DOCUMENT RESUME

ED 469 361 JC 020 670

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TITLE	The Influence of Learner Characteristics on Satisfaction with Interactive Televised Courses in Florida Community Colleges.
PUB DATE	2001-00-00
NOTE	14p.
PUB TYPE	Reports - Research (143)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Audiovisual Instruction; *Community Colleges; *Distance Education; *Educational Television; *Interactive Television; Participant Satisfaction; *Student Attitudes; Student Characteristics; *Telecourses; Television Curriculum; Two Year Colleges
IDENTIFIERS	*Florida Community College System

ABSTRACT

This report describes a pilot project designed to explore the influence of particular personality and demographic characteristics on community college student satisfaction with distance learning, specifically interactive telecommunications (ITV) courses. The study used the Telecourse Evaluation Questionnaire (TEQ) and the Sixteen Personality Factor Questionnaire (16PF) to examine characteristics of more than 100 learners at 3 Florida community colleges in the summer of 1998. The study compared on-site and remote-site student satisfaction with ITV courses. Miller, Hyatt, et al. (1996) described distance learners as niche learners, or students whose shared situations placed them in a certain category of learners. Rural learners and disabled learners are examples of two types of niche learners. Dean, Biner, and Summers (1996) include personality factors in attempting to predict course achievement in ITV courses. Their study analyzed data from 1,396 students in 44 courses. This study examines personality factors in order to determine their influence on student satisfaction. Among the personality characteristics of remote site students, it was found that concrete thinkers, and conscientious and experimenting students were more favorable in their regard for the ITV setting. A chart of primary source traits covered by the 16PF Test is appended. (NB)

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The Influence of Learner Characteristics on Satisfaction with Interactive Televised Courses in Florida Community Colleges

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Summary with Implications for the Community College System

An increasing number of American community colleges are exploring the use of telecommunications and other technologies for instructional delivery. Distance learning provides new ways for students and faculty to interact, as well as new challenges. The purpose of this pilot project was to explore the influence of particular personality and demographic characteristics on community college student satisfaction with interactive telecommunications (ITV) courses.

During the summer of 1998 three Florida community colleges participated in this pilot study by administering the Telecourse Evaluation Questionnaire and the Sixteen Personality Factor Questionnaire (16PF) to more than 100 students. Responses of on-site and remote students in ITV courses were compared on a number of variables. An analysis of the influence of student characteristics on student satisfaction indicated differences between on-site and remote student satisfaction and that certain personality characteristics may influence how receptive students are to the distance learning environment.

Florida community colleges interested in assisting students in deciding the appropriateness of the distance learning experience might consider employing the 16PF as a tool for screening as there is evidence that certain personality types will be more satisfied with ITV than others. As a popular educational access point for a variety of non-traditional and special needs students, Florida community colleges should assess the effect of ITV on the educational success of these student groups.

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The Influence of Learner Characteristics on Satisfaction with Interactive Televised Courses in Florida Community Colleges

An increasing number of community colleges are exploring the use of telecommunications and other technologies for instructional delivery. Community colleges have a tradition of adapting to meet the needs of a changing society; they continuously strive to create programs that will serve new clients and prepare them for career opportunities in emerging fields. In keeping with this philosophy, distance learning has surfaced as an educational modality that merges the need for quality educational programs with the demand of today's students for flexibility and access (Lever-Duffy & Lemke, 1996). Distance learning in the community college has provided access to new students including disabled, working, and geographically remote students. It unites the values and traditions of the American community college with the current wave of American technological advancement.

Distance learning provides new ways for students and faculty to interact. But this change also presents both students and faculty with new challenges. The purpose of this pilot project was to explore the influence of particular personality and demographic characteristics on community college student satisfaction with distance learning, specifically interactive telecommunications courses. Using the Telecourse Evaluation Questionnaire (TEQ), an instrument developed to assess student satisfaction with a variety of specific dimensions of ITV courses, the study compared on-site and remote site student satisfaction with interactive telecommunications (ITV) courses. The Sixteen Personality Factor Questionnaire (16PF) and selected demographic questions were used to examine characteristics of the learners.

Florida has kept pace with the national distance learning trends. Florida's community colleges have been involved with distance learning since the 1970s by first offering correspondence courses and later educational television courses. Community colleges in Florida have increasingly made use of the recent technological advances such as interactive teleclasses and Internet courses. Florida's interest in expanding distance learning opportunities is evidenced by the formation of the Florida Community College Distance Learning Consortium and the Florida Virtual Campus which will offer programs ranging from certificates to graduate degrees. Several other state supported entities have also been created and designed to encourage and guide the use of distance technologies for educational use (State Board of Community Colleges, 1999).

Students and Distance Learning

Through technological advances, more and more courses are being offered to students at locations away from the campus. Distance education enables community colleges to extend their reach to wider service areas and to provide more programs to remote sites. As Lever-Duffy and Lemke (1996) stated, "Even flexible on-campus instruction, while improving access, may not meet the needs of many community college students. For those whose life circumstances make it difficult or impossible to come to campus, distance education may be their only opportunity" (p.viii). Many community college students are attempting to balance their busy lives with their academic goals. Distance learning can provide easier access and more flexibility, two qualities that enhance the educational experience.

Studies carried out in other states have also examined characteristics of distance learners. Researchers in Tennessee and Maine, two states with a history of active involvement in distance learning efforts, have endeavored to provide insight into the types of students who

receive degrees through distance learning programs. Miller, Hyatt, Brennan, Betani, and Trevor (1996) described the distance learning students at Chattanooga State as "niche" learners, that is students whose shared situations placed them in a certain category of learners. For example, physically disabled students are one group of niche learners. These students participate in distance learning because of the physical access and time flexibility that distance learning courses offer. Another student niche in the Miller et al. study was the Power Line Maintenance Technicians. They represented students seeking additional job training who, due to their remote work locations, found it impossible to attend college in the traditional sense.

Lyons, McBrayne, and Johnson (1994) researched distance learners in the Community College of Maine and also discovered a niche of rural learners. The authors described these students as predominately female (74%), with more than half (54%) over the age of thirty. To attend classes these students drove an average of eleven miles, as opposed to the near 300 miles that would have been required for some of them to attend traditional on campus classes. While these students were above average performers in their courses, the researchers found that they were challenged by the lack of interaction with faculty.

A study by Dean, Biner, and Summers (1996) at a major midwestern university went beyond basic student demographics to include personality factors in attempting to predict course achievement in ITV courses. The study analyzed data received from 1,396 students enrolled in 44 undergraduate and graduate courses. The researchers found several significant predictors of final course grades—grade point average, prior knowledge (represented by SAT scores), year in school, and age of the student. The present study also investigated personality

factors. However the purpose was to ascertain their influence on student satisfaction, not academic achievement.

Methodology

Florida community colleges that were offering ITV courses during Summer, 1998 were the focus of this pilot study. Three colleges participated in the study. Contacts established at each college distributed the study instruments, the Telecourse Evaluation Questionnaire (TEQ), with additional demographic questions--and the Sixteen Personality Factor Questionnaire (16PF). One hundred twelve usable student responses were received.

The TEQ, designed by Paul M. Biner (1993), was created "to offer telecourse researchers a practical, yet psychometrically sound, method of constructing an attitudinal assessment instrument that would accommodate their institutional information needs" (p.63). The TEQ assesses student satisfaction with a variety of teleclass dimensions, including instructor/instruction, course management, and out-of-class communication with the instructor. According to Biner, Dean, & Mellinger (1994) Cronbach's alpha for each of the dimensions in the TEQ ranged from very high (.94) to moderate (.51). The 16PF is a well-documented self-report personality inventory which produces scores across 16 personality factor scales (see Appendix.). Developed through basic research in psychology, the personality factors measured by the 16PF are rooted in the context of a general theory of personality. Reliability for each scale of the 16PF Form C ranges from .52 to .78 (Institute for Personality and Ability Testing, 1991).

Results

The TEQ asks students a variety of questions regarding characteristics of the course instruction and the instructor. Responses of on-site (students in the room with the instructor)

and remote site (students taking the class at a location away from the instructor) students were compared on a number of variables. Responses indicated that in general remote site student satisfaction was significantly lower than that of on-site students at $\alpha = 0.10$ (see Table 1). Also satisfaction of remote site students was more influenced by student personality characteristics than the satisfaction of on-site students (see Table 2).

An analysis of the influence of student characteristics on student satisfaction yielded statistically significant outcomes in several areas. Among remote site students it was found that a) the concrete thinkers tended to be more satisfied with the distance learning experience than the abstract thinkers (personality factor B); b) the emotionally stable students were more satisfied than the emotionally less stable (personality factor C); c) the conscientious or rule bound students were also more satisfied with ITV than the expedient students (personality factor G; and d) the self-assured students more satisfied than the apprehensive students (personality factor O) in this group. Among the on-site students statistically significant predictors of course satisfaction were: a) expected grade (see Table 3); and b) the experimenting-conservative (Q_1) personality factor (see Table 2). That is to say on-site students who expected to receive higher grades were more satisfied with their distance learning experience as were the experimenting (i.e., open to change) on-site students.

In addition to inquiring about their satisfaction with the ITV course, students were asked to compare the ITV course to the traditional course (Item 36). Significant findings were in the responses of the remote site students. In this group, two student characteristics, reported college grade point average (GPA) and race, made statistically significant differences in student response. Remote site students with lower reported college GPAs tended to rate the ITV course more favorably, as did remote site minority students (see Table 4.). Among the

personality characteristics of the remote site students, it was found that concrete thinkers, conscientious, and experimenting students were more favorable in their regard for the ITV setting. (see Table 5.).

Discussion

The question regarding what type of student is best suited to the distance learning environment continues to be discussed. While a pilot study of this type does not present strong predictive power, the findings do indicate differences influenced by student characteristics between community college on-site and remote site student evaluation of ITV course dimensions. The findings in this study indicate that certain personality characteristics may influence how receptive students are to the distance learning environment, specifically interactive teleclasses. In this study responses of remote site students tended to more influenced by personality characteristics than the responses of on-site students. Those remote site students who were found to be more satisfied with the teleclass experience were those who were concrete thinkers, emotionally stable, conscientious, and self-assured.

In an effort to increase student success in the distance learning environment some institutions have begun to screen student admission to distance learning courses or to provide students with screening questions that can help them make the decision whether or not they are well-suited for the distance learning environment. Florida community colleges interested in assisting students in this type of decision making might consider employing the 16PF as a tool for screening as there is evidence that certain personality types will be more satisfied with the ITV experience than will others.

Findings of the differences in student perceptions are especially noteworthy for Florida community colleges, where quality instruction is considered a hallmark and teaching is a

primary mission. The American community college has a history of providing the "personal touch" often missing in the four-year institution. According to Cohen and Brawer (1996), many community college students are under-prepared and from lower socio-economic backgrounds. Through an emphasis on quality teaching, the community college has become a popular avenue of access to higher education for a variety of non-traditional and special needs students. Quality instruction and the personal touch are factors that have attracted these particular groups of students to the community college. As Florida community colleges incorporate ITV and other distance learning formats into the curriculum, they should assess the effect of the technologies on these student groups.

Distance education is seen by community colleges as a method that can provide more access to students and offer innovative learning experiences. With any new methodology, issues emerge that must be addressed. Future research studies like the pilot study described here can help community colleges understand what personal characteristics best suit students in the distance learning environment. This will help institutions embarking on new distance learning efforts to evaluate the student experience and ensure that students are being well-served by the technology.

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Appendix

The Primary Source Traits Covered by the 16PF Test

Factor	Low Score Description	High Score Description
A	Cool, reserved, impersonal, detached, formal, aloof	Warm, outgoing, kindly, easygoing, participating, likes people
B	Concrete-thinking, less intelligent	Abstract thinking, more intelligent, bright
C	Affected by feelings, emotionally less stable, easily annoyed	Emotionally stable, mature, faces reality, calm
E	Submissive, humble, mild, easily led, accommodating	Dominant, assertive, aggressive, stubborn, competitive, bossy
F	Sober, restrained, prudent, taciturn, serious	Enthusiastic, spontaneous, heedless, expressive, cheerful
G	Expedient, disregards rules, self-indulgent	Conscientious, conforming, moralistic, staid, rule-bound
H	Shy, treat-sensitive, timid, hesitant, intimidated	Bold, venturesome, uninhibited, can take stress
I	Tough minded, self-reliant, no-nonsense, rough, realistic	Tender-minded, sensitive, overprotected, intuitive, refined
L	Trusting, accepting conditions, easy to get on with	Suspicious, hard to fool, distrustful, skeptical
M	Practical, concerned with "down-to-earth" issues, steady	Imaginative, absent-minded, absorbed in thought, impractical
N	Forthright, unpretentious, open, genuine, artless	Shrewd, polished, socially aware, diplomatic calculating
O	Self-assured, secure, feels free of guilt, untroubled, self-satisfied	Apprehensive, self-blaming, guilt-prone, insecure, worrying
Q_1	Conservative, respecting traditional ideas	Experimenting, liberal, critical open to change
Q_2	Group-oriented, a "joiner" and sound follower, listens to others	Self-sufficient, resourceful, prefers own decisions
Q_3	Undisciplined self-conflict, lax, careless of social rules	Following self-image, socially precise, compulsive
Q_4	Relaxed, tranquil, composed, has low drive, unfrustrated	Tense, frustrated, overwrought, has high drive

Excerpted from Institute for Personality and Ability Testing, Inc. (1991). Administrator's manual for the 16PF, page 6.

Table 1. Mean rating scores on course satisfaction

	Mean	SD	N
Remote site	4.13	.87	63
On-site	4.39	.64	49

t = 1.759 (p = 0.081)

Table 2.
Correlation coefficients between course satisfaction and personality characteristics.

	A	B	C	E	F	G	H
Remote site	- .104	**-.254****	**.240***	- .089	.095	**.218***	- .013
On-site	- .052	.142	- .136	.000	- .059	.042	- .210

I	L	M	N	O	Q1	Q2
- .089	- .032	.095	.004	**- .235***	.111	.109
.216	- .094	.056	.170	- .116	**.232***	- .027

Q3	Q4
.104	- .031
.112	.007

* $p < .10$
** $p < .05$

Table 3.
Correlation coefficients between course satisfaction and demographic variables.

	Year in School	Gender	Expected Grade	H.S GPA	College GPA	Income	# of Courses	Age	Race
Remote	- .167	- .006	- .021	.004	- .198	.014	.412	.084	- .216
On-site	- .071	- .147	**- .361****	- .138	- .042	- .072	.105	.055	- .056

** $p < .05$

Table 4. Correlation coefficients between ITV course satisfaction compared to traditional course satisfaction and demographic variables among remote site students.

	Year in School	Gender	Expected Grade	H.S GPA	College GPA	Income	# of Courses	Age	Race
Item 36	- .028	- .107	.021	- .149	- .322**	- .146	.128	- .040	- .297**

** $p < .05$

Table 5. Correlation coefficients between ITV course satisfaction compared to traditional course satisfaction and personality characteristic variables among remote site students.

	A	B	C	E	F	G	H
Item 36	- .130	- .261**	.060	- .025	.046	.252**	- .028

I	L	M	N	O	Q1	Q2	Q3	Q4
- .053	- .159	.064	.073	- .119	.336**	.094	.178	.006

** $p < .05$

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