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Four hundred and fifty three undergraduate students were surveyed at one CCCU institution regarding perceptions of what "exists" and what they "value" related to university pedagogy, learning activities, assessments, and learning relationships. Researchers ranked students' values and examined gaps in students' perceptions of what students say exists at the university as compared to what they value. The highest ranked values primarily related to learning relationships, including "demonstrates Christian ethics in interactions with others" and "integrates Christian worldview in the teaching of course content." The factor that most explained satisfaction with teaching practices was the "Methods Factor" and the single item that most explained student satisfaction with teaching practices was, "provides interesting lessons."

Current accreditation procedures support a movement towards a more learner-centered environment. A learner-centered environment is challenging to define. As the ideal learning environment relates to pedagogy, at one end of the continuum, some university educators proclaim that the ideal pedagogy is the dissemination/lecture method coupled with exams and research papers graded on pre-determined grading scales. At the opposite end of the continuum, some educators suggest that students should be given the freedom to explore issues of personal concern, self-select content and methodology, connect theory and practice, and be graded on holistic learning standards. The result is a tension that exists in defining "ideal" learning environments.

This study was conceptualized when the authors were provided a grant to study one Christian university's undergraduate population of 2,708 students, assessing student perceptions of what exists and what they value related to (1) effective pedagogy (what the professor does), (2) learning activities (what the professor designs for the students to do), (3) assessments (how the professor measures student learning), and (4) learning relationships (the professor/student relationship) that support ideal learning at the university. Though the scope of this study also included studying the professors' perceptions of teaching practices, as well as gaps between student and professors' values, the scope of this article will focus just on the quantitative data related to student perceptions.

Research Questions

Key research questions for this article are as follows:

1. From the students' perspective, what key indicators in pedagogy, learning activities, assessment, and re lationships are perceived as promoting effective learning at the university level?
2. How do these students' values, regarding what posi tively contributes to their learning, compare with what they perceive exists at their Christian univer sity?
3. Overall, what factor most contributes to student satisfaction with teaching practices at this Christian university?

Importance of Study

Believing that meaningful conversation focused on defining learning-centered education requires listening to student voices, the authors sought comprehensive research on student perceptions in Christian learning environments. To date, the researchers could not locate studies of Christian university environments that examined student perceptions of effective pedagogy, learning activities, assessments, and learning relationships from a Christian perspective. This study will begin to fill this void in the literature and also contribute to aligning one Christian university's learning environment to educational standards and institutional goals as they move toward a more learner-centered environment.

Conceptual Definitions of Variables and Terms

Four key concepts were intentionally imbedded in the Teaching Practices Survey. "Pedagogy" refers to what the professor does in the university classroom setting (e.g., methodology). "Learning activities" refers to what the professor designs for the students to do so that the students might learn. "Assessment" refers to how the professor attempts to measure student learning. Items related to "learning relationships" were imbedded throughout the quantitative section of the survey. Learning relationship items were present to identify some key values and campus concerns as well as to collect information regarding comfort and safety between the professor and the student, which is identified in the brain research as an important component to learning (Driscoll, 2000; Egan, 2001; Jennings and Caulfield, 1997; Wolfe, 2003).

Review of the Literature

Introduction

Much of the literature related to effective teaching practices revolves around the teaching, learning, assessment cycle. Literature related to effective teaching emphasizes the variability of the learner, the critical aspect of immediate, specific, and accurate feedback, and the organization of learning so as to facilitate recall (Fowler, 1999; Jensen, 1998; McKeachie, 1994). Literature related to effective learning activities emphasizes the importance of authentic learning that parallels what the learner will need to do in his or her field and the critical importance of deep processing of information for thorough understanding and later recall (Driscoll, 2000; Egan, 2001; Hardiman, 2001; King-Friedrichs, 2001; Jensen, 1998). Assessment literature emphasizes the importance of having the assessment "fit" the learning (McKeachie, 1994). So, for example, if the student is a radio-television major, a multiple choice test is not going to examine the students' understanding of the content. However, a video production will demonstrate student understanding and application of critical content in his or her field. Finally, learning relationships, the central hub of the teaching/learning/assessment cycle, provide the safe environment in which a student can take risks, ask questions, make mistakes, get help, and experience personal and professional growth in knowledge, skills, and application (Cain and Cain, 2001; Fowler, 1999).

Effective Pedagogy

Active learning is much more efficient than passive learning; however, differentials in learning styles readily exist in every classroom. Egan and Greeno's research (1973) found that "some learners learned most readily by the formula, or algorithmic method, while others learned more effectively by the meaning method" (p. 291). "Because of interactions among student characteristics, teacher characteristics, goals, subject matter and methods (Cronbach and Snow, 1977), flexibility and variability of approaches are more likely to be effective than a single method. Any given method is likely to be effective for some students and ineffective for others" (McKeachie, 1994, p. 291). Hence, a professor is wise to vary the types of approaches in the university classroom, from lecture, to small group discussion, to hands-on activities, to problem-solving think tanks.

Organizing key concepts by providing graphics and models to capture key content of subject matter provides structures around which students can build their learning (Orlich, et al, 2004). Making connections between what students already know with what they are about to learn, along with coordinating objectives, readings, and learning experiences strengthens connections and provides coherency in the classroom (Burden and Byrd, 2003, Hardiman, 2001; Kauchak and Eggen, 2003).

Learning Activities

Current research in neuroscience indicates that the learning environment should be orchestrated so as to facilitate "'strength of connections between neurons that participate in the encoding experience' because these are the experiences that 'have a high likelihood of being remembered subsequently'" (Brandt, 2000 in King-Friedrichs, 2001). Hence, writing, verbalization, questioning, and elaboration of information are valuable tools for deep processing and long-term memory (Carter, 1997; King-Friedrichs, 2001; McKeachie, 1994; Schacter, 1996, in King-Friedrichs, 2001). Simply listening to and then repeating something, such as what might be accomplished on a multiple choice or true/false exam, creates a scenario in which we have difficulty finding this information when we want to recall it later, outside the classroom situation. However, when

students elaborate, process, talk about, write about, explain, summarize, and question-"we are more likely to remember it [the information] when we need to use it later" (McKeachie, 1994, p. 32).

Feedback is essential to learning and most meaningful when it is "consistent, specific, and timely" (Fowler & D'Arcangelo, 1999; Jensen, 2000; Markowitz & Jensen, 1999; McKeachie, 1994). Feedback is naturally built into an active learning environment; whereas, true/false and multiple choice questions have feedback when the professor says the student is "right" or "wrong." Authentic learning, such as dramatic performances, debates, musical compositions and performances, and juried art exhibits are examples of learning activities that have built in feedback as well as assessment opportunity (Hardiman, 2001).

Assessments

Professors vary in how they assess student learning. Some professors prefer objective formats; whereas, others prefer essay questions that are time-consuming to grade but that demonstrate the depth of student knowledge. A classic study by McCluskey in 1934 indicated that students study differently for objective versus essay tests. His study involved two groups. One group of students were told that they were going to have an objective test. The other group was told they were going to have an essay test. When the test day came, they all received a test that had a combination of objective and essay questions. Both groups made equivalent scores on the objective section of the test; however, the students that had studied for the essay questions did far superior on the essay section of the test. This study demonstrated that students study differently for different types of test construction and that studying for essay questions is superior over studying for objective questioning only (McKluskey, 1994).

Alternatives to conventional exams, such as hands-on science labs, juried papers, dramatic and musical presentations, portfolios, and problem-solving activities are highly lauded by researchers and professors alike as more meaningful than studying for objective tests and lead to longer, more-meaningful retention of material (Jensen, 1998, 2000; Hardiman, 2001; Kauchak & Eggen, 2003; King-Friedrichs, 2001; McKeachie, 1994). The challenge, of course, is providing an appropriate rubric for grading such open-ended tasks, finding the time to appropriately assess such projects, and creating the authentic assessment to start. Perhaps Daniel Appell's (2000) "Way of Being" question can guide us, "What do you want the students to be like in relationship to the subject matter ten years from now?" This question universally sheds light on how one might approach learning and assessment design in the university classroom.

"In all cases, the method of assessment should fit the purpose of instruction. If students are expected to learn to write well, then competency can hardly be measured by multiple-choice questions about grammar" (Keefe & Jenkins, 2002, p.47). Professors should examine their field beyond the classroom to determine the appropriate method of assessment.

Learning Relationships

Relationships are the central hub of learning. Professorial/student relationships can contribute to flow in learning or completely deflate student motivation. Fear or threat closes down students' emotions, inviting chemical brain reactions that release chemicals that shut down learning (Jensen, 2000). Conversely, a comfortable, loving environment where students feel safe to ask questions, get help, and express their needs, invites a nurturing atmosphere conducive to learning (Fowler, 1999).

When university students are asked to recall their most positive and negative experiences related to teaching, they consistently record stories that describe effective instructors who deeply cared about them, hostile instructors who humiliated and hurt them, or passive instructors who did not care at all (Hetzel, 2004). Rick Weissbourd, lecturer at Harvard Graduate School of Education, has observed "again and again students' exquisite sensitivity to the qualities of their teachers-both their fierce loyalty to the teachers they trust and their keen alertness to hypocrisy, injustice, and indifference. Research shows that even when schools are massively restructured, students often remain strangely oblivious to new structures and practices. When asked about the strengths and weaknesses of their schools after these reforms, students focus on the strengths and weaknesses of individual teachers" (Weissbourd, 2003, p.7; Little, 1999).

In a member institution of the Coalition of Christian

Colleges and Universities (CCCU), such as the Christian university under study, the researchers predicted that the context for positive relationships would also naturally envelope Christ-like character and Christian worldview as an integral part of the learning relationship. Hence, Christian worldview items were added to the survey.

Procedures and Methodology

The researchers surveyed the literature, constructed the survey instrument, and then disseminated the final draft to 453 undergraduates at a Christian university during spring 2003. Using descriptive and multivariate statistics, the researchers then analyzed: (1) what students perceive is valuable for their learning, (2) gaps between student perceptions of what exists and what they value for learning, and (3) the most significant variables that contribute to student satisfaction in the learning environment.

Survey Construction

Researchers Hetzel and Walters (2003) wrote an original survey because they did not locate a survey that attempted to get at the basic question of student satisfaction with teaching practices at a Christian university as reflected in pedagogy, learning activities, assessments, and learning relationships. Additionally, the researchers wanted to ask item 85, "Overall, on a scale of 1-10, my level of satisfaction with teaching practices at _____ University is ____" and determine, through multiple regression, factors that most contribute to student satisfaction.

To construct the Teaching Practices Study, the researchers began with a review of the literature, identifying key indicators that contribute to effective learning environments. Next, Hetzel presented the broad purposes of the study to a graduate class of approximately 20 practicing teachers in December 2002 and had the graduates work in collaborative groups to define variables that should be considered for a university teaching practices survey.

Following this conceptual development, the researchers developed a draft that captured key indicators of pedagogy, learning activities, and assessment, infusing variables that contributed to emotional safety within the learning relationship of professor and student.

After developing the initial draft, the researchers worked independently to refine the draft. Then, they brought the two separate survey drafts back together and reduced redundancy by merging and eliminating items. The next draft was then brought to a graduate class of 22 practicing experts. These experts provided individual input by written comment and corporately through discussion. Then, several university professors determined the suitability of the survey content based upon their professional expertise.

Reliability

After reviewing the literature, consultation, and survey revisions, Hetzel administered the survey on two occasions, three weeks apart, to a world civilization class, to establish reliability of each item through a test-retest procedure. Thirty students were present during both survey administrations. Using a T-test, the mean of the means were compared to determine whether or not each variable was interpreted similarly during both administrations. Twelve items were removed from the survey because they did not prove reliable in this setting.

Validity

The validity of this survey was established through content validity. Variables included in the survey were selected from the literature. Additionally, at least fifty educators also provided input as to what good teaching practices look like at the university setting, verifying validity of the items at various stages of the draft.

Sensitivity

The majority of items on the survey use a five-point Likert scale (0-4) for measuring the influence of each independent variable. Item 86, the key dependent variable, "Overall, on a scale of 0-10, my level of satisfaction with teaching practices at Christian university is: _____," was an eleven-point scale.

Generalizability

The 453 students who responded to this survey represent 16.7 % of the population of 2,708 undergraduate students enrolled at this Christian university during spring 2003. The survey administration took place

in general education classes identified by the Associate Provost to have a mix of gender and class so as to gather an approximate stratified sample in a limited time frame. The respondents paralleled the approximate percents of the Freshman, Sophomore, and Junior classes and had less than desirable representation for the Senior class. See Table 1.0.

Table 1.0				
Frequency of Respondents by Class				
Value Label	Frequency of Respondents	Percent of Respondents Spring 2003	Percent of Respondents	Undergraduate Enrollment Spring 2003 (2,708 enrolled)
Freshmen	114	25.5%	23%	
Sophomore	143	32%	21%	
Junior	108	24.2%	25.5%	
Senior	81	18.1%	33%	
(Missing Response)		1.5%		
N = 453 Valid cases = 446 Missing Cases = 7				

Additionally, the gender balance of the sample also represented the approximate ratio of male to female students enrolled at the university at the undergraduate level with a little more representation of female students than was proportional to the undergraduate enrollment during the spring 2003 semester. See Table 2.0.

Table 2.0				
Frequency of Respondents by Gender				
Value Label	Frequency	Percent of Respondents Spring 2003	Percent of Respondents	Undergraduate Enrollment Spring 2003 (2,708 enrolled)
Male	107	23.6%	37.7%	
Female	302	66.7%	62.3%	
Did not respond to gender identification	44	9.7%		
N = 454				

Even though class and gender representation of the sample paralleled the larger population of the university, results should not be generalized to universities outside this Christian institution.

Of the 453 students who took the student survey, the mean age was 19.83; however, the range was from 17 to 51. The average number of units completed to date was 51. Socioeconomic information was not gathered.

Seventy three percent of the undergraduates who responded to the survey identified themselves as Caucasian/White; whereas, 22% identified themselves as a minority culture. Five percent did not respond to this question. See Table 3.0.

Table 3.0			
Frequency of Respondents by Ethnicity			
Value Label	Frequency	Percent of Respondents Spring 2003	Total University Undergraduate Population
Caucasian/ White	333	73.5	2,070 = 75%
Asian	36	7.9	236 = 9%
Hispanic	40	8.8	232 = 9%
African American/ Black	7	1.5	58 = 2%
American Indian	1	.2	11 = .5%
Other	12	2.6	17 + 90 international = 4%
Did not respond	24	5.3	11 = .5%
N = 453			

2,725 Traditional Undergrads

Final Surveys

The final version of the Teaching Practices Survey can be found in Appendix A. There is a total of 86 items on the student survey, plus an additional 63 items because of the second response required on items #1-63. Items #1-63 require two responses: "What exists?" and "What do I value?" Therefore, there is a total of 149 items on the student survey (86 plus 63).

Because items #1-63 Likert Scales require two responses, the second response to each Likert Scale (what is valuable for learning), was coded #101-163 for ease of data comparison. In other words, in data comparisons, one would compare item #1 with item #101, item #2

with item #102, item #3 with item #103 and so forth. Items #87-100 do not exist on the student survey because the researchers realized that comparing what exists and what is valuable for student learning would occur with more ease if the data was entered with a 100 point difference (#1 to be compared with #101, #2 to be compared with #102, and so forth). Items labels #101, #102, #103, and so forth were not included on the actual student surveys so as to reduce visual congestion.

The final version of the Teaching Practices Survey (Appendix A) also includes a series of open-ended questions in an attempt to gather qualitative and quantitative information. A complete analysis of the qualitative study will not be included in this report.

Hypotheses

We would expect a range of differentials between student perceptions of key indicators of effective pedagogy, learning activities, and assessment when comparing reports of what exists with what is ideal for learning.
We would expect that items related to learning relationships would be the most predictive factor related to satisfaction with teaching practices at this Christian university.
Report and Analysis of the Data

QUESTION #1: *From the students' perspective, what key indicators in pedagogy, learning activities, assessment, and relationships are perceived as promoting effective learning at the university level?*

On a 0 to 4 Likert Scale, with 4 representing the most value for student learning, undergraduates indicated professors who "demonstrate Christian ethics in interactions with others" as most important to their learning (item 27, mean of 3.835). "Utilizes portfolios for final assessment" (item 1, mean of 1.923) was ranked as least valuable by the undergraduates for student learning. See Appendix B for a full report for variables #1-63. See Table 4.0 that follows for ranked variables that had mean averages of 3.6 or higher. Table 4.0 is a summary of the highest ranked variables and Tables 5.0-7.0 that follow separate out the variables in categories.

Table 4.0

Ranked Variables that Average 3.6 and Higher
as Students Report These Variables Are Valuable to Their Learning

	Ranking	Student "values"
127: "Demonstrates Christian ethics in interactions with others"	1	3.835
129: "Treats all students equitably, regardless of gender"	2	3.788
130: "Treats all students equitably, regardless of ethnicity"	3	3.781
128: "Integrates Christian worldview in the teaching of course content"	4	3.743
142: "Provides clear, specific criteria for assignments"	4	3.743
107: "Provides interesting lessons"	5	3.674
131: "Treats all students equitably, regardless of disabilities"	6	3.663
106: "Demonstrates the relevancy and application of material to be studied"	6	3.663
137: "Provides help when students get stuck on something"	7	3.674
119: "Provides a grading structure that is defined and well-structured"	8	3.636
139: "Intentionally coordinates course assignments with course objectives"	9	3.632
126: "Prays for and with students in and out of class"	10	3.625
152: "Provides time in class to clarify assignment expectations"	11	3.614
138: "Clearly develops course outcomes (what students are to produce)"	12	3.591
141: "Intentionally coordinates course readings with course assignments"		

157: "Creates assignments that are at the appropriate level of challenge"	14	3.583
111: "Provides accurate feedback on students' understanding and misunderstanding of course content"	15	3.580
134: "Is sensitive to students' family, social, and work obligations"	16	3.568
N = 453		

Students' Teaching Methodology Values

Highest student values in teaching methodology begin with "integrates Christian worldview in the teaching of course content" (item 128, 3.743 mean). Then, three separate issues related to teaching follow: "provides interesting lessons," (item 107, 3.674 mean), "demonstrates the relevancy and application of material to be studied," (item 106, mean 3.663), and "provides help when students get stuck on something" (item 137, 3.640 mean). Interestingly, both items 128, 106, and 107 relate to content; whereas, item 137, "provides help when students get stuck on something" is very much a relational issue as well as a teaching methodology issue. Refer to Table 5.0 for ranked responses for this question.

Table 5.0

Highest Values (3.5 orabove) in Teaching Methodology

	Ranking	Student "values"
128: "Integrates Christian worldview in the teaching of course content"	4	3.743
107: "Provides interesting lessons"	5	3.674
106: "Demonstrates the relevancy and application of material to be studied"	6	3.663
137: "Provides help when students get stuck on something"	7	3.640
111: "Provides accurate feedback on students' understanding and misunderstanding of course content"	15	3.580
N = 453		

Students' Values for Learning Activities

Table 6.0 lists the four highest student values for learning activities. All four variables related to clarity and coherency: "provides clear, specific criteria for assignments" (item 142, 3.743 mean), "clearly develops course outcomes (what students are to produce) (item 138, 3.591 mean), "intentionally coordinates course readings with course assignments" (item 141, 3.589 mean), and creates assignments that are at the appropriate level of challenge" (item 157, 3.583 mean).

Table 6.0

Highest Values (3.5 orabove) in Teaching Methodology

	Ranking	Student "values"
142: "Provides clear, specific criteria for assignments"	4	3.743
138: "Clearly develops course outcomes (what students are to produce)"	12	3.591
141: "Intentionally coordinates course readings with course assignments"	13	3.589
157: "Creates assignments that are at the appropriate level of challenge"	14	3.583
N = 453		

Students' Values for Assessments

The highest student values for assessments, found in Table 7.0, also relate to clarity and coherency: "provides a grading structure that is defined and well-structured" (item 119, 3.636 mean), "intentionally coordinates course assignments with course objectives" (item 139, 3.632 mean), and "provides time in class to clarify assignment expectations" (item 152, 3.614 mean).

Interesting, item 152, "provides time in class to clarify assignment expectations" is, once again, an item that overlaps with relational issues.

Table 7.0		
High Values (3.5 or above) in Assessments		
	Ranking	Student "values"
119: "Provides a grading structure that is defined and well-structured"	8	3.636
139: "Intentionally coordinates course assignments with course objectives"	9	3.632
152: "Provides time in class to clarify assignment expectations"	11	3.614

Students' Values in Learning Relationships

Relationships are the highest value for these Christian university undergraduates. The item that these students ranked the highest is that their professors "demonstrate Christian ethics in interactions with others" (item 127, 3.835 mean). Following closely behind this value of Christian ethics are three critical relational values: "treats all students equitably, regardless of gender" (item 129, 3.788 mean), "treats all students equitably, regardless of ethnicity" (item 130, 3.781 mean), and "treats all students equitably, regardless of disabilities" (item 131, 3.663 mean). See Table 8.0.

Table 8.0		
High Values (3.5 or above) in Relationships		
	Ranking	Student "values"
127: "Demonstrates Christian ethics in interactions with others"	1	3.835
129: "Treats all students equitably, regardless of gender"	2	3.788
130: "Treats all students equitably, regardless of ethnicity"	3	3.781
131: "Treats all students equitably, regardless of disabilities"	6	3.663
126: "Prays for and with students in and out of class"	10	3.625
134: "Is sensitive to students' family, social, and work obligations"	16	3.568

QUESTION #2: *How do these students' values, regarding what positively contributes to their learning, compare with what they perceive exists at their Christian university?*

Appendix B records the differences between what students perceive exists and their learning values. T-values and their significance are also shown. The largest gaps between what students say "exists" and items they "value" as it contributes to their learning, fall into three categories: teaching methodology, learning activities, and assessments. All gaps are significant to the $p < .001$ level with the exception of item 21 being significant to the $p < .05$ level. Items 30 and 31 are the only variables from #1-63 that do not having significant gaps between what the students value and what they perceive exists in teaching practices at the university. Appendix B shows a comprehensive table, comparing students' perceptions of what exists with what they value.

Methodology Gaps Between Students' Perceptions of "Exists" and What They "Value"

A significant gap exists between what students say "exists" and the level at which they report their values in every item related to teaching methodology. So, for example, "asks for informal feedback on how the semester is going to improve the course while in progress" was rated by the students as 2.328 on a 4-point Likert Scale as far as how much it exists at this university; however, the value the students place on the professor "asking for informal feedback on how the semester is going" as it relates to their learning is a mean of 3.363. This is a gap of 1.035 from what exists to what students' value. Two other items in teaching methodology also demonstrated over one point difference: "provides concrete suggestions on how to study course material" ("exists" at 2.405, values at 3.433, gap of 1.028) and "provides interesting lessons" ("exists" at 2.662, values at 3.674, and gap of 1.012). See Table 9.0

Teaching Methodology

Table 9.0					
Teaching Methodology					
Variable	Student "exists" (a) #1-63	Student "values" (b)	(b-a)	t-value	df
33: "Asks for informal feedback on how the semester is going to improve the course while in progress"	2.328	3.636	1.035	17.82***	444
51: "Provides concrete suggestions on how to study course material"	2.405	3.433	1.028	18.98***	455
7: "Provides interesting lessons"	2.662	3.674			
*Level of Significance * p < .05 ** p < .01 *** p < .001*					

Learning Activity Gaps Between Students' Perceptions of "Exists" and What They "Value"

All items related to learning activities demonstrated significant gaps. The largest exists/values gaps identified by students will be challenging to implement should professors permit this feedback to inform their teaching. The largest gap was item 13, the professor "allows students to redo work that is not of an acceptable level." Students rated item 13's existence at 1.902; whereas, they rated their value of item 13's existence at 3.103, leaving a gap of 1.201.

Variable 53, "provides models of the assignments given" was rated as existing at a mean of 2.237; whereas, the value for learning was perceived at 3.398, leaving a gap of 1.161. The last two areas where highest gaps between exists and values was reported related to interest and choice: "provides opportunities to explore self-selected areas of interest" (item 2, 2.301 exists, 3.396 values, 1.095 gap) and "provides some type of choice within assignments (item 56, exists 2.269, values 3.315, gap 1.046). See Table 10.0

Table 10.0					
Teaching Methodology					
Variable	Student "exists" (a) #1-63	Student "values" (b)	(b-a)	t-value	df
13: "Allows students to redo work that is not of an acceptable level"	1.902	3.103	1.201	19.05***	446
53: "Provides models of the assignments given"	2.237	3.398	1.161	21.57***	442
2: Provides opportunities to explore self-selected areas of interest"	2.301	3.396	1.095	22.11***	443
56: "Provides some type of choice within assignments"	2.269	3.315	1.046	20.46***	443
*Level of Significance * p < .05 ** p < .01 *** p < .001*					

Learning Activities

Assessment Gaps Between Students' Perceptions of What "Exists" and What They "Value"

All items related to assessment gaps demonstrated significant differences. Three key items (11, 4, and 17) indicate that students highly value (3.58) accurate feedback but do not receive as much feedback on their understanding as they want (2.5 mean). Additionally, students want timely feedback (item 17) and they rate this as happening at 2.554 on a 4.0 scale, but value it as 3.520. Related to timely and specific feedback, is that students want more clarification as to professors' expectations in what differentiates excellent, average, and poor work (item 4). See Table 11.0. The area of timely and specific feedback with clarification on expectations is an item worthy of study for this Christian university community.

Assessments

Table 11.0					
Assessments					
Variable	Student "exists" (a) #1-63	Student "values" (b)	(b-a)	t-value	df
11: "Provides accurate feedback on students' understanding and misunderstanding of course content"	2.512	3.580	1.068	22.63***	449
4: "Provides information on what differentiates excellent, average, and poor work"	2.460	3.489	1.029	18.45***	447
17: "Provides timely feedback on students' understanding and misunderstanding of course content"	2.554	3.520	.966	17.99***	440
*Level of Significance * p < .05 ** p < .01 *** p < .001*					

Learning Relationship Gaps Between Students' Perceptions of "Exists" and "Values"

The gaps between "exists" and "values" were smaller for items related to learning relationships, than those related to methodology, learning activities, and assessment, indicating a higher match between "exists" and "values" in learning relationships. With the exception of items 30 and 31, all items related to learning relationships showed statistically significant gaps at the $p < .001$ level. The two items that did not show significant difference were item 30, "Treats all students equitably, regardless of ethnicity" and item 31, "Treats all students equitably, regardless of disabilities." With the high rating of these variables, this is a positive report regarding relationships between professors and students.

The overall results of the quantitative data suggest that issues of largest value to students and professors, as it relates to their learning relationships, reflect the distinctives of a Christian institution. For example, "demonstrates Christian ethics in interactions with others" (item 128), "treats all students equitably, regardless of gender" (item 129), "treats all students equitably, regardless of ethnicity" (item 130), and "treats all students equitably, regardless of disabilities" (item 131) received highest ratings on the student surveys.

However, when asked to rate the value of "promptly and proactively addressing all instances of overt or covert hostility, ignorance or insensitivity toward other students or groups" (item 132), the value of intervening when equity is not carried out in the classroom, dropped considerably (3.4 mean for students). Additionally, when students were asked to rate how much promptly and proactively addressing of all instances of overt or covert hostility, ignorance or insensitivity toward other students or groups actually took place on campus ("exists," item 32), the mean was only 2.9 on a 4.0 scale, underscoring the critical nature of more work in the area of diversity training for this Christian university campus. Even though item 32 did not rank in the highest differences between what students perceive exists at this Christian university compared with what they value for their learning, given the critical nature of this item, the researchers recommended close examination.

QUESTION #3: *Overall, what factor most contributes to student satisfaction with teaching practices at this Christian university?*

The dependent variable, question 85 states, "Overall, on a scale of 1-10, my level of satisfaction with teaching practices at this Christian university is: ____." A response of "0" would mean "completely dissatisfied with teaching practices at this Christian university." Whereas, a response of "10" would indicate "completely satisfied with teaching practices at this Christian university; happy with 100% of my professors' teaching practices." The most frequent response (mode) was an "8". One hundred and sixty-four students responded with an "8" on a zero to ten scale. One hundred and thirteen responded with a "7". Eighty-two responded with a "9" and eleven students responded with a "10." Three hundred and seventy students out of 453 responded with a seven or above. Sixty-eight students responded with a rating of "6" or lower. The mean response was 7.5.

Using item 85 as the dependent variable, "Overall, on a scale of 1-10, my level of satisfaction with teaching practices at this Christian university is: ____", the researchers attempted to determine what most explains student satisfaction in perceptions of current teaching practices as they exist at this Christian university. We

created four factors: methods, activities, assessments, and relationships. The "Methods Factor" was created by combining items 2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 18, 20, 21, 23, 28, 43, and 45. The "Activities Factor" was created by combining 15, 16, 24, 35, 36, 38, 39, 40, 41, 42, 44, 47, 49, 50, 53, 54, 55, 56, 57, 58, 60, and 63. The "Assessment Factor" was created by combining items 1, 4, 11, 17, 19, 22, 25, 33, 46, 48, 61, and 62. And the "Relationships Factor" was created by combining items 26, 27, 29, 30, 31, 32, 34, 37, 51, 52, and 59. When entering these four factors in a multiple regression, all four factors entered the equation to provide an R Square of .22. However, the only significant factor ($p = < .05$) that entered the equation was the "Methods Factor." This result came as a surprise to the researchers in that they predicted that the "Relationship Factor" would be the most predictive of student satisfaction with the current learning environment. When considering how much each individual item might explain satisfaction with the learning environment at this Christian university, item 7, "provides interesting lessons," explained 18% of the satisfaction at a significance level of $p < .001$ level.

Summary and Conclusion

The researchers' first hypothesis, "We would expect a range of differentials between student perceptions of key indicators of effective pedagogy, learning activities, and assessment when comparing reports of what exists with what is ideal for learning," was clearly evident by the gaps that emerged as we compared the students' perceptions of what exists and what they value for learning.

The researchers' second hypothesis, "We would expect that items related to learning relationships would be the most predictive factor related to satisfaction with teaching practices at this Christian university" was incorrect. Though students most highly ranked relationship values, when reporting their perceptions of what currently exists at the university, the "Methods Factor," and "provides interesting lessons," in particular, most explained student satisfaction with current teaching practices.

Ranked data indicates that relationships are the most valued aspect of the learning environment for students (items 127, 128, 129, 130, and 134). At the top of the rankings is item 127, "demonstrates Christian ethics in interactions with others." The value placed upon relationships supports the research of Fowler (1999), Jensen (2000), and Hetzel (2004) and was demonstrated in the life of Christ. It should also be noted that this Christian undergraduate population highly valued item 126, "prays for and with students in and out of class" (mean 3.625). The work of Gail Thompson (1998) indicates that prayer contributes to resiliency.

For these Christian university students, critical variables that are valued for learning that rank just below relationship items, include: relevancy (item 106), interest (107), help (items 105 and 137), clarity (items 119, 139, 152, 138, 141, 142, 152), appropriate level of challenge (item 157), and timely and accurate feedback (items 111 and 117). All these variables support coherency in the classroom and the work of Burden and Byrd (2003), Fowler (1999), Hardiman (2001), and Kauchak and Eggen (2003). Interestingly, most of the items relate to teaching methodology, as opposed to learning activities or assessments. Overall, the quantitative data support the literature.

An evaluation of quantitative data indicates that students highly value Christian ethics (and intervention), lessons taught from a Christian worldview, interesting lessons, immediate and specific feedback, time for questions and answers, clear criteria for assignments, multiple methods of assessment, and sensitivity to personal and family obligations. The quantitative data indicates high success overall in the area of relationships and the living out of Christian ethics at this Christian university. Though the gap was smaller than many of the other items, the researchers have some concern regarding the item "promptly and proactively address all instances of overt or covert hostility, ignorance or insensitivity toward other students or groups" (item 32, .459 gap in students' report of "exists" and "values", $p <.001$). Given that 73.5% of the respondents were Caucasian/White, and the importance of this particular item for the support of non-mainstream students, further analysis of disaggregated data for non-mainstream students versus minority students' experiences will be recommended.

A more learning-centered undergraduate environment at this Christian university from the students' perspective would also include growth on the part of the professors in the area of teaching methodology, including: "asking for informal feedback on how the semester is going to improve the course while in progress"

(items 33 and 133, 1.035 gap between student report of "exists" and "values"); "concrete suggestions on how to study course material," (items 51 and 151, 1.028 gap between student report of "exists" and "values"); and "provides interesting lessons" (items 7 and 107, 1.012 gap between student report of "exists" and "values").

For learning activities, the quantitative data, when comparing students' perceptions of what exists with what they value, suggests it would be helpful for professors to "allow students to redo work that is not at an acceptable level" (items 13 and 113, 1.201 gap); "provide models of the assignments given," (item 53 and 153, 1.161 gap); "provide opportunities to explore self-selected areas of interest" (items 2 and 102, 1.095 gap), and "provide some type of choice within assignments" (items 56 and 156, 1.046 gap).

The quantitative data also suggests that for assessments, professors at this Christian university can improve their service to students by "providing accurate feedback on students' understanding and misunderstanding of course content," (items 11 and 111, 1.068 gap); "provide information on what differentiates excellent, average, and poor work" (items 4 and 104, 1.029 gap); and "provide timely feedback on students' understanding and misunderstanding of course content" (items 17 and 117, .966 gap).

Overall, undergraduate student satisfaction at this Christian university, in the area of teaching practices, has been rated by the students as 7.5 on a 10-point scale. The factor that most explains satisfaction with the learning environment is the "Methods Factor," or what the professor does as he or she teaches in the classroom. Additionally, the item that most explains student satisfaction is item 7, "provides interesting lessons."

The highest relationship values of "demonstrates Christian ethics in interactions with others" (item 127, 3.8 student mean) and the teaching value of "integrates Christian worldview in the teaching of course content" (item 128, 3.7 student mean) demonstrate that undergraduates are accepted into this Christian institution whose values are aligned with the pillars of the institution. Undergraduates understand what the university is about and the university is recruiting students that are a match for the institution. However, in the working out of these values, from the students' perspective, professors need some assistance in how to be proactive in the area of diversity. Additionally, themes that continue to emerge in the quantitative analysis were the importance of interest and choice; feedback; help; clarity of expectations; relevancy; and coherency and connectivity of teaching methods, learning activities, and assessments.

Key to undergraduate learning at this Christian university is the desire to integrate their learning with God's purpose for their life – "I want to know God: that is the reason I come here." Thus, a successful learning environment emerges when the learning environment and teaching practices actively embrace the student's faith.

Limitations and Delimitations

This study is limited to the population of one Christian university's undergraduate students and so cannot be generalized to other private or public universities. This study is limited to reported perceptions and depends on the accurate reporting of individuals to a lengthy survey of 149 items.

The student survey was administered in the context of specific general education classes in an attempt to acquire a stratified, representative population of freshman, sophomores, juniors, and seniors. General education courses were selected, based upon stratified enrollment, with the assistance of the Associate Provost. The researchers heavily emphasized that the responses should represent each student's collective experiences at Christian university, and NOT reflect just the specific class they were in. However, it is possible that the survey responses were negatively or positively skewed depending upon the particular class climate where surveys were taken.

The sample of 453 university students was collected during the last few weeks of the 2003 spring semester. To expedite the process, the surveyed students were primarily undergraduate students taking required Bible and theology classes. Though a stratified sample emerged, representing a balance of gender and class (Freshman, Sophomore, Junior, Senior), the sample included only a small percentage of honors students, because their Bible and Theology requirements were imbedded in their honors program. Most honor students are not in the general Bible and Theology courses.

Another limitation to the sampling was that the primary researcher gathered half the total number of surveys by gathering surveys from all students in the general education courses she attended; whereas, the second researcher visited several general education classes and students self-selected whether or not they would fill out the survey. The students who self-selected the survey could have felt more strongly about teaching practices issues and thus, potentially may have skewed the results in a positive or negative direction.

Additionally, students preparing for teaching in their undergraduate work were overrepresented in the final analysis when compared with other majors in the university. The fact that there was overrepresentation of education students could have skewed the results of the survey in a positive direction if student perceptions were inflated due to enthusiasm for the teaching process or in the negative direction if education students tended to be more critical of teaching practices at the university level due to their training in the field.

As with all surveys, a weakness is that the survey instrument is not comprehensive. For example, there are items related to teaching methodology; however, the survey does not contain an exhaustive bank of variables. Therefore, in the final data analysis, when most critical factors are ranked, there still exists the possibility that the most critical factor for learning was not addressed in the study. The same applies to learning activities, assessment, and learning relationships. Items that address each area may not include the most critical factor as it relates to student learning.

Recommendations for Further Study

There are several areas recommended for further study that have come about as a result of this particular study, including: 1) developing additional items for the survey, 2) revising the survey to provide a stronger measure of internal consistency, 3) conducting a study with Christian university graduate students, 4) sorting data by specialized populations, 5) deeper probing through interview to address some of the issues that emerged in the study, and 6) duplicating the study at other CCCU institutions.

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Appendix A

See PDF

Appendix B

A Comparison of Students' Perception of "What Exists" with What They "Value" as it Contributes to Their Learning

Variable	Student "exists" (a) #1-63	Student "values" (b) #101-163	(b-a)	t-value	df
1: "Utilizes portfolios for final assessment"	1.402	1.923	.431	7.39***	423
2: Provides opportunities to explore self-selected areas of interest"	2.301	3.396	1.095	22.11***	443
3: "Demonstrates unique characteristics of the subject matter"	2.869	3.339	.470	11.52***	442
4: "Provides information on what differentiates excellent, average, and poor work"	2.460	3.489	1.029	18.45***	447
5: "Provides time for questions and answers within the lesson"	3.150	3.467	.317	6.41***	449
6: "Demonstrates the relevancy and application of material to be studied"	3.091	3.663	.572	13.98***	450
7: "Provides interesting lessons"	2.662	3.674	1.012	21.55***	450
8: "Provides an overview of what we will study during each class session"	2.619	3.027	.408	7.28***	446
9: "Provides a visual or graphic that shows key concepts in the lesson"	2.559	3.239	.680	13.00***	446
10: "Organizes lessons around a series of thought-provoking questions"	2.264	2.973	.709	14.69***	447

11: "Provides accurate feedback on students' understanding and misunderstanding of course content"	2.512	3.580	1.068	22.73***	449
12: "Introduces new vocabulary"	2.609	2.951	.342	6.21***	446
13: "Allows students to redo work that is not of an acceptable level"	1.902	3.103	1.201	19.05***	446
14: "Integrates multicultural role models within the content presentations"	2.090	2.488	.398	6.28***	444
15: "Provides time for me to discuss what I am learning with another/others"	2.381	2.781	.400	6.14***	446
16: "When using group work, monitors groups by asking questions and providing feedback"	2.487	2.784	.297	5.18***	442
17: "Provides timely feedback on students' understanding and misunderstanding of course content"	2.554	3.520	.966	17.99***	440
18: Connects prior learning to the new content"	2.857	3.522	.665	14.88***	446
19: "Provides a grading structure that is defined and well-structured"	3.154	3.636	.482	9.62***	444
20: "Uses gestures and vocal variations to keep students' attention"	2.695	3.394	.699	12.99***	444
21: "When lecturing, makes eye contact with students"	3.419	3.380	-.039	.77*	447
22: "Choices are given regarding the method of assessment"	1.98	2.813	.833	15.32***	438
23: "Uses auditory helps during teaching (e.g., music, sound effects, etc.)	1.984	2.704	.720	13.2***	447
24: "Uses technology to assist students in learning"	2.786	3.035	.249	4.83***	447
25: "Uses multiple sources of information to determine course grade"	2.860	3.502	.249	14.14***	446

26: "Prays for and with students in and out of class"	3.395	3.625	.230	5.75***	447
27: "Demonstrates Christian ethics in interactions with others"	3.647	3.835	.188	5.90***	444
28: "Integrates Christian worldview in the teaching of course content"	3.576	3.743	.167	4.59***	446
29: "Treats all students equitably, regardless of gender"	3.643	3.788	.145	3.99***	447
30: "Treats all students equitably, regardless of ethnicity"	3.704	3.781	.077	1.91	446
31: "Treats all students equitably, regardless of disabilities"	3.684	3.663	-.021	.73	440
32: "Promptly and proactively addresses all instances of overt or covert hostility, ignorance or insensitivity toward other students or groups"	2.942	3.401	.459	8.62***	427
33: "Asks for informal feedback on how the semester is going to improve the course while in progress"	2.328	3.363	1.035	17.82***	444
34 "Is sensitive to students' family, social, and work obligations"	2.829	3.568	.739	13.54***	446
35: "Provides time in class where students get to know and trust each other"	2.408	3.168	.76	13.99***	443
36: "Facilitates situations outside class time where students collaborate"	2.452	2.565	.113	2.00*	443
37: "Provides help when students get stuck on something"	3.053	3.640	.587	13.91***	443
38: "Clearly develops course outcomes (what students are to produce)"	3.016	3.591	.575	13.09***	444
39: "Intentionally coordinates course assignments with course objectives"	3.279	3.632	.353	9.41***	442
40: "Requires group presentation (e.g., productions, recitals, presentations)	2.557	2.198	-.359	5.76***	441

41: "Intentionally coordinates course readings with course assignments"	3.318	3.589	.271	6.53***	444
42: "Provides clear, specific criteria for assignments"	3.029	3.743	.714	16.81***	441
43: "Uses drama to deepen understanding"	1.504	2.237	.733	12.47***	441
44: "Uses debate to explore multiple sides of an issue"	1.897	2.653	.756	12.74***	442
45: "Uses games as a means of varying instruction"	1.454	2.209	.755	12.25***	442
46: "Encourages personal reflection on individual strengths and weaknesses"	2.568	3.147	.579	10.83***	443
47: "Provides time for reflection and processing of information"	2.346	3.126	.780	14.28***	442
48: "Includes essays on exams"	2.652	2.369	-.283	4.67***	446
49: "Incorporates research papers"	3.033	2.571	-.462	8.87***	447
50: "Incorporates supplemental readings"	2.996	2.694	-.302	5.83***	446
51: "Provides concrete suggestions on how to study course material"	2.405	3.433	1.028	18.98***	445
52: "Provides time in class to clarify assignment expectations"	2.947	3.614	.667	13.57***	445
53: "Provides models of the assignments given"	2.237	3.398	1.161	21.57***	442
54: "Creates assignments that encourage original thinking"	2.803	3.407	.604	13.20***	442
55: "Creates assignments that help review class content"	2.938	3.528	.590	13.66***	442
56: "Provides some type of choice within assignments"	2.269	3.315	1.046	20.46***	443
57: "Creates assignments that are at the appropriate level of challenge"	3.062	3.583	.521	11.66***	441
58: "Creates assignments that assist students in becoming independent problem solvers"	2.778	3.367	.556	12.51***	439

59: "Provides time outside of class for extra help"	2.960	3.516	.556	12.15***	443
60: "Uses realistic case studies"	2.852	3.252	.40	10.41***	438
61: "Incorporates multiple choice questions on exams"	3.645	3.463	-.182	4.25***	444
62: "Utilizes true/ false questions on exams"	3.400	2.987	-.413	7.89***	445
63: "Encourages students to use technology to demonstrate learning (e.g., powerpoint, graphics, music, video)"	2.456	2.691	.235	4.61***	442
*Level of Significance * $p < .05$ ** $p < .01$ *** $p < .001$*					