learning experience; that they are appropriately prepared for it; and that their progress and engagement is monitored, encouraged and supported".

IGG students have the distance element of their course delivered using DIT's Learning Management System (LMS), which is also known as a Virtual Learning Environment (VLE). This system is called Webcourses. Enrolled students are given access to the system from course registration and encouraged to spend time getting to know the system's interface and navigation. From a programme management and individual lecturer perspective the content provided via Webcourses must work with the LMS's structure, functionality and limitations.

Outline of Project

Part One – Audit of Webcourses content

To understand the IGG student view and experience of the LMS, a programme level audit was carried out in February 2017 to assess the content available at that time. It was noted that a standard navigation did not exist across the different cohorts. Please see Appendix 3.1 for the full audit summary table.

Output 1 – Standardise programme navigation items

It was recommended to standardise the navigation items where possible; see findings below with an image of how the navigation looks in-situ on Webcourses.
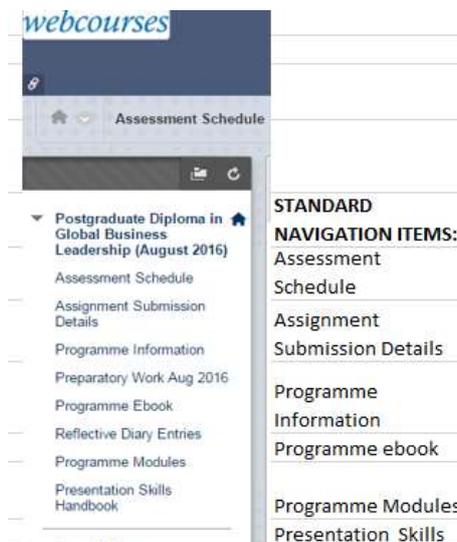

Figure 3.1: Standard navigation items required

During the following months navigation items were standardised over the cohorts in progress. This means that a uniform view is presented across the various interfaces for each programme on Webcourses and enables teaching staff to replicate the navigation, utilising it for new cohorts. There is also a student user-experience benefit, providing a unified view to the student.

Output 2 – Make assessment schedule the default "home page" for programmes

It was decided that all programmes would have the assessment schedule and key dates calendar as the landing page, i.e. the first page that students see upon opening their programme section on Webcourses. This ensures key dates and assessment deadlines are clearly visible.
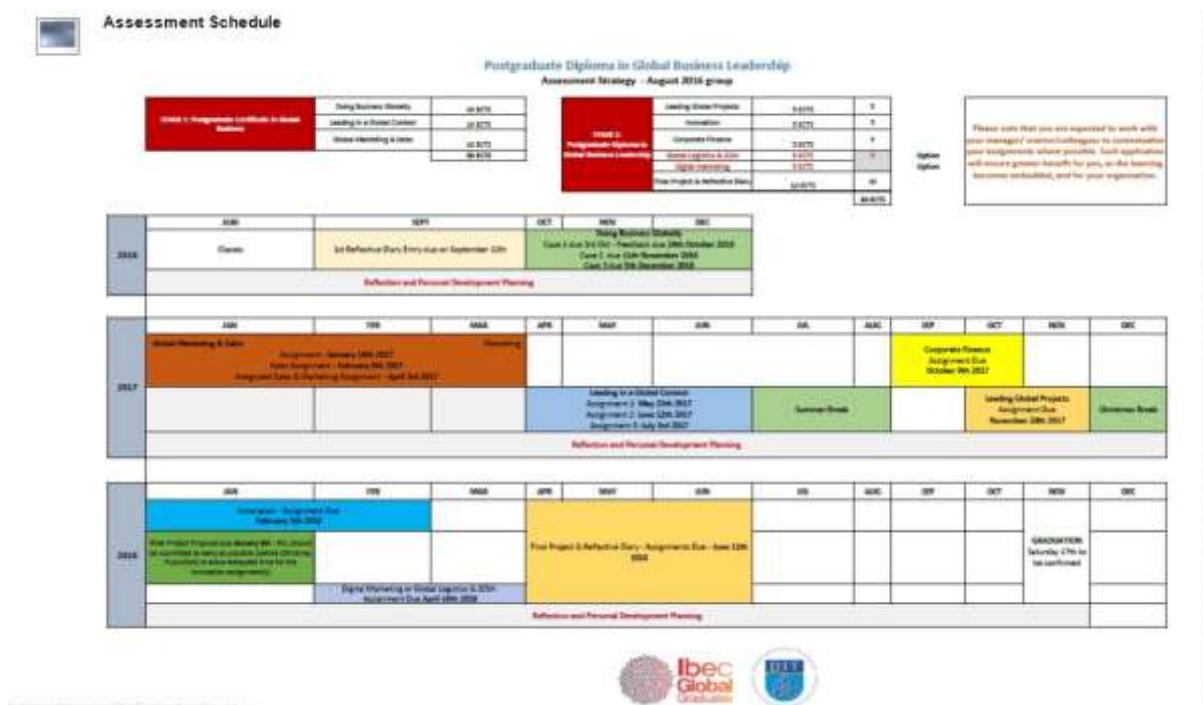

Figure 3.2: Assessment schedule for programmes

Output 3 – A list of five essential elements were compiled

During the literature review in relation to best practice in e-learning design Steen's 2008 paper on "Effective e-learning design" gave clear guidance; "There is no one-size-fits-all approach to the design of e-learning. Each course is unique. However, there is a general process whereby the designer balances the elements involved. If the designer does everything correctly, there is a greatly improved chance that the result will be effective e-learning".

The author decided to identify the key elements from a programme level that could be influenced and improved. Further advice was provided by Brown & Voltz (2005), who recommended three clear areas to focus on: the training material itself, the experience and interactivity of that material, and the feedback channels available to learners.

The five essential elements compiled for the IGG e-learning design, include three items (numbers 1, 2 and 4) that are related to module content, quality and user experience on the LMS. Communication with DIT staff is via direct email and also via messages on Webcourses, this relates to item number 3 being kept up to date. The final essential element for the IGG course was Assessment Methods as all assessments are posted on Webcourses.

The final list of the five key elements is the following:
1. Module Content – the detail and quality of content on Webcourses

2. Interactivity of Content – variety including videos, e-books, web links etc.
3. Updating of Module Content – timeliness and being kept up to date
4. User Experience – format and structure of content on Webcourses
5. Assessment Methods – the detail and quality of content on Webcourses

To validate these five key elements a student survey was conducted.

Part Two – Student Survey

In April 2017 a student survey was conducted with the following objectives:
- To measure student satisfaction with the current Webcourses provision
- To ask students to rate and rank the proposed five key elements
- To obtain general feedback on the current Webcourses provision

Ultimately the research findings would feed into the guidelines on a student-centric design for the programme on Webcourses. The research sampled 39 students and 17 responses were received. Student representative input was also requested during the regular programme review meetings to gauge the response to amendments and gather student feedback.

Research Finding 1 – Satisfaction level

Question asked: How satisfied or dissatisfied were you with the e-learning (Webcourses) experience on this course?
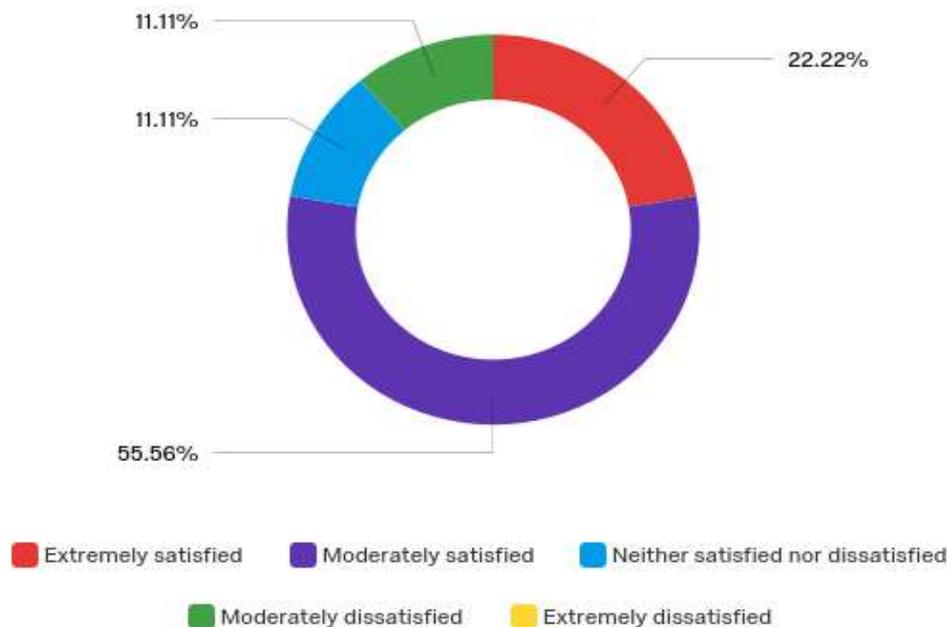

Figure 3.3: Satisfaction level with e-learning experience

No respondent expressed extreme dissatisfaction. Some 66% of respondents were either extremely or moderately satisfied with the current Webcourses provision.

Research Finding 2 – Importance ranking of "five elements in e-learning design"

Question asked: In terms of your e-learning (Webcourses) experience please rank the following criteria (from 1–5) in order of importance for module content. You can move the choices around to order them.
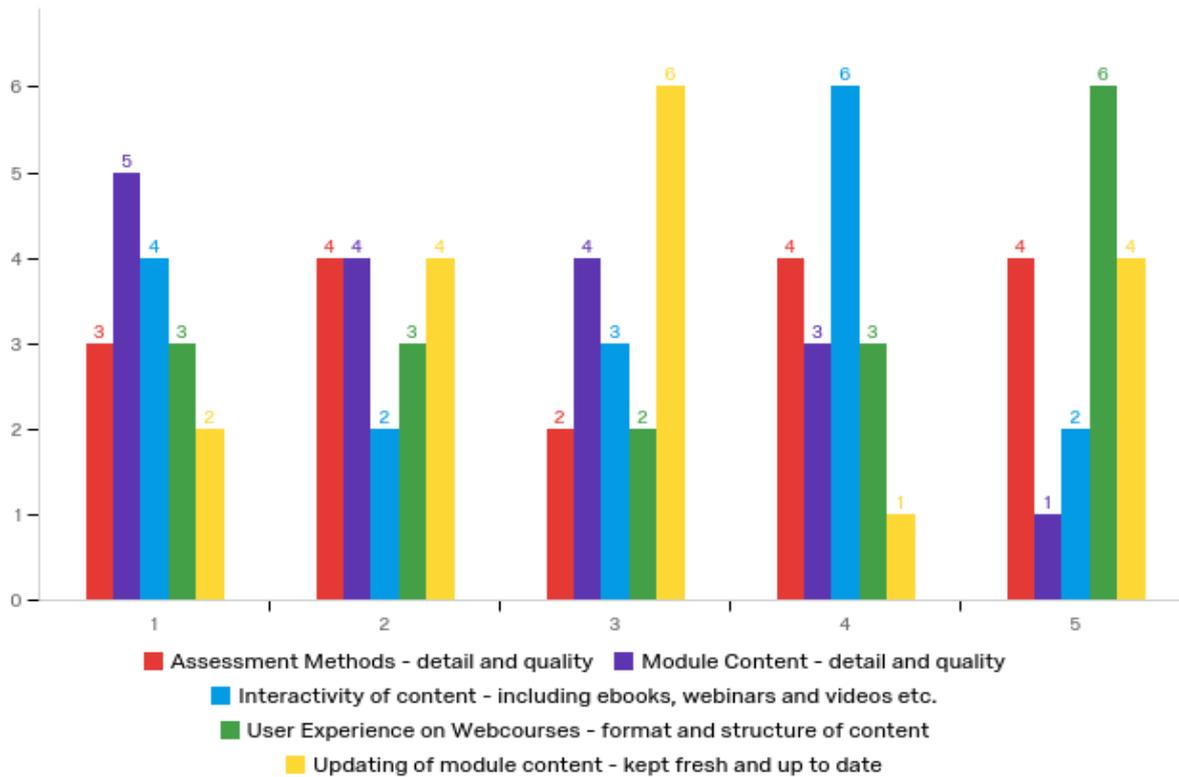
Figure 3.4: Ranking of key criteria in relation to module content

#	Question	1		2		3		4		5		Total
1	Assessment Methods – detail and quality	18%	3	24%	4	12%	2	24%	4	24%	4	17
2	Module Content – detail and quality	29%	5	24%	4	24%	4	18%	3	6%	1	17
3	Interactivity of Content – including ebooks, webinars and videos etc.	24%	4	12%	2	18%	3	35%	6	12%	2	17
4	User Experience on Webcourses – format and structure of content	18%	3	18%	3	12%	2	18%	3	35%	6	17
5	Updating of Module Content – kept fresh and up to date	12%	2	24%	4	35%	6	6%	1	24%	4	17

Table 3.1: Responses

Respondents ranked the five key elements as follows (using the rank position of number 1):
Based on the ranking for number 1, i.e. which got placed as most important, here are the results:
1. Module Content – the detail and quality of content on Webcourses (29%)
2. Interactivity of Content – variety including videos, e-books, web links etc. (24%)
3. User Experience – format and structure of content on Webcourses (18%)
4. Assessment Methods – the detail and quality of content on Webcourses (18%)
5. Updating of Module Content – timeliness and being kept up to date (12%)

The respondents validated the importance of individual module content, interactivity of that content and the overall user experience on the LMS as the paramount elements.

The research validated the five key elements which should be used for effective e-learning design.

Research Findings – Qualitative Feedback received suggested improvements to LMS

During Part Two, qualitative feedback was gathered in two ways. The first was via the regular programme committee review meetings with student representatives, normally six students attend representing a total of five cohorts. Extensive meeting notes gather feedback on the programme in general but also sought to specifically get feedback on the Webcourses provisions and the ongoing amendments and improvements.

A sample of this feedback can be seen in Appendix 3.2.

Recommendations to DIT

Five recommendations are made to the institute: (1) provide further details to support the five key elements, (2) include support material to assist programme and teaching staff in developing and implementing these elements in day-to-day activities, (3) continue to improve e-learning design, and (5) regularly collect feedback specifically on the e-learning/LMS provision for the IGG programme.

To support the five key elements for effective e-learning design, the project found the use of the audit process an important and efficient way to assess and review. A process of auditing an e-learning provision is also encouraged and recommended to other teams and departments at the Institute.

References

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Appendix 3.1

Audit Summary – February 2017

Group	Date	Assessment Schedule	Assignment Submission Details	Programme Information	Programme E-book	Programme Modules	Presentation Skills
IGG	Oct. 15	X	X	X	X	X	X
Food & Drink	Jan. 16		X		X	X	X
Food & Drink	Jun. 16	X	X	X		X	X
IGG	Aug. 16	X	X	X	X	X	X
IGG	Oct. 16	X	X	X	X	X	X

Appendix 3.2

Sample of feedback from Student Representatives at Programme Committee Review Meeting – 24 February 2017

<u>Webinars</u>

Webinars were discussed in detail. XXX agreed that XXX webinar for Doing Business Globally was quite helpful as it contained guidelines on writing case studies and many students were completing case study assessments for the first time. XXX noted that XXX webinar for 'International Market & Trade Research' was also very useful. XXX noted that a webinar with a recap of module content would not be of interest to her personally and that she would rather a webinar explaining the specific assessment. XXX noted that any students come from non-business backgrounds and as a result a recap of the module content was often very useful. XXX agreed to investigate the possibility of one pre-recorded webinar featuring a recap of module content, along with a separate live webinar focused on the assessment brief. XXX suggested that a table of contents be used to allow students to skip forward to relevant sections of the webinar.

Sample of Feedback from the Online Survey in April 2017

In relation to question 3 above, are there any comments or feedback you would like to add:

- Overall the way the course was laid out was very helpful, especially the labs given when we were in DIT which helped a lot with the projects for this module. However some of the content on Blackboard were insufficient and I would have liked to have seen more articles about design, responsiveness etc.

- I think the e-learning system is good and easy to use.

- All of the above choices are equally as important but since we have to do a lot of our work online improving UX is needed as it can sometimes be difficult to find a reading or assessment brief that we know is online. Again interaction is also important as we are not in a classroom it is harder to keep us engaged so more videos/webinars are needed. Also, content needs to be freshened up. I know the theory doesn't change all that much but examples can, so it would be great to keep it relevant to the times we are in.

- Greater access to e-books.

- The quality has improved since Web Courses started to be used properly by lecturers, i.e. content uploaded on time and grading/feedback offered through Web Courses and not by email