Constructing Communication in Blended Learning Environments: Students' Perceptions of Good Practice in Hybrid Courses

Construcción de la Comunicación en Ambientes de Aprendizaje Combinado: Percepciones de los Alumnos sobre las Buenas Prácticas in Cursos Híbridos

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Abstract

Students enrolled in a hybrid course reported their satisfaction with course design and delivery and their perceived academic performance. Students' perceptions of both satisfaction and performance were predicted using the benchmarks created for evaluating distance education (Chickering & Gamson, 1987). Specifically, students' perceptions of performance and satisfaction were predicted by course design and delivery, especially active learning, student-student interaction, professor feedback, and communication of high expectations for students. The current study demonstrates that applying the benchmarks to hybrid course design and delivery positively affects students' satisfaction and performance.

Keywords: Hybrid course, student performance, benchmarks, professor feedback, student interaction

Resumen

Los alumnos matriculados en un curso híbrido informaron estar satisfechos con el diseño y ejecución del curso y su rendimiento escolar. Las percepciones de los alumnos sobre satisfacción y el rendimiento fue pronosticado utilizando los puntos de referencia creados para evaluar la educación a distancia. En concreto, las percepciones de los alumnos sobre rendimiento y satisfacción fueron pronosticadas por el diseño del curso, especialmente aprendizaje activo, la interacción entre ellos, retroalimentación del profesor, y la comunicación de altas expectativas para los alumnos. El estudio actual demuestra que la aplicación de los puntos de referencia para el diseño y entrega de cursos híbridos, afecta positivamente la satisfacción y desempeño de los alumnos.

Palabras clave: curso híbrido, desempeño de los alumnos, puntos de referencia, retroalimentación del profesor, interacción entre alumnos

Distance learning is becoming increasingly more popular on college campuses. Distance learning includes courses that are taught at satellite campuses, through instructional television, as hybrid courses, and fully online. In the 2000-2001 academic year, 89% of 4-year public institutions offered some form of distance learning (Tallent-Runnels et al., 2006). During the 2006-2007 academic year, the percentage of distance education courses offered remained unchanged, but the percentage of hybrid courses increased from 35% to 64% (NCES, 2008). Another study reported that professors, already using blended learning, expected to offer more than 40% of their courses in the blended format by the year 2013 (Bonk & Kim, 2006).

Hybrid, or blended, courses are a combination of online and traditional, face-to-face courses. The goal of hybrid courses is often to combine quality features of traditional classroom teaching with quality features of online courses in order to promote active, independent learning and reduce time in the classroom (Aycock, Garnham, & Kaleta, 2002). However, a common criticism of technology-based course design is that "online components are bells and whistles tacked onto traditional courses, which are costly to add and only minimally enhance the course content" (Stewart, Bachman, & Babb, 2009, p. 511). This criticism may well have merit when online delivery focuses solely on providing course content but fails to create a learning environment that supports the growth of a community of learners and

shared knowledge. If courses are nothing more than content, then all students would need is their textbook. Faculty members, however, view the learning community as essential for cognitive growth and the development of critical thinking skills. Similarly, online and hybrid educators recognize the importance of creating a learning environment that fosters interaction, dialogue, and mentoring in an effort to produce learning outcomes similar to those in traditional courses.

A common concern for hybrid students and faculty is the quality of communication between the student and the professor (Shedletsky & Aitken, 2001). Reduced classroom time means fewer opportunities for traditional learning; therefore, both students and professors have to learn how to have meaningful online communication. However, few faculty members have the training in instructional design or learning theory needed to create a well-designed hybrid course (Oblinger & Hawkins, 2006), which should foster a collaborative learning environment that encourages students' interactions with the course content, the professor, and fellow classmates (Hostetter & Busch, 2006). Technology alone cannot create an effective learning community without the support of theory to fortify the course design.

A study found that, when compared with traditional courses, the hybrid delivery mode can result in higher grades and improved learning outcomes (Dowling, Godfrey, & Gyles, 2003), as well as students' perceptions of greater learning and motivation (Leh, 2002; Riffell & Sibley, 2003). Students in hybrid courses also feel a stronger sense of community with their classmates and professor when compared with both traditional and online students (Rovai & Jordan, 2004). A sense of community, which is measured by students' perceptions of connectedness and learning, has been repeatedly shown to be important in the process of learning (Chavis, Hogge, McMillan, & Wandersman, 1986; McMillan & Chavis, 1986; Riger & Lavrakas, 1981; Sarason, 1974), in addition to students' classroom attitudes, perceptions of learning, and performance on course exams (McKinney, McKinney, Franiuk, & Schweitzer, 2006). McMillan and Chavis (1986) suggested that a sense of community was comprised of membership, influence, integration and fulfillment of needs, and shared emotional connection. A sense of community has been found to be influenced by the attitude of the instructor and the environment created by classmates (Tebben, 1995), as well as interactive online tools (Baym, 1995; Dede, 1996; Reid, 1995; Rheingold, 1993). Recently, Wighting (2006) reported that students named connectedness with peers as the most important variable in developing a sense of community.

However, some studies have found that hybrid courses exhibit some of the same weaknesses as fully online courses, despite the traditional classroom interaction (Jackson & Helms, 2008). For example, Rovai and Jordan (2004) found that reduced social cues, such as tone of voice and facial expressions, could cause misunderstandings that negatively affect learning. Other weaknesses include student computer literacy, limitations of technology, and technological inexperience of the instructor.

To address some of these weaknesses, higher education leaders are attempting to measure the extent to which institutional objectives are being met using a traditional industry tool. Benchmarking is a method for developing requirements and standards in e-learning and thereby measuring performance (Oliver, 2005). Chickering and Gamson (1987) identified seven principles of good practice in undergraduate education, which includes contact between faculty and students, cooperation among students, active learning, prompt feedback, time on tasks, high expectations of students, and respect for diverse student learning styles. More than half of the benchmarks involve effective professor-student and student-student interaction.

These seven principles have been found to be adaptable to distance education courses (Grant & Thornton, 2007). Graham and colleagues (Graham, Cagiltay, Lim, Craner, & Duffy, 2001) recommended that, in order to apply Chickering and Gamson's (1987) principles, distance instructors: provide clear guidelines for interactions with students; create well-designed discussion assignments that require participation, engagement, and feedback; require student-presented projects; provide feedback on both assignments and inquiries; establish deadlines; communicate high expectations through challenging assignments and praise; and allow students to express their own interests and points of view by choosing project topics.

Effective student-student and professor-student interaction is impossible without establishing social presence in the online forum. Social presence is "the degree to which a person is perceived as 'real' in computer-mediated communication" (Gunawardena, 1995, p. 151) and studies have shown that students perceive their classmates and professors to be both real and accessible in online forums (Gunawardena,

1995; Mama, 2001; Swan, 2002). According to Pelz (2004), social presence can be: affective, in which students express emotions and feelings; interactive, which occurs when students effectively comprehend others' responses; and cohesive, which results in a sense of commitment and belonging. Studies have found positive correlations between social presence and satisfaction with both the course and the professor (Richardson & Swan, 2003).

Teaching presence involves frequent and effective interaction between the student and professor (Mandernach, Gonzales, & Garrett, 2006). Teaching presence can be created in three ways: through facilitation of discussion by both the student and the professor; through direct instruction by the professor; or through instructional design (Garrison, Anderson, & Archer, 2000). Facilitation of discussion and instructional design seem to be particularly important in establishing a sense of connectedness and learning in distance courses, as well as course satisfaction (Shea, Swan, Li, & Pickett, 2005).

Immediacy is related to presence in that it refers to verbal and nonverbal behaviors that create interaction and a feeling of closeness (Gorham, 1988; Hutchins, 2003; Meharabian, 1969). Students should perceive a small social distance between the professor and the student and this can be accomplished through use of humor and encouragement in online and traditional interactions, and eye contact and hand gestures in the traditional classroom (Gorham, 1988). Moreover, Woods and Baker (2004) state that, "the integration of verbal and non-verbal immediacy communication behaviors lets professors move from mere interaction to authentic intimacy and interpersonal closeness" (p. 2).

The Institute for Higher Education Policy (2000) also emphasizes feedback as an important communication-based benchmark. One common student complaint with fully online courses is the lack of prompt feedback from the professor to the student (Hansen, Shinkle, & Dupin, 1999). Because professor-student interaction is correlated with learning and achievement (Bernard et al., 2004), it is important to provide prompt and effective feedback to students who have less traditional class time. A large proportion of feedback in traditional classrooms occurs through non-verbal cues such as body language, gestures, and facial expressions, which are not possible in online forums (Rovia & Jordan, 2004). Therefore, prompt responses to student questions, clear communication about assignments, high expectations for student performance, and professor immediacy are important features of professor-student feedback in hybrid courses.

The current study augments the extant literature, which focuses primarily on online instruction, by examining students' perceptions of their satisfaction with and performance in hybrid courses. Based on the findings of Chickering and Gamson (1987), it was expected that students' perceived satisfaction and performance in hybrid courses could be predicted using the benchmarks. Specifically, it was hypothesized that: 1) Students' perceived performance will enhance students' evaluations of course design (e.g., Oblinger & Hawkins, 2006). 2) Students' evaluations of course design will predict students' perceptions of course delivery, such as student-student interaction, professor-student interaction, and professor feedback (e.g., Shea et al., 2005). Further, it was expected that course delivery would impact student performance and satisfaction with their courses. 3) Student-student interaction will predict student performance and course satisfaction (Richardson & Swan, 2003; Whiting, 2006). 4) Professor-student interaction will predict student performance and satisfaction with their hybrid course (McKinney et al., 2006). 5) Professor feedback will predict student performance and satisfaction (Graham et al., 2001). 6) Professor expectations will predict student performance and performance satisfaction in hybrid courses.

Method

Participants

The sample included 75 undergraduate students enrolled in hybrid courses at a large, urban, open-enrollment university. Seventy percent of the sample was female and 30% was male. Eighty percent of students were enrolled in college full-time (see Table 1 for all participant characteristics).

Design and Procedure

Students enrolled in hybrid courses were invited to participate in an online survey, which was approved by the university internal review board and was administered using Sona Systems online experiment

management system. Those interested in participating reviewed the consent form and completed an online survey, which took approximately 40 minutes. Students received extra credit for participation, but were free to withdraw from the survey at any time.

Measure

A survey was developed to examine students' perceptions of hybrid courses. The survey included 61 items that measured student demographics, utility of online tools, and perceptions of course design and delivery, and perceived performance and performance satisfaction (see the Appendix for the *Student Perceptions of Course Delivery Survey*).

Student Perceptions of Course Design. Thirteen items measured student perceptions of course design using a five-point rating scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree)*. The items (i.e., #19, 21, 22, 26, 35, 36, 37, 38, 39, 40, 43, 49, 52) assessed how helpful various online tools and materials were in content mastery and how easy the website was to navigate.

Student-Student Interaction. Survey items 24, 27, and 36 examined students' perceptions of their online communication with their classmates using a five-point rating scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree)*. A Principle Component Analysis (PCA) with Varimax rotation was performed on the items and a single factor accounted for 54% of the variance. Items with factor loadings that exceeded .50 were included in the factor (see Table 2 for the factor loadings and the coefficient alpha).

Professor-Student Interaction. Items 31, 44, and 46 were standardized and then uniformly transformed to a five-point response scale that assessed students' perceptions of their interactions with their professors. A PCA yielded a single factor solution, which accounted for 41% of the variance (see Table 2 for the factor loadings and coefficient alphas).

Professor Expectations. Two items (#33 and 54) examined how well the professors conveyed their expectations of student performance. One item used a five-point scale ranging from 1 (*strongly disagree)* to 5 *(strongly agree)* and the other item was normed and transformed from a seven-point scale to a five-point scale. A PCA revealed a single factor solution which accounted for 59% of the variance (see Table 2 for the factor loadings and the coefficient alpha).

Perceived Relatedness. Items 51 and 57 assessed student perceptions of their relationship with their professors using a five-point response scale ranging from 1 *(strongly disagree)* to 5 *(strongly agree)*. A PCA with Varimax rotation was performed and a single factor emerged which accounted for 76% of the variance (see Table 2 for the factor loadings and the coefficient alpha).

Professor Feedback. A 4-item subset (i.e., #45, 53, 55, and 61) using a seven-point response scale that was transformed into a five-point response scale examined students' perceptions of faculty feedback. A PCA yielded a single factor, which accounted for 43% of the variance (see Table 2 for the factor loadings and the coefficient alpha).

Student Perceived Performance. Five items (#29, 30, 32, 58, 60) measured students' expected grades in their hybrid courses, satisfaction with quality of their participation, perceived workload in their hybrid courses, perceived performance on their assignments, and their satisfaction with their performance in the class. Reliability analysis demonstrated that internal consistency was adequate, $\alpha = .55$.

Results

Course Design and Student Performance. A series of regression analyses were performed to predict student performance using several course design variables. Involvement with the learning management system (LMS), online supplements, easy navigation, interesting assignments, and fun online activities were included in the model. Significant F-change statistics demonstrated that the inclusion of additional predictors into the model improved the variance accounted for in each of the criterion. Regression statistics for the various models tested are described below.

Table 1. *Participant Characteristics*

Variable		***n***	***%***
Age			
	18-22	35	48
	23-29	19	27
	30-37	17	16
	38-49	7	8
	Over 50	1	1
Gender			
	Female	53	70
	Male	22	30
Ethnicity			
	Hispanic	23	31
	African American	31	41
	Caucasian	11	15
	Middle Eastern	5	7
	Asian American	3	4
	Other	2	2
Academic Level			
	Freshman	10	13
	Sophomore	22	29
	Junior	23	31
	Senior	20	27
Credit Hours			
	Less than 6	9	12
	7 to 12	46	61
	13 to 18	17	23
	More than 19	3	4
Parental Status			
	No Children	56	75
	Have Children	19	25
Number of Hours			
	Less than 10 Hours	21	28
	11 to 20 Hours	3	4
	21 to 30 Hours	12	16
	31 to 40 Hours	13	17
	More than 40 Hours	26	35
Commute Time			
	5 to 15 Minutes	5	7
	16 to 30 Minutes	24	32
	31 to 45 Minutes	27	36
	46 to 60 Minutes	16	21
	More than 60 Minutes	3	4

Note. N = 75.

Table 2. *Factor Loadings for Principle Component Analysis with Varimax Rotation for Student Interaction, Professor Interaction, Professor Expectations, Perceived Relatedness, and Professor Feedback*

Scale		***α***	***AVE***	***Loading***
Student-Student Interaction		.56	54%	
	Enjoy discussions			.69
	Shared opinions			.76
	Enjoy classmates			.75
Professor-Student Interaction		.65	50%	
	Easy to contact			.71
	Encouraging			.79
	Listened			.61
Professor Expectations		.27	59%	
	Expectations communicated			.77
	Confident in my abilities			.77
Perceived Relatedness		.68	76%	
	Professor understands			.87
	Professor cares			.87
Professor Feedback		.52	43%	
	Rubric use			.56
	Feedback quality			.67
	Helpful feedback			.77
	Responsive			.60

Note. AVE = Average Variance Extracted

Student Satisfaction with Performance and Website Design. The model accounted for 17% of the variance in students' satisfaction with their performance in hybrid courses, $F(5, 74) = 2.9$, $p < .05$. Results showed that involvement with the LMS predicted satisfaction with performance ($\beta = .20$, $p < .05$); namely, those students that were very involved with the LMS ($M = 3.1$, $SD = .81$) were more satisfied with their performance in the course than were those who were uninvolved with the LMS ($M = 2.0$, $SD = 1.1$), $t(74) = 3.5$, $p < .01$. The course design model did not predict expected grades, quality of participation, or perceived performance.

Another series of regression analyses were performed to predict student performance using student perceptions of various online tools. Perceptions of course materials, syllabi, notes, discussion topics, quizzes, assignments, and exams were included in the model.

Perceived Workload and Online Tools. The model significantly predicted students' perceptions of hybrid course workload, accounting for 26% of the variance, $F(7, 74) = 3.4$, $p < .01$. Students who found the online assignments helpful ($\beta = .26$, $p < .01$) perceived the hybrid course workload as similar to that of

face-to-face courses. Specifically, students who found the assignments helpful (*M* = 3.1, *SD* = .70) and very helpful (*M* = 3.5, *SD* = .83) found the workload more similar to that of traditional courses than did students who did not find the assignments helpful (*M* = 2.4, *SD* = 1.4), *t*(74) = 3.1, *p* < .01. The model did not significantly predict expected grade, quality of participation, perceived performance, or satisfaction with performance.

Course Design and Course Delivery. A series of regression analyses were conducted to predict the course delivery factors using the course design variables. In the first series of analyses, involvement with the LMS, online supplements, easy navigation, interesting assignments, and fun online activities were included in the model as predictor variables and student-student interaction, professor-student interaction, professor expectations, professor relatedness, and professor feedback were the criterion variables. A second set of analyses predicted the course delivery factors using students' perceptions of the various online tools (e.g., course materials, syllabi, notes, discussion topics, quizzes, assignments, and exams).

Student Perceptions of Course Delivery and Website Design. The model accounted for 26% of the variance in professor expectations, 33% of the variance in professor-student interaction, and 39% of the variance in student-student interaction (see Table 3 for the F-statistics and beta coefficients).

Table 3. *Regression Analyses for Students' Perceptions of Course Delivery and Website Design*

Variable	Faculty Expectations		Professor-Student Interaction		Student-Student Interaction	
	β	F	β	F	β	F
Involvement with LMS	-.05	4.9**	-.04	6.7**	-.00	8.7**
Online content	.08		.14		.19*	
Easy to navigate	.17		.24		.33**	
Interesting assignments	.28*		-.09		.21	
Fun Activities	.06		.33**		.03	

Note. * p < .05; ** p < .01.

Student Perceptions of Course Delivery and Online Tools. Thirty-four percent of the variance in professor-student interaction was accounted for by students' perceived utility of the various online tools. The model also predicted professor expectations, accounting for 24% of the variance, and 29% of the variance in professor feedback (see Table 4 for the F-statistics and beta coefficients).

Table 4. *Regression Analyses for Students' Perceptions of Course Delivery and Online Tools*

Variable	Professor-Student Interaction		Professor Expectations		Professor Feedback	
	β	F	β	F	β	F
Materials	.08	4.8**	.14*	3.1**	-.00	3.5**
Syllabus	.06		.00		.03	
Notes	.18*		.21**		.10	
Discussions	.29*		.12		.09	
Quizzes	-.07		-.11		.00	
Assignments	.19**		.13		.12**	
Exams	-.03		-.10		.01	

*Note. * p < .05; ** p < .01.*

Course Delivery and Student Performance. A series of regression analyses were conducted to predict student performance using the course design variables. Student-student interaction, professor-student interaction, professor expectations, professor relatedness, and professor feedback were included in the model. Results for the regression analyses follow.

Expected grades. The model accounted for 19% of the variance in expected grades, $F(5, 73) = p < .01$, with professor expectations as an independent predictor ($\beta = -.37$, $p < .01$). Students whose professors communicated very high expectations ($M = 1.5$, $SD = .66$) expected lower grades in their hybrid courses than did students whose professors seldom expressed high expectations ($M = 1.8$, $SD = .69$), $t(73) = 3.0$, $p < .01$.

Perceived Workload. The course delivery factors accounted for 24% of the variance in perceived workload, $F(5, 73) = 4.4$, $p < .01$. Professor feedback significantly predicted workload ($\beta = .99$, $p < .01$). Post hoc analyses demonstrated that students who thought that their professors' feedback was somewhat helpful ($M = 3.3$, $SD = .79$) perceived the workload to be similar between face-to-face and hybrid courses in comparison to students who found their professor's feedback unhelpful ($M = 2.5$, $SD = 1.4$), $t(73) = 3.0$, $p < .01$. Furthermore, students whose professors responded quickly to questions ($M = 3.5$, $SD = .85$) perceived the workload in hybrid courses to be similar to traditional courses in comparison to students who received slow feedback from faculty ($M = 3.0$, $SD = .00$), $t(73) = 3.8$, $p < .01$.

Perceived Performance. The model accounted for 18% of the variance in students' perceived performance in their hybrid courses, $F(5, 73) = 3.0$, $p < .05$. However, none of the individual predictors significantly predicted perceived performance.

Performance Satisfaction. The course delivery factors accounted for 26% of the variance in students' performance satisfaction, $F(5, 73) = 4.7$, $p < .01$, with student-student interaction ($\beta = .24$, $p < .05$) and professor expectations ($\beta = .28$, $p < .05$) as an independent predictors of student performance satisfaction. Pair-wise comparisons indicated that students who enjoyed communicating with their classmates ($M = 3.3$, $SD = .82$) were more satisfied with their performance in their hybrid courses than were students who did not enjoy interacting with their classmates ($M = 2.0$, $SD = 1.1$), $t(73) = 1.9$, $p < .05$. Moreover, students whose professors communicated very high expectations ($M = 3.2$, $SD = .72$) were more satisfied with their performance in their hybrid course than were students whose professors seldom communicated high expectations ($M = 1.3$, $SD = 1.2$), $t(73) = 1.8$, $p < .05$.

Discussion

Overall, this study found that students' perceived satisfaction and performance in hybrid courses was predicted using the benchmarks for course design and delivery (Chickering & Gamson, 1987). The findings bolster previous research by demonstrating the applicability of using the benchmarks to evaluate hybrid courses (Grant & Thornton, 2007). Specifically, user-friendly websites which increase student involvement, house well-designed assignments, provide a forum for faculty–student communication, build a community of learners, and have a mechanism for providing prompt feedback and communicating high expectations were noted as good practices in hybrid instruction.

Students' perceived performance and satisfaction was predicted by students' evaluations of course design, supporting hypothesis 1. Course design was defined by a professor's ability to create a website that was easy to navigate, contained helpful online resources, and provided a medium for communication. The findings showed that ease of website navigation and well-designed assignments predicted students' perceived workload in the course. Marsh (1977) established that students defined workload as one of the primary dimensions of effective teaching. Furthermore, students perceive higher levels of performance when they also perceive the amount of workload in the course to be reasonable (Entwistle & Tait, 1990).

Increased student involvement with the LMS also enhanced students' satisfaction with their performance in the course. Similarly, Felder, Felder, and Dietz (1998) found that students enrolled in courses that utilized active learning strategies perceived a reduction in workload in comparison to those in lecture-based courses. Furthermore, their findings suggested that students involved in active learning were less likely to withdraw from courses and more likely to be satisfied with their education and graduate from college.

Students' evaluations of course design also predicted students' perceptions of course delivery (Shea et al., 2005), which supported hypothesis 2. Course delivery was defined by a faculty member's ability to communicate high expectations, provide prompt, helpful feedback, establish immediacy and presence, and create a forum for a community of learners. The results demonstrated that students who thought that the assignments were interesting also believed that their professors communicated high expectations of their performance. Students who had fun completing the course activities also experienced positive interactions with their professors, and students who easily navigated the website and thought that the online content supplemented the in-class portion of the course experienced positive interactions with their classmates. Moreover, faculty who posted helpful discussions and assignments also had good communication with their students. Finally, professors who communicated high expectations also provided students with helpful online materials and notes, and professors who posted helpful online assignments also communicated high expectations of their students. Taken together, course design impacts students' perceptions of their interactions with their classmates and professors and their beliefs about what is expected from them during the course. Because a sense of community is influenced by the professor as well as students, it is important for professors to create online assignments that demand participation, engagement, and interaction among classmates (Graham et al., 2001).

In general, it was hypothesized that course delivery would affect students' perceived performance and performance satisfaction, which was supported by the results. Student performance was examined by students' perceptions of their performance, their expected grade, and their level of satisfaction with their performance. Course delivery predicted students' expected grades, perceived workload and performance, and performance satisfaction. These findings support Graham and colleagues' (2001) suggestions for distance education instructors, which have been established as essential in providing quality distance education (Institute for Higher Education Policy, 2000).

Specifically, our findings supported previous research and hypothesis 3 by demonstrating that student-student interaction was related to students' performance satisfaction. Put simply, students who enjoyed interacting with their classmates, enjoyed discussing course material with their peers online, and felt comfortable sharing their opinions and views were more satisfied with their performance in their hybrid courses. Spatirui, Quinn, and Hartley (2007) found that online discussion forums established an egalitarian environment for sharing ideas that many students would have been hesitant to discuss in traditional classes. Our findings further develop those of Spatirui and colleagues by revealing that opportunities to participate in continued discussion during the online portion of the course increases students' satisfaction with their participation.

It was hypothesized that courses demonstrating professor-student interaction (i.e., faculty members who encouraged and listened to students, created an environment that allowed students to safely share their opinions, and were easy to contact) would have students with positive perceptions of their performance and satisfaction. Hypothesis 4, however, was not supported by our findings. Rather, specific aspects of professor communication (e.g., professor feedback and expectations) were more powerful predictors of students' perceived performance and performance satisfaction.

The current study made evident the necessity of prompt, helpful feedback for hybrid students, endorsing hypothesis 5 and previous research (Graham et al., 2001; Hansen et al., 1999). Specifically, students who received prompt, helpful feedback perceived their workload to be similar to that of a traditional course. It follows that faculty who use rubrics, are responsive to student emails, and provide helpful responses to student questions will limit the amount of time that students waste trying to interpret assignments. Clear and effective feedback has been associated with improved student performance and satisfaction (Mandernach et al., 2006); however, this study did not substantiate those findings, perhaps because student perceptions of performance were assessed rather than direct measures of performance such as grades.

Additionally, it was predicted that faculty members' communication of high expectations would influence students' perceptions of their performance and their satisfaction with their performance in hybrid courses. The results provided supporting evidence for hypothesis 6 and findings from prior studies (Chickering & Gamson, 1987; Graham et al., 2001; Grant & Thornton, 2007). In particular, faculty who communicated high expectations, but also communicated confidence in their students' abilities to meet those expectations, had students who were more satisfied with their performance, despite the fact that they expected lower grades in their courses. Even if students did not expect to make an A in their hybrid course, it appears they felt satisfied that they had performed optimally in the class, provided their professors had high expectations that were tempered with encouragement.

Findings from the current study provided support for many of Chickering and Gamson's (1987) benchmarks. However, the benchmarks place substantial emphasis on teaching presence, instructor immediacy, and social presence. The current study did not endorse those particular benchmarks. It could be that immediacy and presence are more necessary in fully online courses, when students have no face-to-face interaction with faculty. In the instance of hybrid courses, much of the communication between faculty and students occurs during face-to-face meetings thereby limiting the importance of those benchmarks in predicting students' perceived performance. Future research should compare students' perceived performance in hybrid and fully online courses to address this issue. Future research should also use the benchmarks to predict students' perceived performance and actual performance in hybrid courses. A limitation of this study is its reliance on students' expected grades and students' perceived performance in their hybrid courses. A comparison of actual performance with perceived performance would prove insightful.

Those currently teaching hybrid courses or faculty who intend to teach hybrid courses should employ the benchmarks when designing their hybrid class, as this research and previous studies have demonstrated the utility of the benchmarks in predicting student learning outcomes and satisfaction. In addition, faculty should design courses to provide students with ample opportunity to converse online about the material as students' satisfaction was related to positive interactions with classmates. Lastly, professor communications should be timely, effective, and express high expectations of student performance.

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Appendix

Student Perceptions of Course Delivery Survey

Please provide a response for every question.

1. What is your age?
2. What is your sex?
    a. Female
    b. Male
3. Are you a
    a. Full-time Student
    b. Part-time Student

4. How many credit hours do you take at University of Houston-Downtown?
    a. < 6 credit hours
    b. 7 to 12 credit hours
    c. 13 to 18 credit hours
    d. > 19 credit hours

5. Do you have to commute to campus for other classes?
    a. Yes
    b. No
6. What is your academic level?
    a. Freshman
    b. Sophomore
    c. Junior
    d. Senior
7. What is your ethnic/racial background?
    a. White/Caucasian
    b. Black/African-American
    c. Hispanic/Latino
    d. Asian-American
    e. Native American
    f. Indian/Middle Eastern
    g. Other
8. I expect to receive a(n)___grade in this class.
    a. A
    b. B
    c. C
    d. D
    e. F
9. How many classes have you taken that used Vista to supplement the course materials?
10. How many fully online classes have you completed?
11. How much time does it take you to reach campus on an average day?
    a. From 5 to 15 minutes
    b. From 16 to 30 minutes
    c. From 31 to 45 minutes
    d. From 46 minutes to an hour
    e. More than an hour
12. Which of the following living conditions most closely describes your household situation this semester?
    a. Alone
    b. With roommate
    c. With parents
    d. With other family
    e. With spouse
13. How many hours do you work at a job?
    a. < 5 hours per week
    b. 6 to 10 hours per week
    c. 11 to 20 hours per week
    d. 21 to 30 hours per week
    e. 31 to 40 hours per week
    f. > 40 hours per week
14. I am the main caregiver for my children.
    a. Yes
    b. No

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining an answer is considered a response.

15. Please provide the name of your professor.
16. Please insert your class (i.e., child psychology).
17. Is your class
    a. Face-to-face course
    b. Hybrid course
    c. Online course

d. Other

Please provide a response for every question.

18. Did you feel comfortable using new technology (i.e., navigating Vista, browsing the Web, etc.)?
    a. Not comfortable at all
    b. Not very comfortable
    c. Comfortable
    d. Somewhat comfortable
    e. Very comfortable
    f. Not applicable
19. The material on Vista helped me get involved with the course content.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
20. The material used in the course could be more helpful.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
21. The syllabus posted on Vista was helpful in helping me understand the course requirements and grading standards.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
22. The Vista web site used in this course was well organized.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
23. In general, I found that using computer technology in my courses has been
    a. Not helpful at all
    b. Not often helpful
    c. Sometimes helpful
    d. Often helpful
    e. Very often helpful
    f. Not applicable
24. I enjoyed interacting with my classmates using Vista discussions.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
25. The online portion of this course allowed great flexibility.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided

d. Moderately agree
e. Strongly agree
f. Not applicable

26. The required online materials supplemented the in-class activities.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
27. I felt comfortable sharing my opinions and ideas with my classmates and professor.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
28. This course has made me sensitive to online social skills.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
29. Overall, I was satisfied with the quality of my participation in this course.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
30. The amount of work in this course was comparable to my other courses.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
31. I was able to get in touch with my course instructor as stated on the syllabus.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
32. Overall, I was satisfied with my classmates' level of participation in this class.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
33. The expectations of me as a student were clearly stated and I fully understood my responsibilities in the course.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree

e. Strongly agree
f. Not applicable

34. I would recommend this course to other students.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
35. Online lecture notes helped me learn more about the course subject.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
36. Online discussions helped me learn more about the course subject.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
37. Practice quizzes helped me learn more about the course subject.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
38. Online assignments helped me learn more about the course subject.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
39. I was satisfied with the easy access in navigating this course website.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
40. I enjoyed being able to take the tests online.
    a. Strongly disagree
    b. Moderately disagree
    c. Undecided
    d. Moderately agree
    e. Strongly agree
    f. Not applicable
41. I was satisfied with the Help Desk's response time and availability.
    a. Strongly disagree
    b. Moderately disagree
    c. Disagree
    d. Moderately agree
    e. Strongly agree
    f. Not applicable

This questionnaire contains items that are related to your experience with your instructor in this class. Instructors have different styles in dealing with students, and we would like to know more about how you have felt about your encounters with your instructor. Your responses are confidential. Please be honest and candid.

Listed below are questions for this section of the survey. Please provide a response for every question. If you are given the option to decline to answer a question, then declining to answer is considered a response.

42. How many days did it take for your instructor to response to email?
    a. 1 business day
    b. 2 business days
    c. 3 business days
    d. 4 or more business days
43. The activities in this course were fun to do.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
44. My instructor listens to how I would like to do things.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
45. How available was your instructor to you online?
    a. Always Available
    b. Often Available
    c. Seldom Available
    d. Never Available
46. My instructor encouraged me to ask questions and provide feedback.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
47. While doing activities in this course, I felt like I had a choice.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
48. I didn't feel very good about the way my instructor interacted with me.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree

49. I enjoyed the activities that allowed me to interact with my classmates.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
50. I feel that my instructor provides me choices and options.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
51. I feel that my instructor cares about me as a person.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
52. I would describe the activities in this course as very interesting.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
53. Do you feel that the feedback the professor provided on written assignments helped you to better understand the course material?
    a. Yes
    b. No
54. My instructor conveyed confidence in my ability to do well in the course.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
55. How do you rate the quality of your professor's feedback on your written assignments?
    a. Excellent
    b. Good
    c. Average
    d. Below Average
56. I didn't really have a choice about doing the course activities.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
57. I feel understood by my instructor.

a. Strongly disagree
b. Moderately disagree
c. Somewhat disagree
d. Neutral
e. Somewhat agree
f. Moderately agree
g. Strongly agree

58. I think I did pretty well with the course activities, compared to other students.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
59. What kind of feedback would you like to receive from future professors in a hybrid/online course?
60. I am satisfied with my performance in this class.
    a. Strongly disagree
    b. Moderately disagree
    c. Somewhat disagree
    d. Neutral
    e. Somewhat agree
    f. Moderately agree
    g. Strongly agree
61. Did your professor provide you with feedback on your written assignments using a rubric?
    a. Yes
    b. No

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