# Evaluating Student Perceptions
# Of Course Delivery Platforms

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## ABSTRACT

*In this paper we evaluate effectiveness of course delivery mode on three dimensions: values, networking opportunities and learning. While students and their future employers are two important customers for the business program, we focus on the perception of students regarding the effectiveness of course delivery mode on program performance. The three dimensions are evaluated based on a questionnaire survey administered to business program students at several universities. We present the results of statistical analysis and draw conclusions based on the results.*

**Keywords:** Instructional Delivery Mode; Student Perceptions; Teaching Effectiveness

## INTRODUCTION

*S*tudents making decisions to enroll in a business program as well as potential employers who evaluate job applicant's credentials use multiple criteria in assessing business program quality. Students and their future employers are clearly business program customers. A college experience significantly transforms the student during the course of study. Students usually assess program value using criteria consistent with their future professional goals and personal growth expectations. For example, a student entering a program may want to earn a college degree in accounting as well as become actively involved in social programs that work towards eliminating homelessness. Employers assess job candidate's fit for a position by comparing candidate's credentials, practical skills and personality traits to specific position and general employer requirements. For example, a company may be looking for a candidate with a four-year college degree in accounting, a CPA certification, a team player who is also interested in social causes. While both student and employer perspectives are important in determining college program value, in this research we restrict our attention to the student perspective. We study the effect of course delivery modes on the perception of students regarding gaining values, networking opportunities and learning. Modes of delivery considered in this research include the traditional face-to-face (F2F), hybrid or blended, and online. In this section we discuss these criteria in detail.

*Values* refer to the concept that the holder of a business degree learns and internalizes the beliefs and values of a degree-granting institution. For example, academic institutions in the United States with religious affiliation integrate their spiritual philosophies and traditions in their educational programs. This leads to the development and reinforcement of individual values and behaviors that are consistent with the philosophies, traditions and values of the institution. In this research, we investigate whether the perception of the students regarding learning/gaining such values are significantly affected by the course/program delivery mode.

*Networking* opportunities capture the idea that the holder of a degree will, over the period of studies, develop a professional network of colleagues to utilize throughout his or her career. Networking opportunities tend to be better for graduate students in business compared to other disciplines. Typically, business students are older and have better defined objectives for enrolling in programs focused on their area of interest and/or expertise. They also tend to have an established career track and business acumen that they bring into the classroom. Better academic programs attract more capable and experienced individuals. They provide better networking opportunities for students in finding internships closely matching individual and employer needs. They also offer good job placement support, job fairs, professional networking and access to post-graduation alumni networks. Such facilities make it easier to switch jobs to advance professional careers and development. The question we investigate in this research

is whether the perception of the ability to develop professional networks is significantly affected by the delivery mode.

*Learning* determines whether a holder of a business degree will develop expertise in one or more of the functional business areas and other abilities, such as communication and teamwork skills. Learning in business programs can be viewed as a combination of area expertise and other abilities such as proficiency in using tools for decision making, teamwork and communication skills. The question we investigate is whether perception of learning is significantly affected by the delivery mode.

Ever since advent of the use of internet technologies in delivery of education, there have been interests in studying the effects of different modes of delivery on education programs. Reputable F2F accredited programs typically require significant physical presence on campus and a relatively high degree of F2F interaction with professors and peers. Instructional information technology facilitates many routine tasks involved in preparation and delivery of any course irrespective the mode of delivery. Given the significant differences involved in the modes of delivery of education, there is skepticism among students and employers, as well as educational institutions, as to whether programs using different modes of delivery are in fact different. This has been especially true from the standpoint of students who have seen an increasing choice of available educational programs. Reservations by educational professionals regarding quality of online programs have been reported in Olson (2015) and references therein.

Aspects of education are primarily intangible. However, there are a few tangible aspects of education such as documents (e.g., transcripts, degree certificates) provided by institutions that signify successful completion of educational programs. Transcripts and degree certificates are the most commonly recognized documents that are essentially required as "proof" of successful completion of educational programs. F2F mode of delivery has been used and well-recognized by traditional educational programs. Official documents such as transcripts and degree certificates rarely explicitly display or include information regarding program delivery mode. Hence, in this research we also investigate whether such information is explicitly displayed or indicated in official university documentation, such as transcripts and diplomas.

## LITERATURE REVIEW

The research on the subject of delivery mode effectiveness has focused on developing and deploying the best practices in college education for improving student learning outcomes. Over the last decade, the delivery of college credit courses by many universities has increasingly transitioned from traditional i.e. F2F toward online. According to Integrated Postsecondary Education Data System discussed in Olson (2015), about 5.5 million students took at least one online course in fall 2014. More than 80% % of public universities and half of private colleges offered at least one fully online program in 2013. According to Allen and Seaman (2011), enrollment in online courses at many colleges and universities has increased at a faster rate than F2F courses. The proportion of online course enrollment to total enrollment was 9.6% in 2002 and grew to 31.3% in 2011.

There exists a significant difference in perceptions regarding the quality of online courses, especially amongst faculty. According to Olson (2015) and references therein, only about 28% of chief academic officers say that their faculty members accept the value and legitimacy of online education. Results of a survey conducted by Straumsheim (2014) demonstrate that just 26% of faculty surveyed agree or strongly agree that online courses can achieve student outcomes comparable to F2F. In addition, this perception has not changed much in more than a decade.

Sigurjonsson, Arnardottir, Vaiman and Rikhardsson (2015) in an empirical study found that managers' perspectives on ethics education are not considered enough at business schools. They proposed that business schools should actively encourage managers to provide inputs regarding business ethics to academic curricula as well as develop closer collaborative relationship between industry and academia.

Mann and Henneberry (2014) identified course attributes that are considered important to the students in a variety of teaching environments. Students have shown preference for F2F courses offered late morning and early afternoon with the frequency of two or three times a week. Moreover, students selected online over F2F courses depending on the course topic, design technology and when the F2F version was offered. The authors also noted that researchers

agree that irrespective of the delivery mode, in an effective course, students must be able to interact with the course content, course instructor and other students enrolled in the course.

Bramorski (2014) presented a conceptual framework for evaluating course delivery effectiveness. Models of F2F and online delivery were presented. His research presented a model for effective online education and training with emphasis on student engagement and outlined a framework for enhancing student learning through group collaboration in online courses.

Wong L., Tatnall and Burgess (2014) developed and tested a framework for studying and learning in a hybrid environment. The objective of their research was to assess the impact of information technology on readiness and intensity of adoption in hybrid courses. Their research identified areas where future improvement efforts need to be directed to better accomplish course objectives.

Burns, Gupta and Burns (2013) investigated social responsibility issues in a Jesuit business school. Their research objective was to assess the effects of education at a state university and a Jesuit university on business students' sentiment towards marketing. The authors found that students attending the state university showed more positive sentiment toward marketing than students attending the Jesuit university. They concluded that increased emphasis on social justice and social responsibility at the Jesuit university may positively affect the way their students evaluate marketers. The implication for the values dimension discussed in this research is that in their subsequent employment, business students from universities with a religious affiliation may be more likely to act socially responsibly than business students from state universities.

Floyd, Xu, Atkins and Caldwell (2013) discussed the status of business ethics education. They conducted a survey of business students, deans of business schools, and business ethics experts regarding ethical outcomes. They concluded that colleges and universities need to place greater emphasis on teaching skills associated with the ability to connect choices and actions in making ethical business decisions.

Owens and Price (2010) reviewed the technologies used in teaching and learning in higher education. Their research attempted to answer the question of to what degree online learning is replacing traditional F2F lecture. New technologies make it possible for a student to free up time ordinarily allocated to activities associated with learning in an F2F lecture environment. The time should be allocated to meaningful activities supporting the achievement of course learning objectives.

## METHODOLOGY

In order to collect data for this research we administered a survey questionnaire over a period of 3 semesters. The questionnaire included questions asking respondents to rate their perceptions regarding the effectiveness of course or program delivery mode on the selected three dimensions. Student responses were collected on a 5-point Likert scale ranging from 1 for strongly disagree to 5 for strongly agree with the statement. The respondents included undergraduate and graduate business students from four universities. Approximately eighty percent of the responses were collected online in D2L and Blackboard systems. The remaining twenty percent of the responses came from students enrolled in F2F classes. Students were offered a small bonus for returning a completed questionnaire resulting in the response rate of approximately 95 percent. The total number of returned questionnaires was 472. Even though some respondents did not answer all questions, their responses to questions they chose to answer were included in the tabulations. Further, because the number of responses from graduate students was relatively small, we merged the responses from graduate and undergraduate students together because of statistical significance considerations. The survey questions were designed to statistically validate the impact of course delivery mode on the dimensions of values, networking and learning.

Originally, we considered six types of course delivery modes: (a) F2F on campus, (b) F2F off campus, (c) weekend programs, (d) correspondence, (e) web-enhanced hybrid, and (f) pure online. After reviewing preliminary statistical analysis results we observed that the number of responses in F2F off-campus, weekend and correspondence courses was very low (fewer than 20 respondents), resulting in statistically insignificant results. Upon conducting related literature review, we chose to exclude these three categories from further consideration. Our approach is consistent with the current trend in the literature that views differences in the delivery mode based on the extent of use of

information technology to enhance student learning on a continuum Wong, Tatnall, , and Burgess (2014) and Jones, Chew, Jonesand Lau A. (2009.) Although we adopt a similar research methodology, we specifically consider three discrete and popular modes of course delivery: F2F on-campus, web-enhanced (hybrid) and pure online.

**The Research Hypotheses**

We examine whether or not the mean differences regarding perceptions of the effectiveness of the three course delivery modes (F2F, hybrid and online) for three criteria (values, networking opportunities and learning). This resulted in nine research hypotheses as follows:

$H_0$: F2F on-campus courses are not perceived as influencing respondent values
$H_1$: OW.

$H_0$: Hybrid courses are not perceived as influencing respondent values
$H_1$: OW.

$H_0$: Pure online courses are not perceived as influencing respondent values
$H_1$: OW.

$H_0$: F2F on-campus courses are not perceived as fostering networking opportunities for respondents
$H_1$: OW.

$H_0$: Hybrid courses are not perceived as fostering networking opportunities for respondents
$H_1$: OW.

$H_0$: Pure online courses are not perceived as fostering networking opportunities for respondents
$H_1$: OW.

$H_0$: F2F on-campus courses are not perceived as enhancing respondents learning
$H_1$: OW.

$H_0$: Hybrid courses are not perceived as enhancing respondents learning
$H_1$: OW.

$H_0$: Pure online courses are not perceived as enhancing respondents learning
$H_1$: OW.

In addition, we asked the respondents to indicate whether or not they expected information about the class delivery format to be displayed in the official university documents (diplomas and transcripts). Of the students responding, 99.6% indicated that they expected no such information to be shown on their official documents signifying successful completion of their educational programs. This means that the external constituents of the postsecondary education system, such as the employers, and the society as a whole have no means to identify how the academic credits were earned (i.e. mode of delivery of courses taken). Such information could be useful to investigate the relationship between the level of student professional performance on the job and program delivery mode. Such studies could be conducted periodically (e.g., annually) and be linked to individual performance reviews.

## RESULTS

A series of chi-squared tests of the relationship between mode of delivery (F2F, hybrid and online) and the criteria (values, networking opportunities and learning) were conducted producing results shown in Table 1.

**Table 1.** Summary of results for student perceptions of course delivery modes effectiveness

| Mode of Delivery | Values | Networking | Learning |
|---|---|---|---|
| F2F on-campus | 0.070 (n = 216) | 0.001* (n = 214) | 0.031* (n = 219) |
| Web-enhanced (hybrid) | 0.086 (n = 98) | 0.024* (n = 101) | 0.042* (n = 102) |
| Pure online | 0.145 (n = 147) | 0.332 (n = 146) | 0.053 (n = 151) |

**Note:** Cells include p-values of chi-squared tests for independence and the number of valid responses for each criterion–mode of delivery combination (in parentheses.)
* Significant at the $p < 0.05$ level.

Analysis of all modes of delivery failed to reject the null hypotheses on the values dimension. This result means that the three modes of course or program delivery do not provide students with differing values that guide their personal lives and professional behavior in business. This observation leads us to conclude that the mode of delivery has no effect on perception of values instilled in the students.

It is common wisdom that networking options offered by the educational institution provide career advancement and professional development opportunities to the students. Analysis of F2F on campus and hybrid modes of delivery resulted in the rejection of the null hypotheses on the networking dimension. This conclusion means that the two modes provide meaningful professional networking opportunities to the students. On the other hand, analysis of the pure online mode resulted in the failure to reject of the null hypotheses on the networking dimension. This means that pure online learning environment does not provide meaningful networking opportunities comparable to F2F and hybrid modes. Universities policy makers may use this result to offer alternative professional networking opportunities designed specifically for students in their online courses and program.

Finally, analysis of F2F and hybrid modes of delivery resulted in the rejection of the null hypotheses on the learning dimension. This means that the two modes are effective in facilitating student learning, while the test for pure online mode failed to reject the null hypothesis. We note that for the pure online mode the decision to reject the null hypothesis was marginal because the p-value of 0.053 is very close to the selected significance level of 0.05. It is interesting to observe that although student perceptions of learning quality are the highest for F2F mode (p = 0.031), the result is quite close to the cutoff value of 0.05. We would expect the result to be stronger particularly for the F2F and hybrid modes. It may be interesting to investigate further the reasons why student perceptions of learning are so close to being statistically insignificant irrespective of the mode of delivery.

## CONCLUSIONS AND EXTENSIONS

In this research, we analyzed student perceptions of the impact of course delivery mode on the criteria of values, networking and learning. The model was tested using student perceptions collected through a survey questionnaire administered to undergraduate and graduate students at four Midwestern universities. From the tactical perspective, it is apparent that:

- Information about program delivery mode is not included in the official graduation documentation.
- The process of values development is not meaningfully supported by the delivery mode.
- Improvements need to be made in the way the course supports professional networking opportunities in the pure online environment. This need could be addressed through more effective use of information technology tools, such as social and professional networks.
- Perception of learning is not significantly affected by the delivery mode. However, as noted in Wong, L., Tatnall, A., and Burgess, B. (2014), learning could be improved for all delivery modes by more effective use of content-rich tools and technologies such as interactive individual and group exercises, online chatrooms, discussions and multimedia lectures.

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This research allowed us to identify areas of satisfactory performance of different modes of delivery and, more importantly, potential improvement areas. One notable limitation of this study is its scope in that it focused exclusively on student perceptions of the learning environment quality. Due to statistical significance considerations this study did not incorporate demographics nor did it separately analyze the perceptions of undergraduate and graduate students in a variety of business programs used for data collection (e.g. public vs. private, accredited vs. non-accredited institutions.) In a holistic model it is necessary to encompass broader perspectives including the undergraduate and graduate students, academic institutions, employers, communities and society. In order to achieve this goal it is necessary to develop a set of reliable metrics measuring performance on different criteria from the perspective of such diverse constituencies.

Given the fast increasing enrollment in distance education and rapid advances in multimedia course delivery technologies, improving student learning in pure online and hybrid courses is of strategic importance to academic institutions. Although at present a hybrid course delivery mode is highly credible and is broadly accepted, advances in multi-media technologies will likely increase acceptability of pure online modes in the future. Further research extensions may also include the analysis of other learning components such as capstone projects and travel studies on values, networking opportunities and learning.

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## AUTHOR BIOGRAPHIES

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**NOTES**