Exploring media richness using different communication channels within a hybrid presentation style

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Abstract

Some traditional face-to-face teaching is being replaced with on-line methodologies. While there are advantages to this replacement, there are certainly drawbacks to it as well. A teaching environment that combines both, however, a hybrid classroom, gains the best of both worlds. There should be a reason why hybrids are used and courses should be optimized to use this method; however, this is no easy task. This paper discusses the use of a hybrid course and the techniques, instruction, and assignments used to optimize and amplify that method for a particular course, Introduction to Management Information Systems.

Keywords: on-line learning, media richness, communication channels

INTRODUCTION

For at least the last twenty years there has been a movement away from just face-to-face classroom instruction to other styles, such as on-line classes and massively open on-line courses. While there are advantages to other teaching methodologies, such as flexibility to students, there are disadvantages as well, such as a lack of personal interaction. A teaching framework which combines the best of both worlds, while eschewing the worst, is the hybrid, or blended, style of teaching.

A hybrid style uses both methods of instruction, some face-to-face and some on-line. The mix can be different, such as a small fraction of in-class instruction, such as the first and last week, or a more evenly distributed mix with half in class and half on-line. While the mix is easy to adjust, the *raison d'etre* and style of the on-line portion is the more difficult part to create and justify.

The problem of determining the style of the on-line portion within a graduate-level introductory course in management information systems was recently encountered. While its solution was unique to the course, the lessons learned from the exercise are applicable to other blended courses. The unique element added was that of *richness*.

Within management science, the idea of the richness of a communication channel is important in areas such as management information systems and organizational behavior (Daft & Lengel, 1986). Richness is defined as the information-carrying capacity of data, and it is proposed that communication media vary in the richness of information processed (Daft & Lengel, 1983) For example, in order of decreasing richness, the media classifications are (1) face-to-face, (2) telephone, (3) personal documents such as letters or memos, (4) impersonal written documents, and (5) numeric documents. (Daft & Lengel, 1983); they compare that of a wink versus a number on a page as two opposing poles of information conveyance. In terms of more current media, "a phone call cannot reproduce visual social cues such as gestures, so it is a less rich communication medium than video conferencing, which allows users to communicate gestures to some extent." (Media Richness Theory, 2016). Additionally, "The greater social presence of a medium creates a greater immediacy and warmth of the communication, because of the greater number of channels" (Media richness theory, 2016),

As the course was an introduction to management information systems, using different communication channels during different weeks allowed the students to see firsthand how the channel effected communication, collaboration, and, ultimately, learning. It also emphasized how the design of an information system affects those who use it and how it can be used.

IMPLEMENTATION

The course layout was an equal mix of on-line and face-to-face instruction, i.e., every other week alternated between the two. To present a full spectrum of channel richness for exploration, different software collaboration packages were used during different weeks of the semester for the on-line portion of the course. The type of channel, the particular software used, and the modality were as follows:

Type	Software	Modality
Text	BlackBoard Discussion Board	Asynchronous
Text	BlackBoard Chat Room	Synchronous
Voice	Skype	Synchronous
Video	Google Hangout, Adobe Connect	Synchronous
Avatar	Avaya Live, Second Life	Synchronous

The category above for modality refers to if all the parties involved need to be collaborating at the same time, synchronous, or at different times, asynchronous. In all cases, the communication was distributed, i.e., different people at different places, which is the major purpose of an on-line component.

The software and type of interaction were used during the on-line portion of the class which met once a week for the "lecture," where the pre-assigned chapter in the textbook was covered. For the class assignment, the end-of-chapter case was to be discussed and the assigned questions about the case were to be written up using Google Docs during the week between the classes and submitted before the next lecture.

Since the makeup of the blending was 50/50, each on-line class was followed by a face-to-face one and the observations of the students regarding the channel of communication were discussed in class. In addition to the discussion, each student was asked to record their observations about the interaction between the student and the instructor during the lecture portion and the interaction between the students themselves during the case-solving component while using the different media for the on-line component.

To ensure the students took the exercise seriously, the grade for the class was determined not only by a mid-term and final examination, with essay questions concerning the material covered, the group-submitted case solution, but the individual record of the observations of the interaction within the different channels and how it related to the material covered was to be turned in as a final paper.

DISCUSSION

The on-line components of the course were of interest to both the students and the professor as it was very interesting to see the interaction, or lack thereof, of the class using the different channels of communication. Each channel had its own distinct nature.

As the on-line component was to be compared with the face-to-face experience for the lecture, the limitations of the former were compared to that of the latter, and that was the purpose of the exercise. What became apparent was the need for different communication protocols to stop communication collisions between students and student and professor, i.e. what happens when two people, teacher-student or student-student, start communicating at the same time.

There are technical issues with the on-line component that need to be considered. Attention must be given to ensure all students have a sufficiently powerful computer and a fast internet connection. This is particularly true when rising to richer channels of communication. Care also must be given to the framework chosen as some software requires the professor to be present at all times, i.e., the students cannot meet without a moderator. This limits the collaboration on the case study in between lectures.

The on-line component was also compared to the face-to-face experience for the group collaborating on the case problem. While the professor was not involved with that aspect, the students were asked to discuss their experiences and reflections on the final paper.

The instructions for the final paper were as follows:

> "The course as presented this semester was a blended course: about half on-line classes and one half face-to-face meetings. For the on-line classes, we used a variety of platforms:
> - BlackBoard Discussion Board
> - BlackBoard Chat Room
> - Skype
> - Adobe Connect/Google Hangout
> - AvayaLive Engage
>
> You had also used these platforms for collaborating on the end-of-chapter case. Each one has advantages and disadvantages and each one had well-defined communication channel bandwidth (the amount of information each one could transmit) and time frame. For example, the discussion board was asynchronous text only.
>
> The purpose of the final paper is for you to describe your likes/dislikes of each of the different platforms, based on your personal preferences ("what you feel"), as well as using the knowledge you gained during the semester ("what you think "). We did experience a number of technical issues with some of the platforms, so you may want to consider each with those preferences as the platform did function versus if the platform had worked perfectly.
>
> Think of this project as an examination of the different possibilities for a business plan for providing a system for an on-line education business.   Using the materials covered this semester, make a suggestion for which one(s) to use (and/or not use)."

CONCLUSION

The exercise in using different channels and frameworks to teach an introduction to management information systems at the graduate level was overwhelmingly successful. While the author sought to provide a reason and justification for the half-time on-line method of presentation due to the a priori scheduling of such, because of the success and popularity of the method, as indicated by the students themselves, and further amplified by the professor, the author would do a similar presentation in a future offering of the course—even if a hybrid presentation was not required!

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