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## Research Methodology at Level 8 and 9: a Web-enabled Approach

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# 5 Research methodology at level 8 and 9: a web-enabled approach

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## Abstract

This research explored the potential use of webinars as a method of course delivery in the College of Business, Dublin Institute of Technology. In-depth interviews were conducted with a purposive sample of students to gain insights into their experience with webinars and to delve into how they interacted with the webinar, whether they would prefer this mode of delivery in the future and to assess their overall perceptions of webinars. Findings indicated that students found the webinar to be a novel and innovative way for delivering course content, however students reported having connectivity issues and at times encountered audio problems. Furthermore, all students described multi-tasking while taking part in the virtual classroom. The in-depth interviews also explored whether students believed webinars could wholly replace the traditional lecture and the sample of students interviewed here felt that webinars lack certain qualities that make this an unlikely possibility. Recommendations to the Institute include exploring the possibility of using webinars in situations where the traditional lecture is not possible (i.e. a contingency method of delivery), or to use webinars as part of a blended learning model, whereby webinars are not the sole method of course content delivery but are used in tandem with the traditional, face-to-face lectures.

*Keywords: eLearning, blended learning, on-line learning, webinars*

## Introduction

In terms of pedagogic structure, the classic lecture relies on content to lead the learning design. In this situation, both the lecturer and students are present and often the lecture proceeds in a very linear and structured manner. This is the format that both lecturers and students are most familiar with; however, the advent of learning technologies has revolutionised education and has brought greater variety, access and interaction into the learning function. We now have sophisticated learning management systems, text tools, and wikis, which create an engaged and innovative learning environment and one such learning technology that will be used increasingly more frequently is the webinar.

A webinar is a communication tool that allows web video conferencing in real or recorded time. Webinars have moved on from the early text-dominant days of the Internet to a more inclusive engaged model that emphasises multi-way communication and collaboration across all parties (Ubell 2011). When webinars were first developed they were very basic with only one-way interactions (instructor → student) possible. Nowadays, they are much more sophisticated with an array of functions such as sub-groups, quizzes and instant messaging now standard features in most webinar technologies. They typically allow for students to participate in real-time or to learn asynchronously using recorded material; this is quite advantageous should a student miss a particular lecture. Webinars are used frequently in executive education. However, in Ireland, the vast majority of lectures are delivered using the traditional method, whereby both the lecturer and the student are physically present. As the Dublin Institute of Technology (DIT), College of Business is committed to embracing new technologies, this teaching fellowship sought to pilot the use of webinars to test their feasibility as a teaching method.

## Outline of the Project

Prior to rolling out a course as a fully blended learning model, it was decided that a pilot would initially be undertaken. A pilot was run with Masters students taking a core module in Research Methods. Using notes and direction given by the author, students logged into the Institute's Learning Management System (LMS) (webcourses), which provides webinar facilities by Wimba. A sample screenshot of the webinar can be found in Figure 5.1 below. When using video as well as audio, the instructor will appear on the screen, however when using audio in isolation students will only hear the instructor but can communicate using the instant messaging function (shown bottom left) and voice (VoIP) if they wish.

For this research, the webinar took place during the snowstorms of December 2010, during which time the DIT buildings were closed due to travel difficulties throughout the city centre and beyond. As such, the webinar was used as a contingency method of course delivery. Students were given instruction on how to gain access to the webinar and information on how to test their browser before the class started. In order to use the webinar facility, students needed to install plug-ins and ensure their browser was enabled for the Wimba software to run.

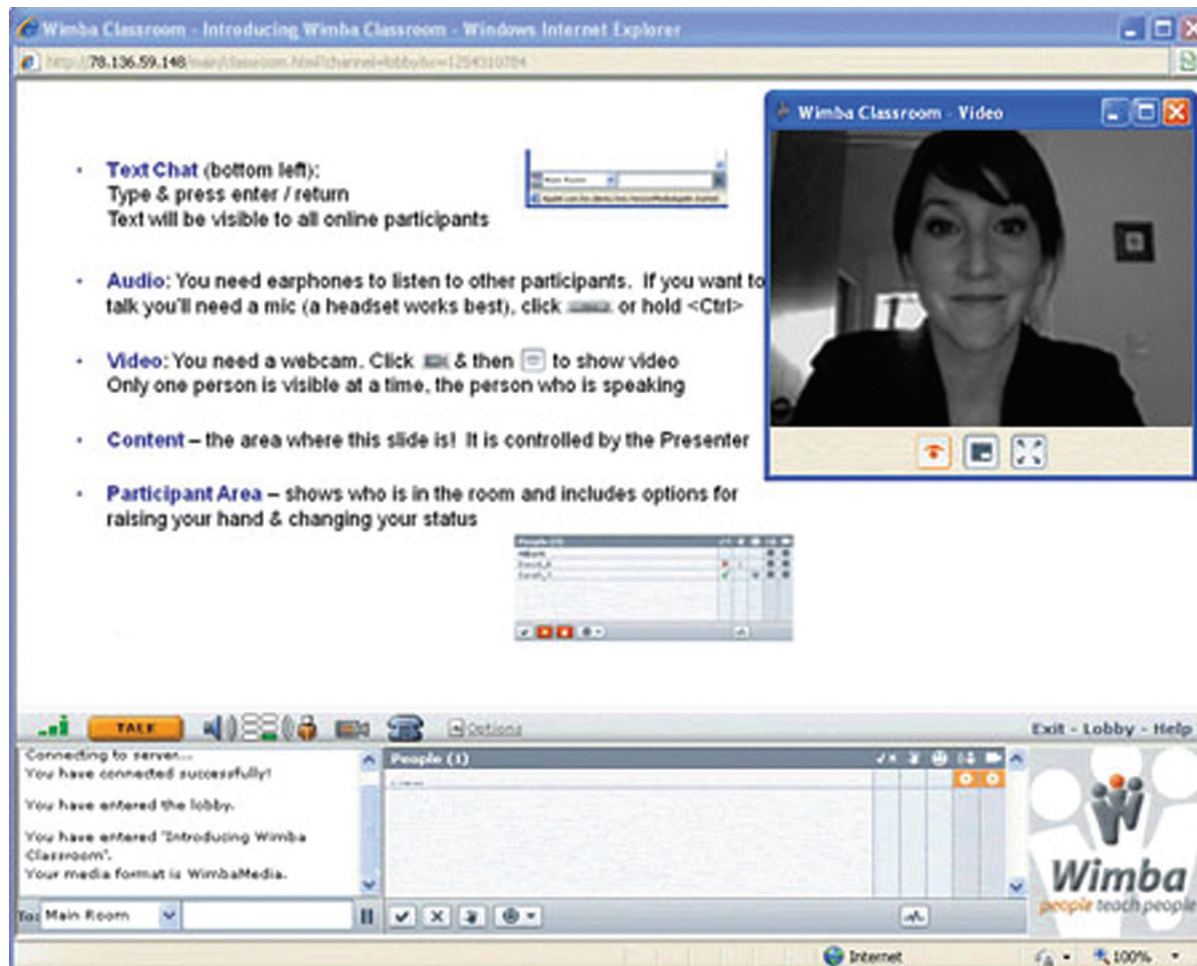


Figure 5.1 Sample screenshot of a webinar

The lesson on that particular day introduced students to the fundamentals of questionnaire administration and design. The theoretical nature of the class content made it ideally suited to a webinar format as there were ample opportunities for class discussion. During the course of the lesson, the material was delivered in the usual manner and attempts were made to engage students in discussion on a number of occasions. Students were hesitant to connect using voice communication and instead relied solely on the instant messaging function. Indeed, the majority of instant messaging communication was used to notify of sound quality issues and technical difficulties being experienced. As students were not willing to use voice or video, interaction during the class was quite limited which subsequently led to the class finishing in less time than it would in a traditional lecture setting. At the end of the class numerous students expressed their thanks and their satisfaction with the class.

A number of days following this, the author approached a purposive sample of students to see whether they would be willing to partake in a 30 minute in-depth interview on their webinar experience. The author briefly explained the purpose of the interview and of those contacted, four students agreed to take part in the interviews. All interviews took place in January 2011.

The following section will outline the major findings of the in-depth interviews

#### Research finding 1: Students have limited previous experience with webinars

Of the students interviewed, none had any previous experience with webinars. Despite their novice status, students found gaining access to the webinar very simple and found the instructions given both clear and informative. While they had not taken part in a webinar in the past, all students interviewed had a reasonable understanding of what a webinar entailed. They understood it would include discussing the course content in a "skype-like manner" and might also include video conferencing. Students were not aware that games such as polls and quizzes could be incorporated into webinars to make them more interactive. Finally, students also reported looking forward to the webinar experience and having a general interest in how it would play out.

#### Research finding 2: Students enjoyed the webinar experience

Of the students interviewed, all enjoyed the webinar experience. All those interviewed said they looked forward to participating in the webinar and were keen to know how it would play out. However, despite the fact that students enjoyed the experience, they stated it did not meet their expectations on a number of grounds. First, students expected better sound and voice quality. Second, they thought it would be more interactive, and third, they expected video conferencing in addition to audio communication.

#### Research finding 3: Students were more inclined to multi-task while taking part in the webinar than in a traditional lecture situation

Students were probed to see if they took notes during the webinar and of the four interviewed, none admitted to taking notes. When questioned whether they would take notes in a traditional class situation, they admitted they generally preferred not to take notes in class and preferred to listen and absorb the discussion. This then led to further probing to ascertain how students engaged

with the webinar and it appeared that all students interviewed were doing other things while listening to the lecture. Activities engaged in included: conducting research for other modules, downloading notes, texting and surfing the Internet. Indeed, one student admitted to preparing his dinner while listening to the webinar; thus emphasising the lack of control the lecturer has over the learning environment.

#### **Research finding 4: Students were less inclined to participate in class discussion than in normal class situations**

During the webinar, interactions with students were entirely limited to instant messaging with the nature of these messages relating almost entirely to sound quality issues. No student engaged in VoIP chat and why this was the case was explored with each of the informants. Interviews revealed that students were too shy to use voice chat, which seems to stem from their unfamiliarity with the medium. Students expressed they were not entirely sure how it would seem to their classmates if they were to actively engage in the lecture using VoIP and for that reason held back. Given that students were much more inclined to use the instant messaging function, it seems that this is seen as more acceptable, perhaps because it is less personal than voice-chat. In a way students are "baring less" of themselves which may mean that students are slightly self-conscious when participating in webinars.

#### **Research finding 5: Students did not feel webinars could be used to wholly substitute traditional lectures**

One of the key objectives of this research was to assess whether students would be willing to have an entire module delivered using webinars. This issue was broached with each informant and it appears that while students value webinars when traditional lectures are not possible (such as in the snowstorm example here), or as part of a blended learning model, they would not like to see webinars entirely replacing the traditional lecture. It seems that students recognise it is too easy to get distracted while taking part in a webinar and feel they might not have the self-discipline to stay engaged throughout.

## **Evaluation and Conclusion**

From the above research it can be seen that despite having limited experience with webinars, students were open minded about their implementation and eagerly anticipated experiencing the new teaching method. Interviews with students indicate that they had a reasonable amount of knowledge about what a webinar entailed, however, they did not realise how dynamic webinars can be in terms of polls, quizzes and games.

In order for a webinar to be successful, it is essential that broadband width is sufficiently large. As the webinar was delivered during the snowstorms of December 2010, the lecture was delivered outside of DIT which meant the inclement weather may have effected connection speeds. Given the circumstances this was unavoidable. However, if webinars are to be adopted as a teaching method pre-tests should be run to assess whether there are any technical difficulties. Ideally, the webinar should be delivered from the DIT as larger bandwidth and support services are available. Furthermore, video conferencing should be used in addition to audio as this is likely to increase engagement during delivery.

The extent to which students engaged in multi-tasking during the webinar is quite worrisome. When delivering course content via webinar, the lecturer relinquishes a significant amount of control over the learning environment; to combat this, steps should be taken to ensure students are continually engaged. The Wimba software includes a number of functions such as games and quizzes which can be used during class and it is likely that punctuating the class with timely exercises may reduce multi-tasking behaviour during the class.

This research also found that students were reluctant to use instant messaging, using it only to notify of connection issues. Furthermore, students seem to find using VoIP intimidating, resulting in a complete absence of voice interaction during the class. It is unclear if this is due to inexperience with the medium or something that will persist over time. It is possible that as students become more accustomed to webinars they will become more likely to interact. Further research will need to investigate whether this is the case.

It is interesting to note that students do not wish for webinars to entirely replace traditional lectures as they feel their learning may suffer if this were to happen. Despite this, students recognise the advantages of webinars and would be open to taking a module that was delivered in a blended learning format.

## **Recommendations to DIT**

Given the exploratory nature of the above research it is difficult to conclusively provide recommendations to the Institute. However, should a lecturer wish to use webinars as a mode of delivery, they should seek to integrate numerous activities throughout the lecture to engage students continuously. In addition, they should anticipate less in-class discussion and use these additional activities to ensure their class-time is filled. From the point of view of the lecturer, webinars are much more difficult to deliver than traditional classes as you cannot gauge atmosphere or whether students are grasping the material being covered. Using eye contact and body language, it is easy to "get a feel for things" in a normal class situation and as this is entirely absent in webinars it can feel slightly disconcerting for the lecturer.

Students interviewed here were apprehensive about taking a full module online, however they are open to taking a class that contains a selection of lectures in a virtual setting. Should the Institute wish to provide full-time students with modules that are delivered wholly online they should consider whether there is a demand for such a module design. As this research is limited to only

a small sample of students the results found here should be treated with caution. In addition, as the webinar was delivered to full-time students, it is possible that part-time or continuing professional development students may view webinars entirely differently. To establish whether this is the case, webinars should be rolled out to these students and their perceptions of the experience researched.

## Proposed Future Work

The purpose of this research was to gain insights into how webinars could be implemented in the College of Business and also to explore students' perceptions of webinars as an alternative teaching method. Given the case-type approach taken here, and the small sample size, it is difficult to extrapolate the findings. Therefore, further research should develop the current study by extending the sample size and by conducting a series of webinars over a set period of time.

If webinars are to be considered as either a stand-alone teaching method or as part of a blended learning model, steps should be taken to ensure the class is highly interactive to ameliorate any problems associated with multi-tasking. Indeed, research by Hembrooke and Gay (2003) found that students who engaged in multitasking during a lecture could recall less content than those who were focused solely on the class. Future research could replicate Hembrooke and Gay's (2003) study in an online vs offline learning environment to determine whether differences exist in recall across the two teaching media. As the study focused only on full-time post-graduate students further research should also be conducted on part-time and executive education students as they may have more positive perceptions of webinars.

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