


**THE NATURE OF ASYNCHRONOUS INTERACTIONS  
WITHIN INDIANA'S HIGHER EDUCATION INSTITUTIONS'  
DISTANCE LEARNING PROGRAMS**

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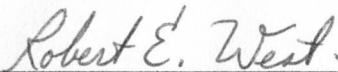
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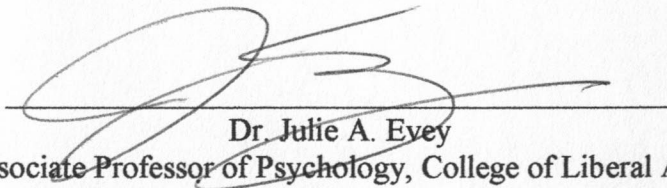
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## **Dedication**

This project is dedicated in memory of my dear friend and mentor, Sherry Crawford whose unconditional love and wonderful sense of humor I miss every day.

## **Acknowledgements**

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## **Abstract**

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Due to the growth of the Internet, formal higher education may occur in a home, an office, or anywhere a person wanting to acquire new knowledge may be located.

However, the advanced technology may be causing educators and distance learners to miss an important channel of communication, which students in a traditional classroom setting experience: face-to-face interaction. The purpose of this research was to identify the forms of communication being utilized by asynchronous distance learning students and their instructors and consider whether these forms of interaction adequately address their communication needs. In a study conducted with 500 online students and 313 instructors within Indiana's higher education institutions' distance learning programs, respondents shared details about the types of mediated communication interactions they experienced, for instance, telephone calls, e-mails, or discussion boards, along with the amount and frequency of the interactions. Additionally, in an effort to identify a student's motivation (specifically, locus of control that may play a role in the student's enrolling in online distance learning), a modified version of Rotter's Locus of Control scale was utilized, and responses were measured using a Likert-type scale. On the basis of their responses, it appears that online students and their instructors favor a group discussion board / web blogging, or e-mail as the choice methods of communication, whereas both groups rated face-to-face meetings as 'not important' to their success in the online course(s). In addition, most students were found to have an internal locus of control, which may indicate they are better suited for the rigors of online learning.

## Introduction

The evolution of higher education means a classroom is no longer confined to a traditional brick-and-mortar structure. Due to the growth of the Internet, formal higher education may occur in a home, an office, or anywhere a person wanting to acquire new knowledge may be located. Distance learning is known by a wide variety of terms, including distance education, distributed learning, asynchronous learning, synchronous learning, or even technologically mediated instruction; it has been available in one form or another since the 1890s (Distance-Educator, 2004, p. 1).

Distance learning began as print correspondence courses, but changed with technology to include a wide range of delivery systems utilizing other types of media such as radio, audio cassette, television, and videotapes. Distance learning in 2005 largely consists of computer-based instruction offered via many different technologies (i.e., Internet, microwave systems, telephone conferencing, satellite, and compressed interactive video) (Loane, 2001, p. 1; Miller, 2001, p. 315).

The American Council on Education describes distance learning as “a system and process of connecting learners with distributed learning resources” (Chute, Thompson, & Hancock, 1999, p. 220). Van Dusen (1997) relates distance learning to the expression, “virtual campus.” In his book, *The Virtual Campus: Technology and Reform in Higher Education* (1997), Van Dusen defines the term as “a metaphor for the electronic teaching, learning, and research environment by the convergence of powerful new information and instructional technologies” (p. iii).

The pairing of the Internet and computer-mediated conferencing software offers yet another unique approach to distance education: asynchronous learning networks (Miller,

2001, p. 315). Gottschalk (2004) defines asynchronous communication as “communication in which interaction between parties does not take place simultaneously” (p. 1).

As long as there is a computer with Internet capabilities, a postal service, a videotape machine, or a facsimile machine, distance learning is possible. J.N. Musto (1997), executive director of the University of Hawaii Professional Assembly, states:

Technology cannot be ignored or undone. Like Pandora’s Box, once opened the capacity of technological change is released – for good or evil, depending upon your point of view (p. 118).

### **Statement of the Problem**

Distance learning enrollments of courses offered by colleges and universities via asynchronous learning networks worldwide are growing every year. However, the advanced technology may be causing educators and distance learners to miss an important channel of communication, which students in a traditional classroom setting experience: face-to-face human interaction.

In 2000, the National Education Association polled more than 400 distance learning instructors nationwide. The results revealed that while one in ten higher education faculty members had taught a distance learning course in the previous five years, a “significant proportion” had never seen their students in a face-to-face setting (NEA, 2000, p. 2).

Hughes and Hewson (1998) assert that a “skillful” instructor in a traditional classroom will incorporate a full range of linguistic and extra linguistic elements including verbal content, speed, timbre, intonation, tone, gesture, and proxemics. These elements are

offered through a variety of different teaching methods such as discussion, brainstorming, questions, setting tasks, and making presentations (p. 2).

In contrast, Haythornthwaite (1999) found that computer-mediated communication offered asynchronously provided an “exchange of fewer cues than face-to-face environments,” (p.2) because many rich verbal and non-verbal aspects were lost. However, Haythornthwaite (1999) observed that computer-mediated communication did provide some beneficial features, including “extending communication possibilities, for example, crossing time and space, and drawing in more peripheral communicators” (p. 2). Are these features enough for students wishing to study at a distance? Does the quantity of communication that asynchronous distance learners experience with their online peers and instructors really matter to the growth of distance learning programs?

### **Significance of the Problem in Indiana**

Currently, all Indiana public colleges and universities plus several independent institutions of higher education that are members of the Indiana College Network, offer distance learning. Courses are available both synchronously [in real time] and asynchronously [anywhere, anytime] for students. During the 2002-2003 academic year within the Indiana College Network, course enrollments<sup>1</sup> reached nearly 70,000 with those courses being delivered strictly over the Internet topping 56,000 (IHETS, 2004, p. 1).

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<sup>1</sup> According to Susan Scott, director of E-learning for the Indiana Higher Education Telecommunication Service, “An enrollment is one student registered in one course, and when enrollments are aggregated, they are sometimes also referred to as “duplicated headcount:” one student taking four courses would be four enrollments. Many students mix distance and on-campus classes, many distance students are studying part time, and some students are concurrently registered in classes from more than one institution. Thus, obtaining accurate headcount enrollment data is often difficult, particularly when aggregating numbers across campuses. The course enrollment is a useful common denominator and can readily be translated into full-time equivalent counts when necessary” (personal communication, October 21, 2005).



During the following academic year of 2003-2004, the Indiana Higher Education Telecommunication System reported the number of course enrollments jumped 54 percent to 104,000, with 85 percent of that total (nearly 90,000) for courses being offered via the Internet. Scott attributes the large enrollment numbers to “busy adults with jobs and families to juggle” who find distance learning offers them flexibility (Brunty, 2003, p. 1). But these non-traditional students are not the only ones enrolled in distance learning courses. Scott states:

More traditional, campus-based college students use these online courses to pick up classes they need to stay on track for timely degree completion. (IHETS, 2005, p.2)

Given a 400 percent increase in distance learning course enrollments within the Indiana College Network in just five years (IHETS, 2005, p. 2), coupled with the intense growth of the Internet from its humble beginnings just 30 years ago, it appears the prospects for distance learning are plentiful. However, along with new technology applications for online learning and more students opting to take courses at a distance, a question arises: Are Indiana’s higher education institutions adequately addressing the communication needs of students and faculty in distance learning programs offered via the Internet?

Frank Mayadas, director of The Alfred P. Sloan Foundation’s Asynchronous Learning Network warned in 2001:

The online learner population is and will be more demanding of quality services than the captive student, so to speak, on campus. (The Chronicle, 2001, p. 10)

### Review of Literature

A great amount of literature is available on a national and international level concerning distance learning from its inception to the present. A meta-analysis of the comparative distance education literature between 1985 and 2002 conducted by Bernard, Abrami, Lou, Borokhovski, Wade, Wozney, Waiet, Fiset & Huang (2004), reveals hundreds of studies have been conducted and results analyzed with most of the research concentrating on student satisfaction. However, Bernard et al. (2004) examined 232 research studies that compared the effectiveness of classroom instruction to distance learning instruction as it relates to student achievement, attitudes, and retention (reasons to stay in school.) Overall results include:

**Achievement:** Distance education conditions favored by a small but significant group.

**Attitude:** Overall attitude outcomes favor classroom instruction by a small but significant group.

**Retention:** Classroom instruction is favored by a “very small but significant” group. (pp. 404-405)

Following the assessment of the overall outcomes for the three measures, Bernard et al. (2004) then chose to split the samples into two different forms of distance learning, synchronous and asynchronous. In brief, their results indicate “substantially different outcomes for the two forms of distance learning” including:

**Achievement:** Synchronous outcomes favored classroom instruction, while asynchronous favored distance learning.

**Attitude:** Both synchronous and asynchronous favored classroom instruction.

**Retention:** Dropout was “substantially higher in asynchronous.” (p. 408)

Allen, Mabry, Mattrey, Bourhis, Titsworth, & Burrell (2004) found similar achievement results in their comparative meta-analysis regarding the effectiveness of distance learning. The authors suggest that, “distance education technologies do not necessarily create a less effective learning environment [but] may enhance effectiveness.” Also, the authors state the broad base of studies selected for review and analyses indicate, “Distance education students score slightly better than traditional students when considering exam scores or grades achieved in a particular course” (p. 415).

If distance learners as a whole are achieving and seem to be scoring well, why do large numbers of asynchronous learners drop out? S. Scott believes the reasons may have more to do with the age and work status of the distance learner because they “have many more life pressures ... than do the traditional-age residential full-time students” (personal communication, October 21, 2005).

Bernard et al. (2004) suggest that a distance learner’s persistence to achieve or drop out may be partially explained by examining the way the student chooses to learn and how they develop attitudes (for example, their locus of control) (p. 408). Mearns (2004) defines the concept of locus of control as a “very generalized, cross-situational belief” about what a person deems will be and will not be reinforced in their life (p. 3).

According to Mearns (2004):

People with a strong internal locus of control believe that the responsibility for whether or not they get reinforced lies with themselves. Internals believe that success or failure is due to their own efforts. In contrast, externals believe that the reinforcers in life are controlled by luck, chance, or powerful others... they see

little impact of their own efforts on the amount of reinforcement they receive.

(p. 3)

Lefcourt (1976) states locus of control does play a “mediating role in determining whether persons will become involved in the pursuit of achievement” but he cautions an observed relationship should not be considered merely “simple and conclusive” (p. 66). Lefcourt suggests other considerations may be involved and should be investigated including self-management, conscious effort, and delayed gratification (p. 67).

Bernard et al. (2004) offer yet another aspect for consideration: the different types of learning environments that synchronous and asynchronous learners experience, and how they interact with others. Synchronous learners, who may meet with other students at a particular place and time, may experience communication through “group affiliation and social pressure,” similar to a traditional classroom. In contrast, an asynchronous learner is not bound by a set time or meeting place, works independently, and may be isolated. The asynchronous learner is less likely to meet face-to-face with other students or faculty unless planned, or if synchronous-mediated contact is scheduled (p. 409).

While it appears a lack of face-to-face interactions may cause problems for the asynchronous learner, Bates and Santos (1997) state:

These new [computer and telecommunications] technologies encourage active learning and interpersonal communication independent of time and distance. They can encourage the development of higher order learning skills, such as critical thinking, knowledge construction, and collaborative learning. (p. 2)

Liu (2002) found a growing body of research in support of computer-mediated communication while conducting an extensive literature review of modern computer-

based communication technologies. Liu (2002) reports computer-mediated communication offers many kinds of services including asynchronous e-mail, bulletin boards, facsimile, voice messaging, and chat rooms (p. 2). Much of the research indicates that computer-mediated communication has two basically separate aspects: task-oriented and social-emotion-oriented communication (p. 3). Liu (2002) states early studies (prior to 1990s) on the nature of computer-mediated communication found the experience of the technology to be “more businesslike, depersonalized, and task-oriented” (p. 3).

More recent studies have investigated the social-emotional nature of the technology. Walther (1993) admits that while computer-mediated communication, without nonverbal cues (facial expressions, posture, and physical appearance) rates “extremely low in social presence,” it does offer positive aspects when performed asynchronously. Walther (1993) states, “Asynchronous communication may offer the communicator less stressful conversational demands, allowing increased opportunity and flexibility. In this mode one may plan, contemplate, and edit one’s comments more easily than [in a] spontaneous, simultaneous mode” (p. 394).

With Walther’s assessment in mind, and given the capacity of distance learning available through the Internet, which appears to offer more opportunities for students to study at their own time and place, important questions emerge: How are distance learners and their instructors communicating within Indiana’s higher education institutions? Are their interactions task-related (e.g., classroom assignments,) or social or both? As Parker (1999) relates, “It is no longer enough for the instruction to flow from the instructor to the student in a sequential, non-interactive path” (p. 13).

One question remains: How much interaction is enough in an online course within Indiana's higher education institutions' asynchronous distance learning programs?

### *Research Questions*

Based upon the preceding discussion and a lack of published research conducted within Indiana's higher education institutions regarding the important element of communication between distance learners and faculty members utilizing asynchronous learning networks (the Internet), the following research questions were posed:

RQ1: How frequently and for what purposes are Indiana distance learners communicating with their peers and instructors? Additionally, how frequently and for what purposes are instructors communicating with their Indiana distance learners?

RQ2: What forms of communication (for example, telephone, email, discussion board, voicemail, facsimile, pager, etc.) are being utilized by students and instructors?

RQ3: Do students and instructors claim that these forms of interaction adequately address their communication needs?

RQ4: What effects will be produced by identifying an Indiana asynchronous distance learning student's locus of control?

## **Method**

### *Development of the Instrument*

Two questionnaires (one for students; a second for instructors) were designed as web-based survey instruments (See Appendices A and B.) Questions were developed to assess the quantity and quality of communication and identify the channels of communication used by students and instructors. Officials from the Indiana Higher Education

Telecommunication System (IHETS), including the director of E-learning, were enlisted to review the items.

In addition, to identify a student's motivation (specifically, their locus of control that may play a role in the student's enrolling in online distance learning), a modified version of Rotter's Locus of Control scale (Rotter, 1966, p. 11) was utilized. Responses were measured using a Likert-type scale (Underwood, 2003, p. 2) ranging from 'strongly agree' (5) to 'strongly disagree' (1).

Prior to pilot testing, IHETS officials performed a review of the survey instruments for clarity. Pilot tests were then performed of the two questionnaires utilizing University of Southern Indiana (USI) students (N = 17) currently participating in a distance learning class via the Internet and with several distance learning instructors and staff within USI. Following the pilot tests, respondents supplied feedback via e-mail to the principal investigator. Among other things, the respondents provided comments on the ease of use, including, "survey wasn't too long," "wasn't difficult," or they "had no trouble following the instructions." Therefore, no changes were required based on pilot testing.

### *Participants and Procedures*

Distance learners (N = 500) taking one or more distance learning courses and distance learning instructors (N = 313) with teaching assignments during the Spring Semester of 2005 in a distance learning program offered via the Internet by an Indiana higher education institution volunteered to share their views concerning their own distance learning / teaching experience. Participants were approached for inclusion via e-mail messages sent by technology officials from IHETS and the Indiana College Network.

Respondents shared details about the types of mediated communication interactions they experienced, for instance, telephone calls, e-mails, or discussion boards.

Additionally, they provided details about their communication needs, including technology issues, and the amount and frequency of interactions between student-to-student and student-to-faculty while participating within the online distance learning program. Furthermore, students were asked about their level of agreement regarding motivation in an effort to identify whether they possess an internal or external locus of control.

## Results

### *Student Profile*

Most student respondents (88%) indicated they 'strongly agree' or 'agree' that distance learning courses are more convenient and flexible in nature than face-to-face classes. The greatest percentage of people participating in the student survey were women (84.4%), who indicated distance learning helps them greatly with their balancing act of education, work, and family obligations (64%). Age of the respondents ranged from 24 years old and under (35.1%), followed by 25 – 35 year olds (26.5%), 36 – 45 year olds (21.4%), 46 – 55 year olds (13.4%), and 56 years and older (3.6%).

Graduate students made up the largest group of participants (24.8%), followed by sophomores (20%), juniors (19%), freshman (16.6%), seniors (13.5%), and those enrolled in continuing education courses (6%). The majority (68.7%) indicated they had taken an online course in the past. The largest segment of respondents (45%) was enrolled in online courses in the Health field, such as health services, nursing, and physical therapy.



Additional fields of study represented were Education (15%), Business (14.3%), and the Arts (9.5%), among others. Nearly 16% listed their online course under Other.

Slightly more than one-half of the student respondents (52.6%) were enrolled full-time, with nearly the same amount (54.2%) taking a combination of on-campus and online courses. Just over half of the respondents (51.7%) were enrolled in a single online course, with another nearly one-third (29.1%) taking two online courses. The remaining students (approx. 20%) were enrolled in three to five online courses. One student reported being enrolled in more than five online distance learning courses.

Nearly all student respondents (98.9%) described their amount of computer experience as either 'intermediate' (i.e., able to perform word processing, games, web browsing) or 'advanced' (i.e., comfortable with a wide array of software applications and the Internet) with most (80.5%) using a Microsoft XP operating system. Most (83.6%) access their online distance learning course(s) from home and utilize a cable modem or other high speed Internet connection (62.6%).

When asked about the number of hours the distance learner spends engaged per week for their online coursework, the largest number (38.5%) reported 6 – 10 hours per week. Another 32% indicated fewer than five hours per week with the remainder of the students (about 30%) spending anywhere from 11 to more than 40 hours per week engaged in work for the online courses.

### *Online Instructor Profile*

Slightly more female than male distance learning instructors responded to the survey (55%) with the majority indicating they were teaching online courses in the areas of Business (22%, accounting, finance, marketing,) Health (21%, health services, nursing,

physical therapy,) and Education (17%, curriculum and instruction, K-12 education, special education training). Nearly 58% of the instructors reported they were teaching both on-campus and online courses during the Spring Semester of 2005. Though the greatest percentage (90%) had taught online in the past, 43% were currently teaching one online course with another 27% teaching two online courses. Six percent of instructors indicated they were teaching more than five online courses.

Most distance learning instructors (78.1%) use a Microsoft XP operating system, and claim their amount of computer experience as 'advanced' (75.2%) as they are comfortable using a wide array of software applications and the Internet. A nearly equal number of instructors access their online course from home (50%) as those who access their course in the workplace (47%), and the most popular type of Internet connection was a T1 or better (often found on university campuses.) Just over a quarter (25.3%) use a cable modem, with another 22.4% gaining access to their online courses via a DSL. Most distance learning instructors indicated they spend anywhere from 6-20 hours a week engaged in work for their online course(s).

**RQ1: How frequently and for what purposes are Indiana distance learners communicating with their peers and instructors? Additionally, how frequently and for what purposes are instructors communicating with their Indiana distance learners?**

#### *Student-Student Interactions*

Many students responded that they did not keep in touch with their online classmates in the month prior to participating in the survey. The greatest percentage (74%) indicated they did not socialize (such as, having coffee together, or talking about other things than

class work), and (67%) did not exchange emotional support (including no personal support or encouragement about issues regarding family, work, or other life activities) with their online classmates.

When they did interact, most student respondents used a group discussion board / web blogging to collaborate on class work (39%), to receive advice or information (38%) or to give advice or information (35%) to their online classmates about course work.

Additionally, e-mail was used to collaborate on class work (36%) including working together on papers, reports or assignments, to receive advice or information (34%), or give advice or information (32%) about the online course work.

#### *Student-Instructor Interactions – Student Results*

The greatest percentage of student respondents (90%) reported their interactions with online instructors were not social in nature in the month prior to participating in the survey. Most (78%) indicated they had received e-mail interactions from their instructor regarding advice or information about class work. The majority (75%) reported they were not offered emotional support by the online instructor (for instance, there was no exchange of personal support or encouragement about issues regarding family, work, or other life activities.) Additionally, 57% indicated they used e-mail to give advice or information to the distance learning instructor. Furthermore, just over one-half (52%) reported they collaborated via e-mail with their instructor on class papers, reports or assignments.

#### *Student-Instructor Interactions – Instructor Results*

Instructor respondents overwhelmingly used e-mail to interact with students whether giving advice or information regarding class work to students (95%), receiving advice or

information from students (84%), collaborating on class work (77%), or even exchanging emotional support to students (68%) in the month prior to participating in the survey. A large percentage of instructors (63%) indicated they did not socialize with their online students in the month prior to participating in the study. Other popular methods of communication used by instructors to give advice or information to students included a group discussion board / web blogging (59%), and using the telephone (49 %).

**RQ2: What forms of communication (for example, telephone, email, discussion board, voicemail, facsimile, pager, etc.) are being utilized by students and instructors?**

#### *Communication Channels – Student Results*

On average, the greatest number of online learner respondents use e-mail to interact with their online instructors about once a week (40%), whereas another 31% report they use group discussion boards / web blogging to communicate with their instructor during the same time period. Just over a quarter of the respondents (27%) specified they use e-mail to communicate with their instructor about once a month.

In addition, the majority of student respondents relayed they never received faxes (75%), instant messaging / chat room interactions (69%), and they never left answering machine or voicemail messages (69%). Additionally, most indicated they did not participate in informal meetings (66%), or scheduled in-person meetings (57%), or received telephone calls (56%) from their online instructor.

On average, most distance learning respondents reported they had little interaction with their online classmates. The majority indicated they never used a facsimile machine (82%), nor an answering machine / voicemail (77%), and no informal meetings (68%)

took place. Additionally, large numbers did not engage in instant messaging / chat rooms (67%), nor schedule in-person meetings (65%) with their peers.

While e-mail was the choice method of communication for distance learners and their online instructors, more than one-third (36%) reported they did not use e-mail at all to keep in touch with their classmates. When they communicated, about one-third (30%) reported using a group discussion board / web blogging about once a week, whereas one-fifth (20%) indicated they used e-mail less than once a month to interact with classmates.

#### *Communication Channels – Instructor Results*

When participating in online learning, on average, most instructor respondents indicated they did not use a facsimile machine (67%), or schedule in-person meetings (61%) with their online students. Some 57% reported they did not engage in instant messaging / chat rooms, with a similar number (56%) indicating that no informal meetings took place with their distance learners. On average, about one-third (32%) specified they used a telephone less than once a month, with another 30% reporting they did not use an answering machine / voice mail to interact with online students.

When communicating with distance learners, 34% of the instructors report using e-mail at least once a day, with another 30% indicating they use a group discussion board / web blogging during that same time. The number using a group discussion board / web blogging to interact with students 2 – 4 times a week dips slightly to 27%.

**RQ3: Do students and instructors claim that these forms of interaction adequately address their communication needs?**

*Addressing Communication Needs*

Overall, most student respondents indicated the following methods of communication were 'not important' to their success in the online course(s): faxes (87%), face-to-face meetings (75%), an answering machine / voicemail (73%), instant messaging / chat room interactions (70%), or telephone calls (67%). E-mail interactions (66%) and using a group discussion board / web blogging (41%) were rated 'extremely important' to a student's success. The following features of distance learning were indicated as 'important' to the respondents: group discussion board / web blogging (39%), e-mails (30%), telephone calls (28%), instant messaging / chat rooms (23%), answering machine / voice mail (23%), face-to-face meetings (21%) and faxes (11%).

Distance learning instructors indicated that they believe e-mail interactions are 'extremely important' or 'important' (99%) for the success of their online course(s); 82% believe a group discussion board / web blogging is 'extremely important' or 'important'. The following were listed as 'not important': faxes (86%), face-to-face meetings (82%), instant messaging / chat room interactions (71%), telephone calls (53%), or an answering machine / voicemail (52%).

**RQ4: What effects will be produced by identifying an Indiana asynchronous distance learning student's locus of control?**

*Locus of Control*

In an effort to identify a student's motivation (specifically, their locus of control that may play a role in the student's enrolling in online distance learning), a modified version of Rotter's Locus of Control scale was used. Responses were measured using a Likert-type scale ranging from 'strongly agree' (5) to 'strongly disagree' (1). The locus of control

scores have a possible range of 0 to 60 (a higher score indicates one is more external.)

Results indicate the students in this study scored an average of 22.16 ( $SD = 5.16$ ), with a range 3 to 35.

Student respondents who claimed they often get things done ahead of schedule have a more internal locus of control ( $M = 21.30$ ,  $SD = 4.96$ ) than students who need reminders ( $M = 23.86$ ,  $SD = 4.32$ ) or will put things off until the last minute ( $M = 23.43$ ,  $SD = 5.43$ ),  $F(2, 470) = 13.30$ ,  $p < .0005$ .

Those respondents who took all online courses ( $M = 21.77$ ,  $SD = 4.77$ ) as opposed to a combination of online and on-campus ( $M = 22.86$ ,  $SD = 5.31$ ) were shown to have a more internal locus of control,  $t(469) = 2.34$ ,  $p < .02$ .

### Discussion

In this study, many of the students who are enrolled in distance learning programs within Indiana's higher education institutions appear to rely heavily on either a group discussion board / web blogging, or e-mail as ways to interact with their online classmates and instructors. At first glance, it may appear these particular forms of mediated communication are less personal than face-to-face interaction or contact, but the students in this study claim they provide a necessary and adequate method of keeping in touch with others. Lee and Gibson (2003) reported similar results in their 1998 research of online graduate students at a Midwestern university (p. 185).

The future of face-to-face classroom instruction and interaction in higher education does not appear to be in doubt, as the majority of college courses offered continue to be offered within a traditional brick-and-mortar building. But distance learning that is offered asynchronously (with no face-to-face human interaction) is proving to be a

valuable resource. Chris Dede, professor of learning technologies at Harvard University's Graduate School of Education, stated in a 2002 interview with the *Chronicle of Higher Education*, "Face-to-face is not the gold standard that it's held up to be. Many people find their voice in distance media in a way that they don't in face-to-face sessions" (Young, 2002, p.3).

This study found instructor and student respondents rated face-to-face meetings as 'not important' to their success in the online course(s) (82% and 75%, respectively.) The two groups also agreed that a fax machine, telephone, instant messaging / chat room, and an answering machine / voicemail were 'not important' to their success in the online course(s).

Another focus of the study was students' motivation (specifically, locus of control.) As previously stated, those who have an internal locus of control believe that their success or failure is due to their own efforts. In contrast, those who feel that control over their situations is external to them tend to attribute their success or failure to external forces such as luck, chance, or powerful others. Thompson (1998) reviewed studies examining students' locus of control and found that distance learners were more likely to have an internal locus of control than were their on-campus peers. Alternately, Thompson (1998) found distance learners with an external locus of control have been reported "to characterize an at-risk" student (p. 4). Liu, Lavelle & Andris (2002) reported that online instruction can be "an effective method to promote change" from external to internal locus of control (p. 68).

Most students (55.3%) in this study, who reported they often get things done ahead of schedule, were found to have an internal locus of control, which may indicate they are



better suited for the rigors of online learning. More than one-third (38.5%) revealed they spend anywhere from 6 – 10 hours per week engaged in work related to their online course(s.) As distance learning students are not required to report to a traditional classroom at a scheduled time, they must be completely responsible for setting their own study schedule while juggling work and family concerns.

Burge (1998) states that “most distance learners are women” (p. 28), as was the case in this study. Out of 500 student respondents, 421 were females who appear to be motivated as they are managing education, work, and family concerns. More than one-half of the respondents (54.3%) indicated they have children at home under the age of 18, with nearly an equal number (52.6%) of distance learners enrolled as full-time students. Additionally, nearly a quarter of the student respondents (24.8%) were graduate students.

Although the measurement of student satisfaction was not a goal of this study, it is apparent. Over half (52.5%) of the distance learning respondents reported their online experience as ‘positive and satisfying’ because they believed their study skills were either ‘improved greatly’ or ‘improved somewhat’ in the following areas: productivity, dependability, communication skills, ability to work independently, computer skills, personal time management, and overall performance and project management.

On the other hand, just over a quarter of the respondents (28%) either ‘strongly agreed’ or ‘agreed’ their online learning experience was frustrating due to technical problems. Upon further examination, it was learned that 34% of those who were frustrated were on dial-up connections and 12% did not even know what kind of connection they had to the Internet. Even though they had experienced technical frustrations, 71% of those students still remain positive about their online learning

experience, 61% of them were satisfied with their decision to take an online course, and 56% of them would strongly recommend online courses to others.

### **Conclusion**

Enrollment in online higher education courses was a novel idea 20 years ago, but it has clearly been accepted as an alternative means of post-secondary education as it continues to evolve. Distance learning offered asynchronously [anywhere, anytime] appears to offer many options, but most notably, flexibility for working mothers or students wishing to finish a degree with minimal complications, or for anyone wanting to take higher education courses without the complexities of commuting to a campus.

As Arbaugh (2000) found, once participants become comfortable with communicating via a computer, “social ties and information exchange will develop” (p. 14). Since this study was conducted early in the semester, it provides only a preliminary examination of Internet-based course interactions between students and instructors within Indiana’s higher education institutions. Future research would be helpful if data are collected twice (early in semester and at the end) in order to gain additional insights, including information about whether students and instructors met informally, or scheduled face-to-face meetings, or possibly even used instant messaging or a chat room once they had become better acquainted. In addition, if the compiled data were shared early enough in a semester, distance learning instructors could make necessary adjustments to improve their interactions with their online students.

Not all of Indiana’s higher educational institutions’ distance learning students and faculty participated in this study. Future research needs to strive for greater participation by the state’s higher education institutions. A more comprehensive review of the

mediated interactions experienced by instructors and students alike could lead to the development of best practices to be shared during faculty training or course design development by all Indiana's higher education institutions that offer online courses. A survey template that is offered several weeks in advance of a school term will provide distance learning instructors ample time to disseminate the surveys in a timely fashion to their online students.

Furthermore, it would be useful if future research examined students' motivating factors for not only enrolling, but persisting in distance learning. The additional knowledge will provide crucial information for Indiana's higher education institutions as they see their enrollment numbers continue to grow within their online distance education programs.

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## Appendix A Student Summary

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Help Center

Monday, December 05, 2005

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- [Home](#)
- [New Survey](#)
- [My Surveys](#)
- [List Management](#)
- [My Account](#)

### Results Summary Show All Pages and Questions

#### Filter Results

To analyze a subset of your data, you can create one or more filters.

[Edit Filter...](#)

**Total:** 500  
**Visible:** 500

#### Share Results

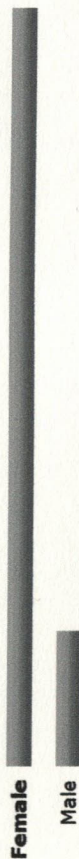
Your results can be shared with others, without giving access to your account.

[Configure...](#)

**Status:** Enabled  
**Reports:** Summary and Detail

### 2. Profile of Participants

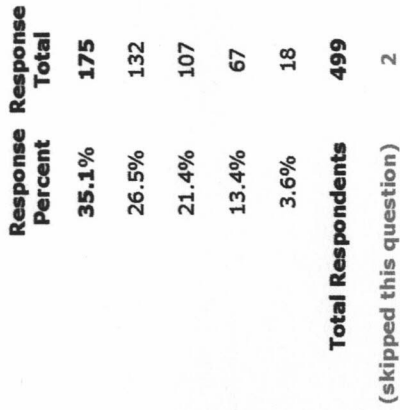
1. Please indicate your gender.



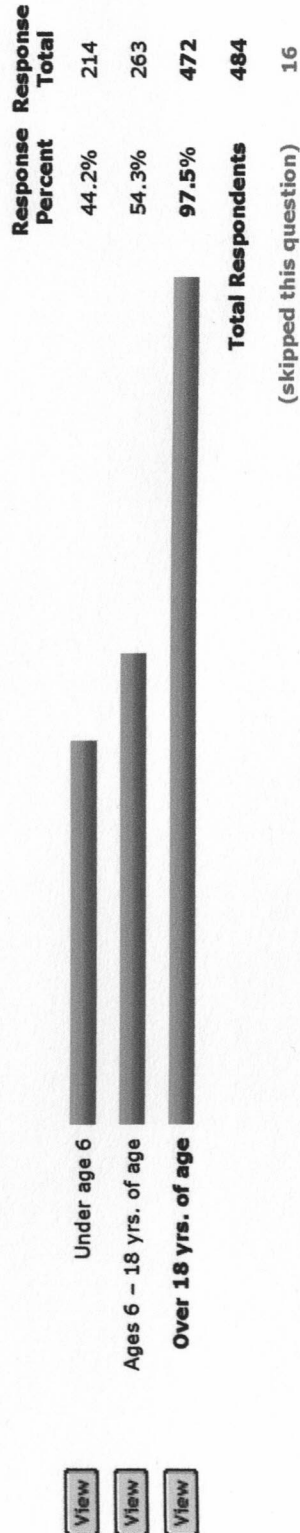
**Total Respondents** 499  
(skipped this question) 2

### Appendix A Student Summary

2. Please indicate your age range.



3. Including yourself, how many people reside in your household?



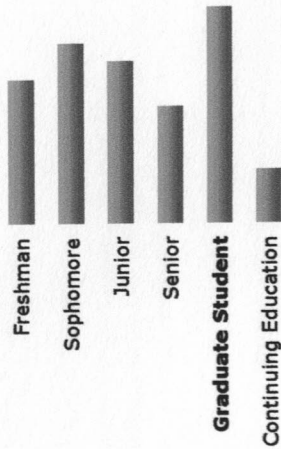
**Appendix A  
Student Summary**

4. I am a

	<b>Response Percent</b>	<b>Response Total</b>
Part time student	47.4%	236
<b>Full time student</b>	<b>52.6%</b>	<b>262</b>
<b>Total Respondents</b>		<b>498</b>
(skipped this question)		3

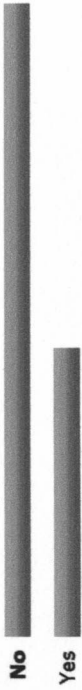
5. At the conclusion of Fall 2004, what is your current student status?

	<b>Response Percent</b>	<b>Response Total</b>
Freshman	16.6%	82
Sophomore	20%	99
Junior	19%	94
Senior	13.5%	67
<b>Graduate Student</b>	<b>24.8%</b>	<b>123</b>
Continuing Education	6.1%	30
<b>Total Respondents</b>		<b>495</b>
(skipped this question)		6



**Appendix A  
Student Summary**

6. Is this your first time taking an online course?



	Response Percent	Response Total
No	68.7%	342
Yes	31.3%	156
<b>Total Respondents</b>		<b>498</b>
(skipped this question)		4

### Appendix A Student Summary

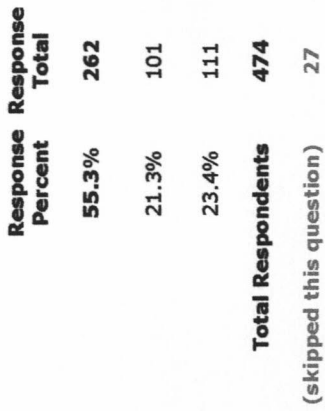
#### 3. Locus of Control

7. Please rate YOUR level of agreement with the following statements.

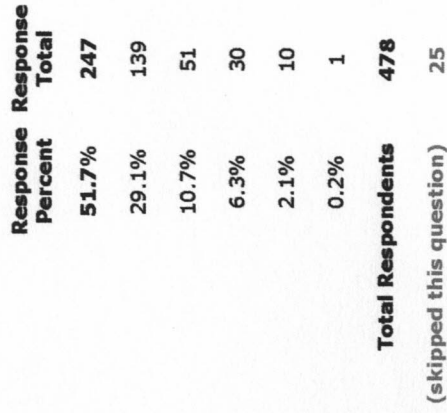
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Response Total
I feel being in control of my learning is important to me.	58% (275)	37% (179)	4% (21)	0% (2)	0% (0)	0% (1)	478
I expect the online instructor to lead the course more.	15% (73)	29% (137)	38% (180)	16% (77)	1% (6)	1% (4)	477
The idea that teachers are unfair to students is nonsense.	13% (60)	30% (142)	34% (162)	19% (93)	2% (11)	2% (10)	478
Most students don't realize the extent to which their grades are influenced by accidental happenings.	6% (29)	28% (132)	40% (190)	17% (82)	5% (25)	4% (17)	475
When I make plans, I am almost certain that I can make them work.	23% (111)	65% (310)	8% (36)	3% (16)	0% (1)	0% (1)	475
It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.	4% (21)	16% (78)	19% (90)	39% (186)	19% (92)	2% (8)	475
In my case getting what I want has little or nothing to do with luck.	23% (111)	48% (228)	19% (92)	8% (36)	2% (9)	0% (2)	478
Many times we might just as well decide what to do by flipping a coin.	0% (1)	5% (22)	15% (71)	39% (186)	38% (179)	3% (15)	474
Sometimes I can't understand how teachers arrive at the grades they give.	3% (14)	19% (89)	20% (93)	38% (181)	18% (86)	2% (8)	471
There is a direct connection between how hard I study and the grades I get.	40% (191)	45% (215)	9% (41)	5% (24)	1% (4)	0% (1)	476
What happens to me is my own doing.	30% (144)	47% (225)	17% (83)	3% (16)	1% (6)	0% (2)	476
Sometime I feel that I don't have enough control over the direction my life is taking.	2% (10)	18% (87)	17% (80)	40% (191)	21% (101)	2% (8)	477
						<b>Total Respondents</b>	<b>479</b>
						(skipped this question)	21

**Appendix A  
Student Summary**

8. Which statement best describes you? (Choose one)

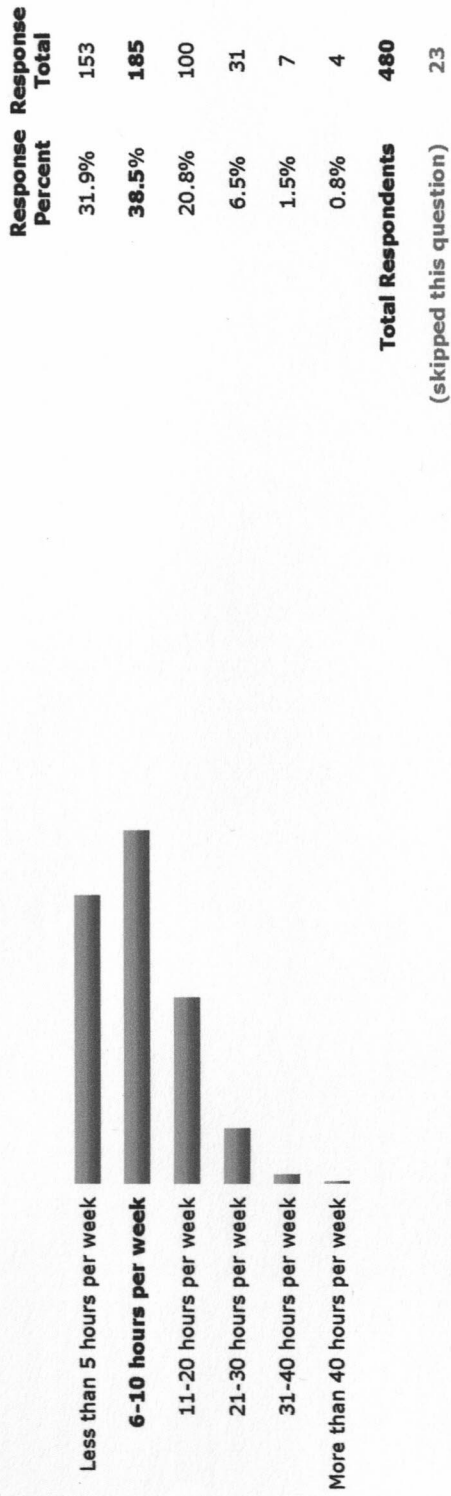


9. How many online courses are you currently enrolled in?



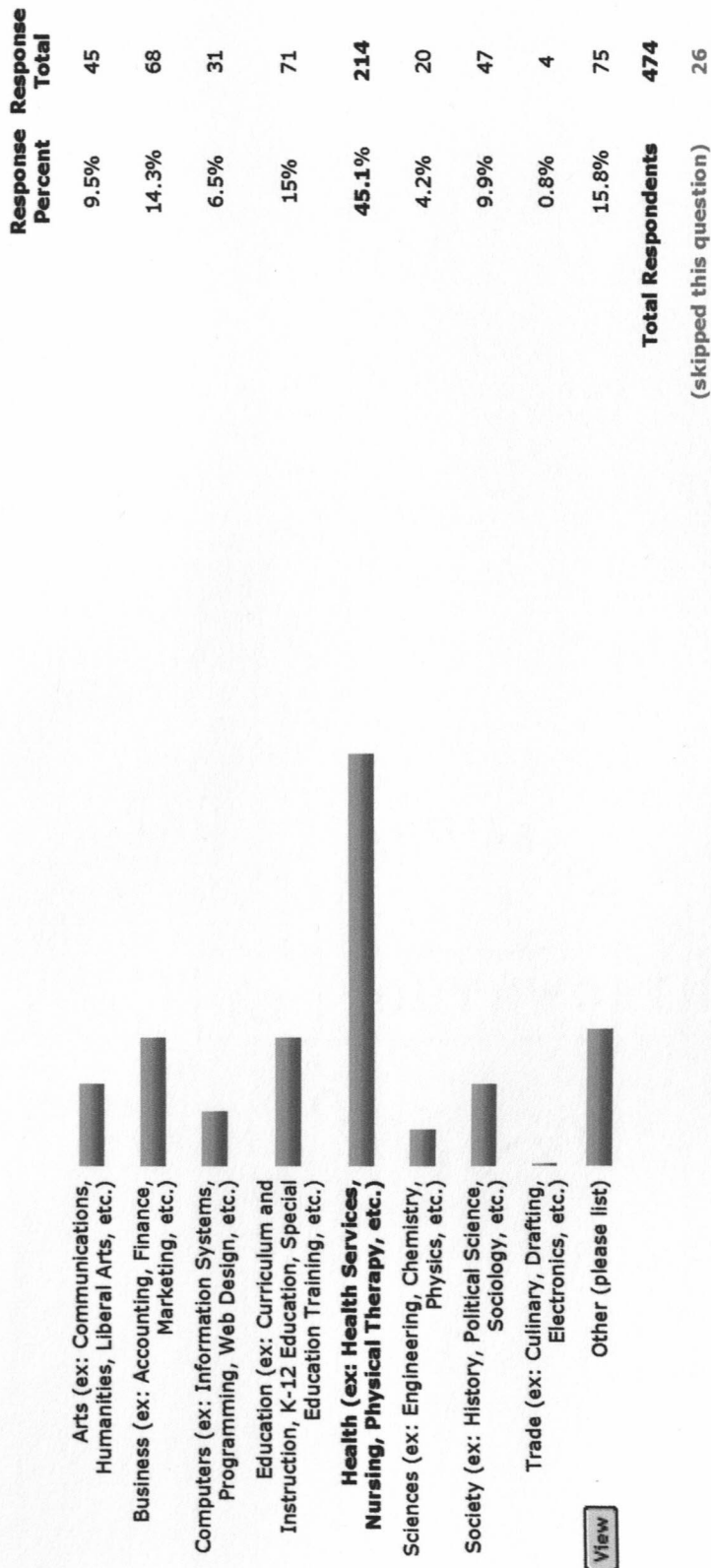
**Appendix A  
Student Summary**

10. How many hours per week do you usually spend engaged in work for your online course(s)?



### Appendix A Student Summary

11. In which of the following areas are you taking online courses? (Check all that apply)



[View](#)



**Appendix A  
Student Summary**

12. What course delivery system best describes your enrollment for Spring 2005?

	Response Percent	Response Total
Combination (a mix of on-campus courses and online courses)	54.2%	258
All online courses only	45.8%	218
<b>Total Respondents</b>	<b>476</b>	
(skipped this question)		29

13. From which Indiana higher education institution(s) are you currently taking online course(s)? (Check all that apply)

	Response Percent	Response Total
Ball State University	0.2%	1
Indiana State University	20.6%	97
Indiana University Bloomington	0.4%	2
Indiana University East	0%	0
Indiana University Kokomo	0%	0
Indiana University Northwest	0.2%	1
Indiana University Purdue University Columbus	0%	0
Indiana University Purdue University Fort Wayne	0%	0
Indiana University Purdue University Indianapolis	0%	0
Indiana University School of Medicine	0%	0
Indiana University South Bend	0.4%	2
Indiana University Southeast	0%	0

**Appendix A  
Student Summary**

Indiana Wesleyan University	0.8%	4
Ivy Tech State College Anderson	0%	0
Ivy Tech State College Bloomington	0.8%	4
Ivy Tech State College Columbus	0.6%	3
Ivy Tech State College Elkhart	1.1%	5
Ivy Tech State College Evansville	10.8%	51
Ivy Tech State College Fort Wayne	2.3%	11
Ivy Tech State College Gary	2.1%	10
Ivy Tech State College Indianapolis	1.1%	5
Ivy Tech State College Kokomo	0.2%	1
Ivy Tech State College Lafayette	0.2%	1
Ivy Tech State College Lawrenceburg	0.4%	2
Ivy Tech State College Logansport	0.2%	1
Ivy Tech State College Madison	0.6%	3
Ivy Tech State College Muncie	0.4%	2
Ivy Tech State College Richmond	1.9%	9
Ivy Tech State College Sellersburg	0%	0
Ivy Tech State College South Bend	7.4%	35
Ivy Tech State College Terre Haute	17.8%	84
Ivy Tech State College Valparaiso	0%	0
Ivy Tech State College Warsaw	0.2%	1
Purdue University North Central	0%	0
Purdue University West Lafayette	0%	0

## Appendix A Student Summary

Saint Mary-of-the-Woods	0%	0
Taylor University Center for Lifelong Learning	3%	14
University of Indianapolis	0%	0
University of Saint Francis	0%	0
<b>University of Southern Indiana</b>	<b>39.3%</b>	<b>185</b>
Vincennes University	0.6%	3
Vincennes University Jasper Center	0%	0
<b>Total Respondents</b>		<b>471</b>
(skipped this question)		29

### 4. Technology Issues

14. What is your PRIMARY location when accessing your online course(s)?

Home	83.6%	393
Workplace	7%	33
Campus Computer Lab	3.8%	18
Campus Dormitory	4%	19
Other	1.5%	7
<b>Total Respondents</b>		<b>470</b>
(skipped this question)		31

**Appendix A  
Student Summary**

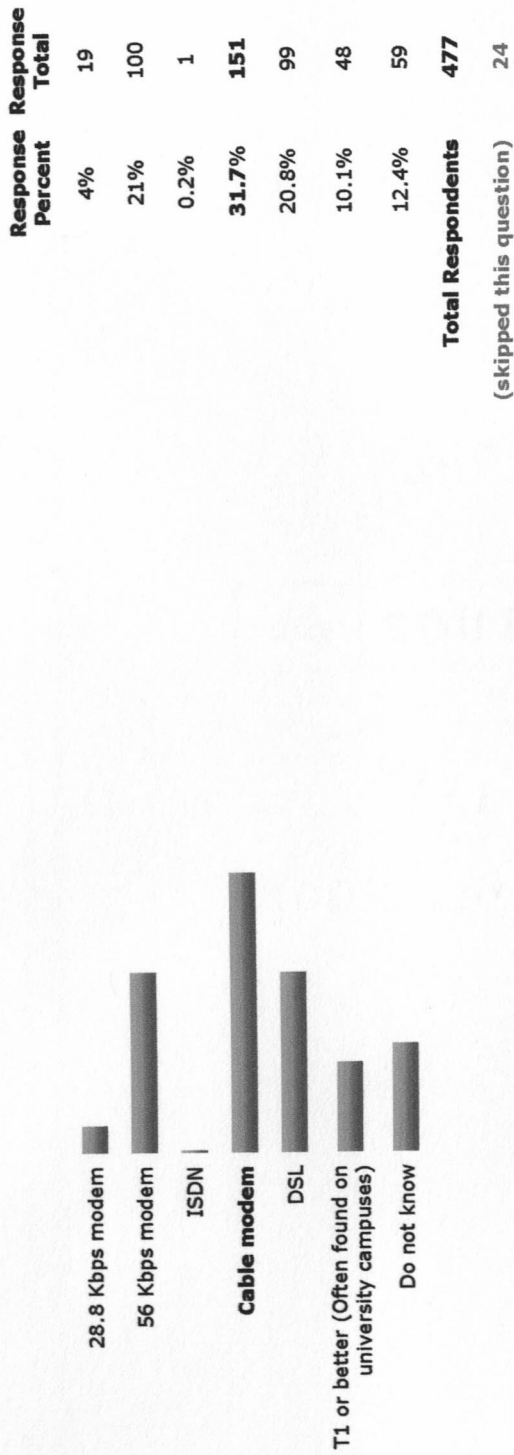
15. Which type of operating system(s) do you most frequently use when accessing your online course(s)?



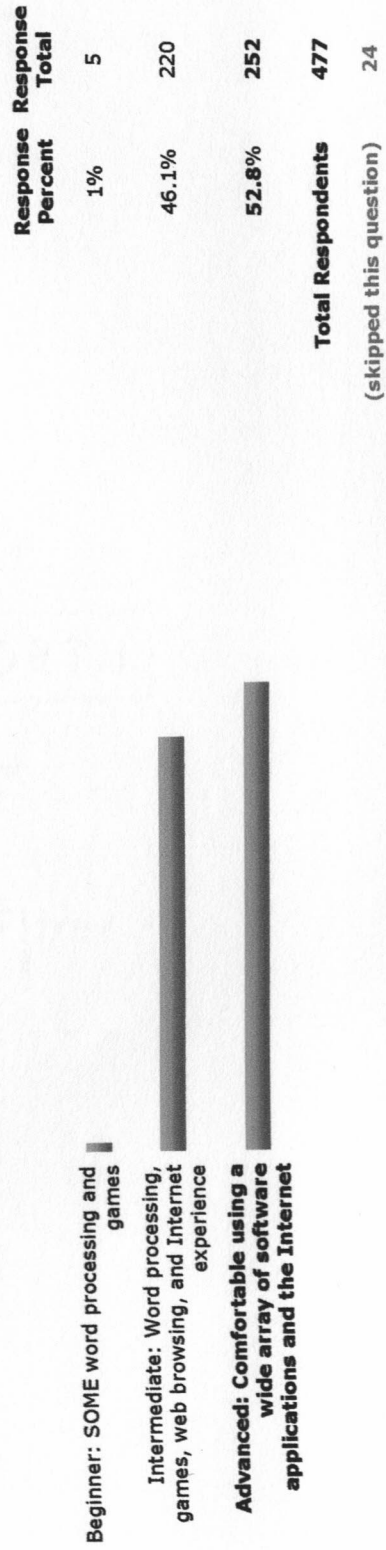
[View](#)

**Appendix A  
Student Summary**

16. When accessing your online course(s), which type of Internet connection are you most likely to use?



17. Which of the categories below best describes your amount of computer experience?



**Appendix A  
Student Summary**

**5. Quantity/Quality/Channel of Communication**

18. On average, when participating in online learning, how often do you interact with your online instructor(s)?

	At least once a day	2 - 4 times a week	About once a week	About once a month	Less than once a month	N/A	Response Total
In person: Scheduled Meetings	1% (4)	2% (9)	7% (31)	9% (41)	25% (113)	57% (258)	456
In person: Informal Meetings	0% (0)	1% (3)	4% (17)	4% (20)	25% (112)	66% (301)	453
Telephone calls	0% (0)	0% (0)	2% (8)	7% (33)	35% (156)	56% (255)	452
Email	1% (4)	17% (79)	40% (189)	27% (128)	12% (55)	3% (14)	469
Instant Messaging / Chat Room	0% (2)	2% (7)	4% (19)	3% (14)	22% (98)	69% (310)	450
Group Discussion Board / Web Blogging	5% (21)	14% (64)	31% (144)	12% (55)	15% (71)	23% (106)	461
Faxes	0% (0)	1% (3)	2% (8)	2% (8)	21% (94)	75% (336)	449
Answering machine / Voice mail	0% (1)	0% (1)	1% (4)	4% (18)	25% (114)	69% (312)	450
						<b>Total Respondents</b>	<b>474</b>
					(skipped this question)		26

**Appendix A  
Student Summary**

19. On average, when participating in online learning, how often do you interact with your online classmates?

	At least once a day	2 - 4 times a week	About once a week	About once a month	Less than once a month	N/A	Response Total
In person: Scheduled Meetings	0% (0)	3% (13)	5% (21)	7% (33)	20% (94)	65% (301)	462
In person: Informal Meetings	1% (3)	2% (10)	4% (18)	4% (18)	21% (95)	68% (312)	456
Telephone calls	0% (2)	2% (8)	7% (34)	3% (15)	21% (94)	66% (302)	455
Email	3% (13)	12% (54)	17% (78)	13% (60)	20% (93)	36% (167)	465
Instant Messaging / Chat Room	0% (2)	2% (10)	7% (30)	3% (14)	20% (92)	67% (304)	452
Group Discussion Board / Web Blogging	7% (33)	19% (89)	30% (140)	9% (41)	15% (70)	20% (96)	469
Faxes	0% (0)	0% (0)	0% (2)	1% (4)	17% (77)	82% (374)	457
Answering machine / Voice mail	0% (0)	1% (5)	1% (6)	1% (4)	19% (88)	77% (354)	457
						<b>Total Respondents</b>	<b>474</b>
						(skipped this question)	26

**Appendix A  
Student Summary**

20. How important are the following methods of communication for success in your online course(s)?

	<b>Extremely Important</b>	<b>Important</b>	<b>Not Important</b>	<b>Response Total</b>
Face-to-face meetings	5% (22)	21% (96)	75% (349)	467
Telephone calls	4% (21)	28% (132)	67% (314)	467
Email	66% (310)	30% (140)	5% (22)	472
Instant Messaging / Chat Room	7% (32)	23% (108)	70% (322)	462
Group Discussion Board / Web Blogging	41% (191)	39% (186)	20% (94)	471
Faxes	2% (7)	11% (52)	87% (404)	463
Answering machine / Voice mail	4% (18)	23% (109)	73% (337)	464
			<b>Total Respondents</b>	<b>473</b>
			(skipped this question)	27



**Appendix A  
Student Summary**

**6. Task-related communication vs emotional and social purpose**

21. In the past month, which types of interaction(s) have you had with your online instructor(s)? (Check all that apply)

	In person: Scheduled meetings	In person: Informal meetings	Telephone calls	E-Mail	Instant Messaging / Chat Room	Group Discussion Board / Web Blogging	Faxes	Answering machine / Voice mail	N/A	Respondent Total
Collaborated on class work (e.g., worked together on papers, reports, assignments)	9% (38)	6% (28)	9% (40)	52% (231)	4% (18)	35% (154)	2% (11)	3% (14)	34% (150)	444
Received advice or information regarding class work	6% (28)	4% (20)	10% (44)	78% (359)	3% (16)	35% (159)	1% (6)	2% (7)	10% (48)	459
Given advice or information regarding class work	4% (19)	3% (14)	5% (23)	57% (249)	3% (11)	30% (130)	1% (3)	0% (1)	28% (121)	434
Socialized (e.g., had coffee together, talked about other things than class work)	1% (3)	3% (12)	0% (1)	6% (24)	1% (4)	2% (10)	1% (3)	0% (0)	90% (376)	416
Exchanged emotional support (e.g., exchanged personal support or encouragement about issues regarding family, work, or other life activities)	2% (8)	3% (12)	3% (14)	17% (71)	1% (5)	6% (25)	1% (4)	0% (0)	75% (319)	423
	<b>Total Respondents</b>									<b>462</b>
	(skipped this question)									38

**Appendix A  
Student Summary**

22. In the past month, which types of interaction(s) have you had with your online classmates? (Check all that apply)

	In person: Scheduled meetings	In person: Informal meetings	Telephone calls	E-Mail	Instant Messaging / Chat Room	Group Discussion Board / Web Blogging	Faxes	Answering machine / Voice mail	N/A	Respondent Total
Collaborated on class work (e.g., worked together on papers, reports, assignments)	11% (50)	11% (49)	11% (51)	36% (162)	5% (24)	39% (174)	1% (3)	2% (7)	40% (177)	448
Received advice or information regarding class work	6% (28)	9% (41)	10% (46)	34% (154)	5% (21)	38% (170)	0% (2)	1% (5)	38% (168)	448
Given advice or information regarding class work	6% (28)	9% (42)	11% (51)	32% (140)	5% (20)	35% (156)	0% (2)	1% (5)	36% (162)	444
Socialized (e.g., had coffee together, talked about other things than class work)	4% (18)	12% (51)	7% (28)	10% (43)	3% (11)	7% (30)	1% (4)	1% (5)	74% (317)	428
Exchanged emotional support (e.g., exchanged personal support or encouragement about issues regarding family, work, or other life activities)	3% (14)	9% (39)	10% (41)	17% (73)	3% (12)	12% (52)	1% (5)	1% (5)	67% (287)	430
									<b>Total Respondents</b>	<b>454</b>
									(skipped this question)	46

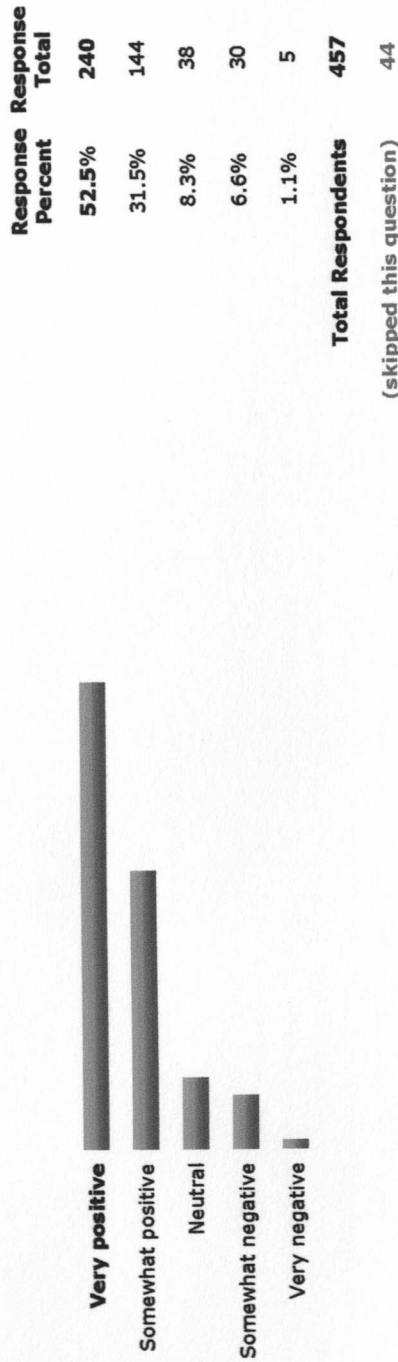
## Appendix A Student Summary

### 7. Student Attitudes

23. Please rate YOUR level of agreement with the following statements about online learning. Online learning...	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Response Total
Is more convenient and flexible than face-to-face classes.	<b>59% (269)</b>	29% (133)	5% (23)	5% (24)	1% (5)	1% (4)	<b>458</b>
Allows me to balance my education with work and family obligations.	<b>64% (293)</b>	29% (133)	3% (14)	2% (11)	1% (3)	1% (5)	<b>459</b>
Has improved my study habits.	24% (110)	28% (126)	<b>28% (130)</b>	15% (70)	4% (18)	1% (3)	<b>457</b>
Has improved my ability to work independently.	33% (150)	<b>38% (173)</b>	21% (95)	6% (28)	2% (7)	1% (3)	<b>456</b>
Allows me to communicate more frequently with my instructors than in face-to-face classes.	11% (50)	19% (88)	<b>28% (130)</b>	25% (113)	14% (66)	2% (11)	<b>458</b>
Allows me to communicate more frequently my classmates than in face-to-face classes.	9% (42)	12% (54)	26% (120)	<b>30% (136)</b>	17% (77)	6% (29)	<b>458</b>
Allows me to communicate my ideas more effectively than in face-to-face classes.	13% (58)	21% (96)	<b>29% (131)</b>	21% (96)	11% (52)	5% (24)	<b>457</b>
Requires more work than face-to-face classes.	24% (111)	<b>31% (142)</b>	23% (104)	17% (77)	4% (18)	1% (5)	<b>457</b>
Is frustrating due to technical problems.	7% (32)	21% (96)	22% (102)	<b>26% (121)</b>	17% (77)	7% (30)	<b>458</b>
Is more satisfying than face-to-face classes.	13% (61)	20% (90)	<b>38% (174)</b>	17% (78)	10% (46)	2% (7)	<b>456</b>
Makes me feel isolated from my classmates and instructors.	8% (38)	16% (74)	23% (107)	<b>30% (136)</b>	19% (87)	3% (16)	<b>458</b>
						<b>Total Respondents</b>	<b>459</b>
						(skipped this question)	41

**Appendix A  
Student Summary**

24. How do you feel about your online learning experience?

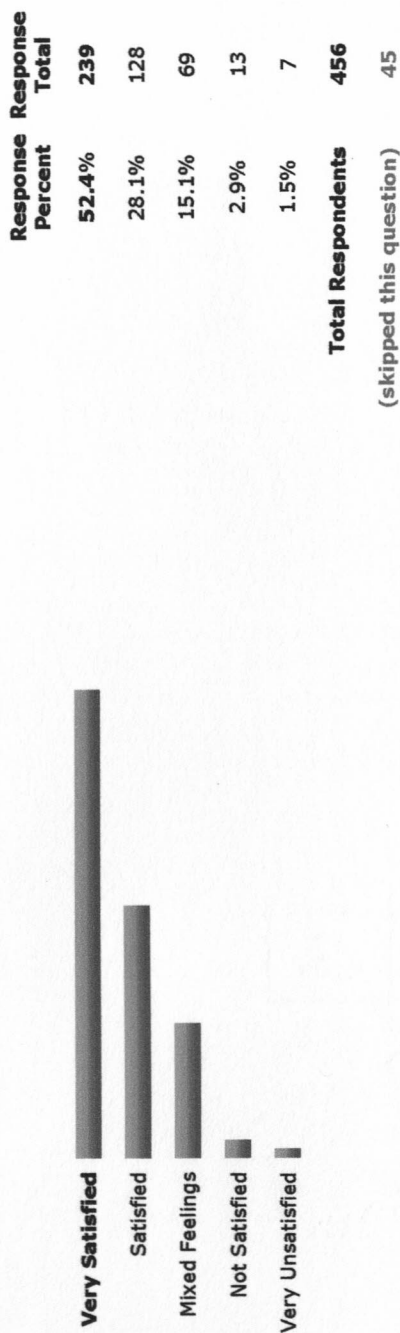


25. As a result of online learning, how have your study skills changed in the following areas?

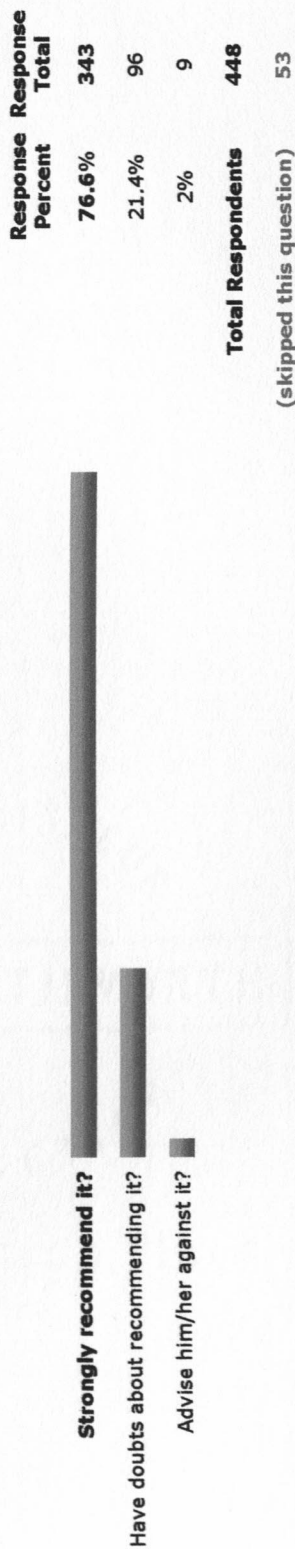
	Improved Greatly	Improved Somewhat	No Change	Decline Somewhat	Declined Greatly	N/A	Response Total
Productivity	21% (95)	35% (159)	37% (171)	6% (26)	1% (5)	0% (2)	458
Interpersonal skills	8% (37)	22% (99)	62% (285)	6% (26)	1% (3)	2% (7)	457
Dependability	17% (79)	31% (143)	48% (217)	3% (12)	0% (2)	1% (3)	456
Communication skills	13% (58)	29% (134)	53% (240)	4% (16)	1% (3)	1% (5)	456
Ability to work independently	29% (134)	35% (161)	34% (157)	0% (2)	0% (0)	1% (3)	457
Computer skills	31% (143)	36% (164)	32% (146)	0% (1)	0% (0)	0% (2)	456
Personal time management	26% (119)	36% (166)	32% (146)	4% (20)	1% (5)	1% (3)	459
Overall performance	20% (93)	39% (181)	35% (162)	4% (19)	1% (3)	0% (1)	459
Project management	18% (81)	37% (169)	40% (181)	4% (17)	1% (3)	2% (7)	458
<b>Total Respondents</b>							<b>458</b>
							42 (skipped this question)

**Appendix A  
Student Summary**

26. How satisfied are you NOW with the decision to take an online course?



27. If a friend told you that he/she was interested in taking an online course like you, would you:



## Appendix B Instructor Summary

[Privacy](#)
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[List Management](#)
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[Help Center](#)

Tuesday, December 06, 2005

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### Results Summary

#### Filter Results

To analyze a subset of your data, you can create one or more filters.

[Add Filter...](#)

**Total:** 313

**Visible:** 313

#### Share Results

Your results can be shared with others, without giving access to your account.

[Configure...](#)

**Status:** Enabled

**Reports:** Summary and Detail

### 2. Profile of Participants

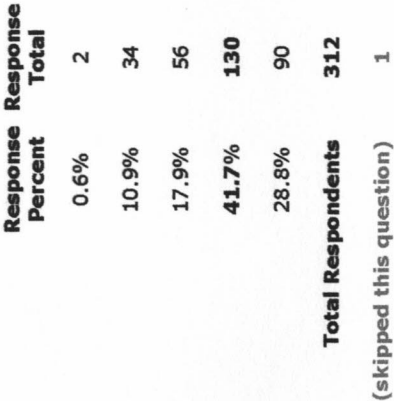
1. Please indicate your gender.



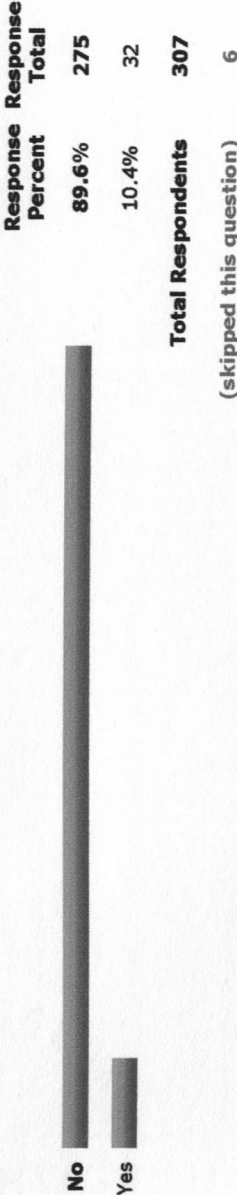
	Response Percent	Response Total
<b>Total Respondents</b>		<b>312</b>
(skipped this question)		1

**Appendix B  
Instructor Summary**

2. Please indicate your age range.

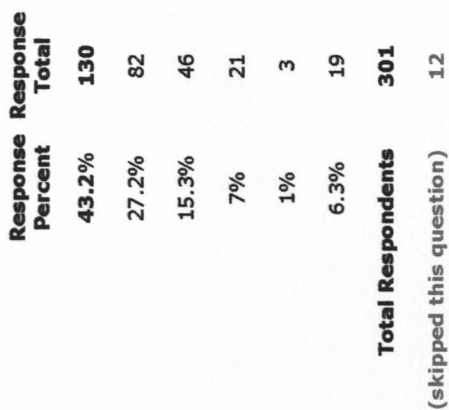


3. Is this your first time teaching an online course?

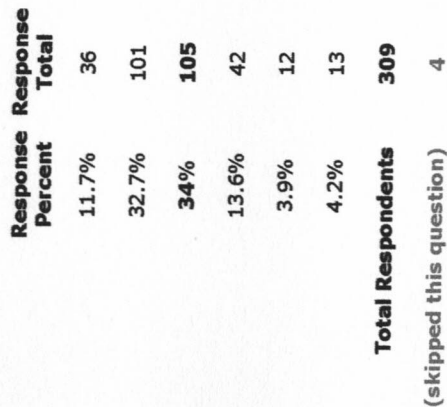


### Appendix B Instructor Summary

4. How many online courses are you currently teaching?



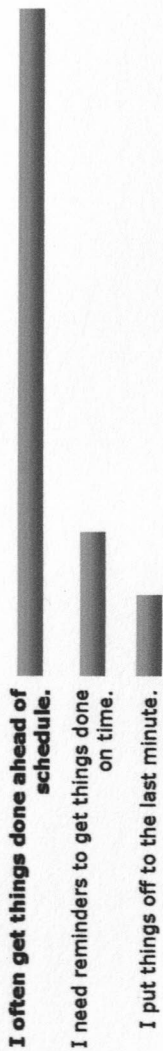
5. How many hours per week do you usually spend engaged in work for your online course(s)?





**Appendix B  
Instructor Summary**

6. Which statement best describes you? (Choose one)

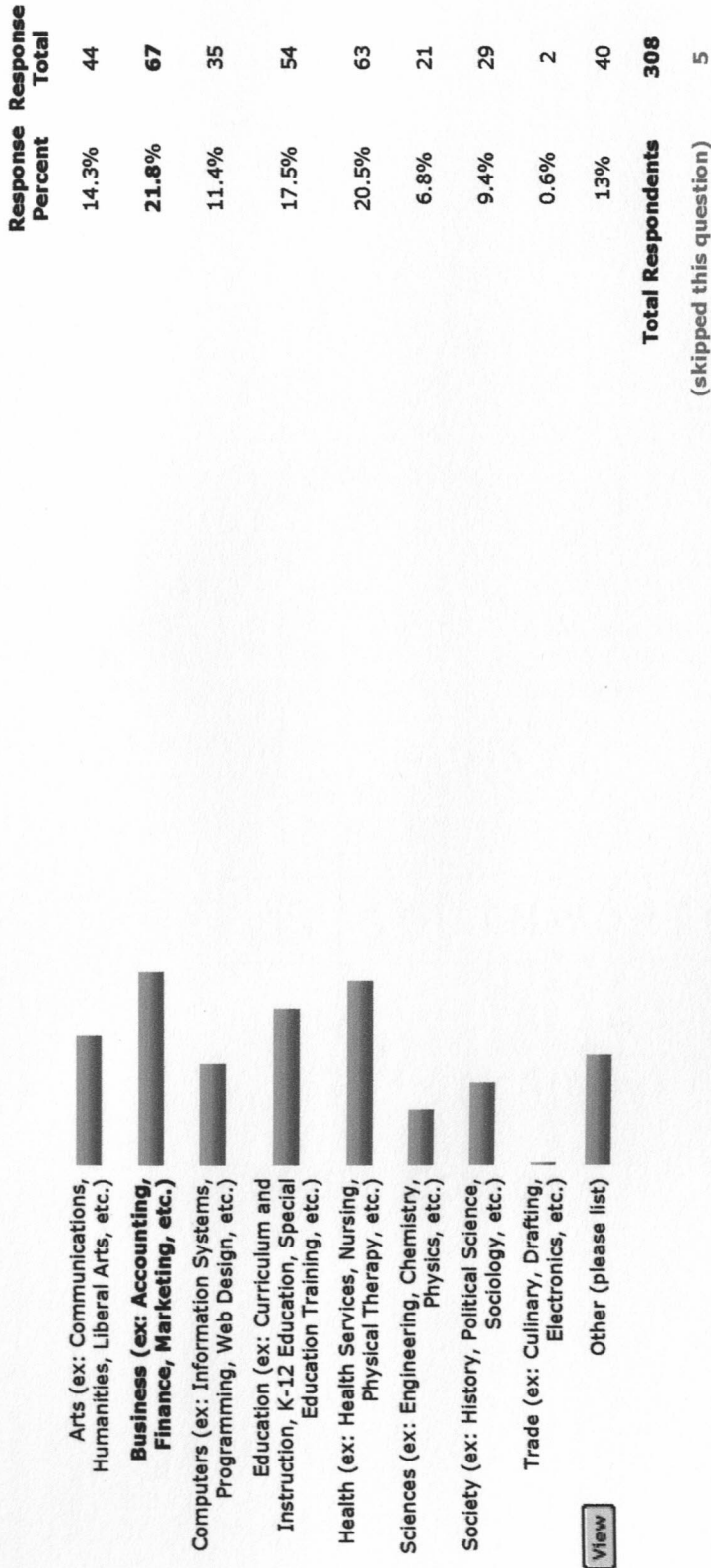


**Total Respondents 306**

(skipped this question) 7

### Appendix B Instructor Summary

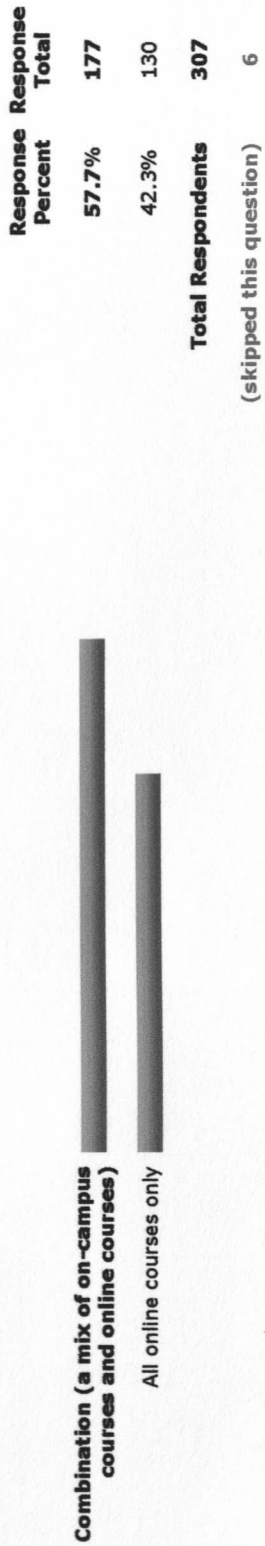
7. In which of the following areas are you teaching online courses? (Check all that apply)



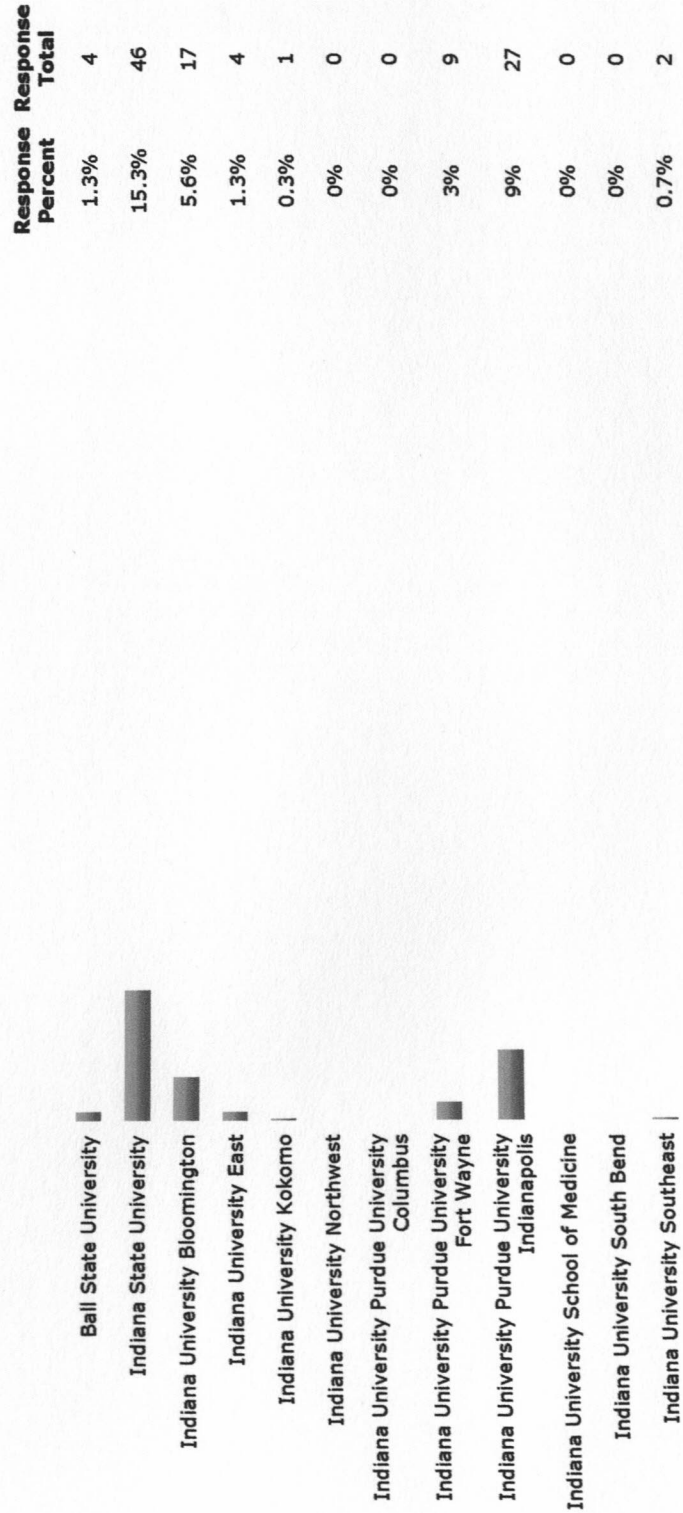
[View](#)

**Appendix B  
Instructor Summary**

8. What course delivery system best describes your teaching assignment(s) for Spring 2005?



9. For which Indiana higher education institution(s) are you currently teaching online course(s)? (Check all that apply)



**Appendix B  
Instructor Summary**

Institution	Percentage	Count
<b>Indiana Wesleyan University</b>	<b>23.3%</b>	<b>70</b>
Ivy Tech State College Anderson	0%	0
Ivy Tech State College Bloomington	1.3%	4
Ivy Tech State College Columbus	1%	3
Ivy Tech State College Elkhart	0.7%	2
Ivy Tech State College Evansville	1.7%	5
Ivy Tech State College Fort Wayne	2.7%	8
Ivy Tech State College Gary	0.3%	1
Ivy Tech State College Indianapolis	0.3%	1
Ivy Tech State College Kokomo	0%	0
Ivy Tech State College Lafayette	0%	0
Ivy Tech State College Lawrenceburg	1%	3
Ivy Tech State College Logansport	0%	0
Ivy Tech State College Madison	1%	3
Ivy Tech State College Muncie	2.7%	8
Ivy Tech State College Richmond	4%	12
Ivy Tech State College Sellersburg	2.3%	7
Ivy Tech State College South Bend	0.7%	2
Ivy Tech State College Terre Haute	5.3%	16
Ivy Tech State College Valparaiso	0%	0
Ivy Tech State College Warsaw	0.7%	2
Purdue University North Central	1%	3
Purdue University West Lafayette	1%	3

## Appendix B Instructor Summary

Saint Mary-of-the-Woods	0.3%	1
Taylor University Center for Lifelong Learning	4%	12
University of Indianapolis	0%	0
University of Saint Francis	0%	0
University of Southern Indiana	10.3%	31
Vincennes University	4%	12
Vincennes University Jasper Center	0.3%	1
<b>Total Respondents</b>		<b>301</b>
(skipped this question)		12

### 3. Technology Issues

10. What is your PRIMARY location when accessing your online course(s)?

<b>Home</b>	<b>50%</b>	<b>148</b>
Workplace	47%	139
Campus Computer Lab	1.7%	5
Other	1.4%	4
<b>Total Respondents</b>		<b>296</b>
(skipped this question)		19

**Appendix B  
Instructor Summary**

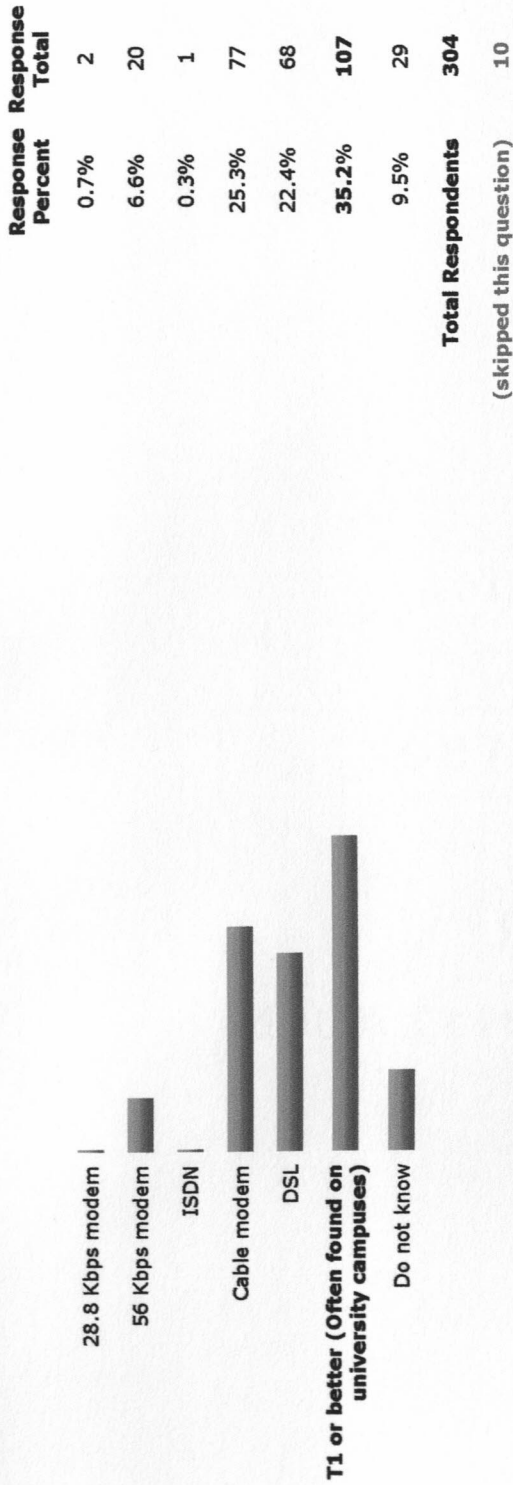
11. Which type of operating system(s) do you most frequently use when accessing your online course(s)?



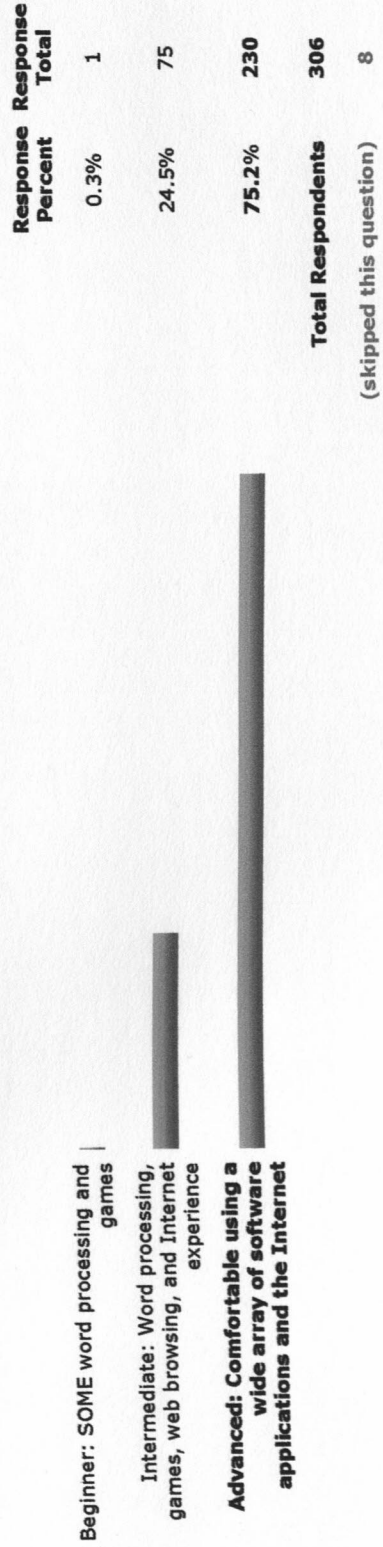
[View](#)

**Appendix B  
Instructor Summary**

12. When accessing your online course(s), which type of Internet connection are you most likely to use?



13. Which of the categories below best describes your amount of computer experience?



## Appendix B Instructor Summary

### 4. Quantity/Quality/Channel of Communication

14. On average, when participating in online learning, how often do you interact with your online student(s)?		At least once a day	2 - 4 times a week	About once a week	About once a month	Less than once a month	N/A	Response Total
In person: Scheduled Meetings		1% (3)	5% (12)	6% (16)	9% (24)	18% (48)	61% (162)	265
In person: Informal Meetings		1% (3)	2% (4)	8% (22)	11% (29)	22% (58)	56% (145)	261
Telephone calls		1% (4)	10% (27)	20% (57)	21% (59)	32% (89)	15% (43)	279
Email		34% (100)	41% (120)	20% (58)	3% (10)	0% (1)	1% (4)	293
Instant Messaging / Chat Room		3% (9)	6% (16)	8% (22)	9% (24)	16% (42)	57% (152)	265
Group Discussion Board / Web Blogging		30% (86)	27% (77)	16% (45)	6% (17)	6% (16)	15% (41)	282
Faxes		1% (3)	1% (2)	4% (12)	6% (15)	21% (58)	67% (180)	270
Answering machine / Voice mail		3% (9)	11% (31)	18% (50)	13% (37)	24% (66)	30% (83)	276
							<b>Total Respondents</b>	<b>299</b>
							(skipped this question)	14



**Appendix B  
Instructor Summary**

15. How important are the following methods of communication for success in your online course(s)?

	<b>Extremely Important</b>	<b>Important</b>	<b>Not Important</b>	<b>Response Total</b>
Face-to-face meetings	7% (21)	10% (29)	<b>82% (233)</b>	<b>283</b>
Telephone calls	9% (25)	39% (112)	<b>53% (153)</b>	<b>290</b>
Email	<b>88% (259)</b>	11% (34)	1% (3)	<b>296</b>
Instant Messaging / Chat Room	7% (20)	22% (61)	<b>71% (200)</b>	<b>281</b>
Group Discussion Board / Web Blogging	<b>62% (179)</b>	20% (58)	18% (53)	<b>290</b>
Faxes	1% (4)	12% (35)	<b>86% (243)</b>	<b>282</b>
Answering machine / Voice mail	12% (34)	36% (105)	<b>52% (149)</b>	<b>288</b>
			<b>Total Respondents</b>	<b>299</b>
			(skipped this question)	14

**Appendix B  
Instructor Summary**

**5. Task-related communication vs emotional and social purpose**

16. In the past month, what types of interaction(s) have you had with your online students? (Check all that apply)

	In person: Scheduled meetings	In person: Informal meetings	Telephone calls	E-Mail	Instant Messaging / Chat Room	Group Discussion Board / Web Blogging	Faxes	Answering machine / Voice mail	N/A	Respondent Total
Collaborated on class work (e.g., worked together on papers, reports, assignments)	13% (38)	15% (42)	39% (112)	77% (220)	14% (40)	56% (161)	5% (15)	22% (64)	13% (38)	285
Received advice or information regarding class work	10% (27)	13% (37)	38% (107)	84% (237)	11% (30)	44% (125)	2% (6)	17% (48)	12% (34)	281
Given advice or information regarding class work	14% (40)	20% (57)	49% (141)	95% (276)	12% (35)	59% (170)	2% (7)	22% (64)	1% (3)	290
Socialized (e.g., had coffee together, talked about other things than class work)	3% (7)	8% (20)	6% (15)	21% (55)	8% (21)	13% (34)	0% (1)	1% (2)	63% (162)	258
Exchanged emotional support (e.g., exchanged personal support or encouragement about issues regarding family, work, or other life activities)	7% (20)	13% (37)	29% (83)	68% (193)	7% (19)	27% (76)	0% (1)	7% (19)	19% (53)	282
	<b>Total Respondents</b>									<b>292</b>
	(skipped this question)									21

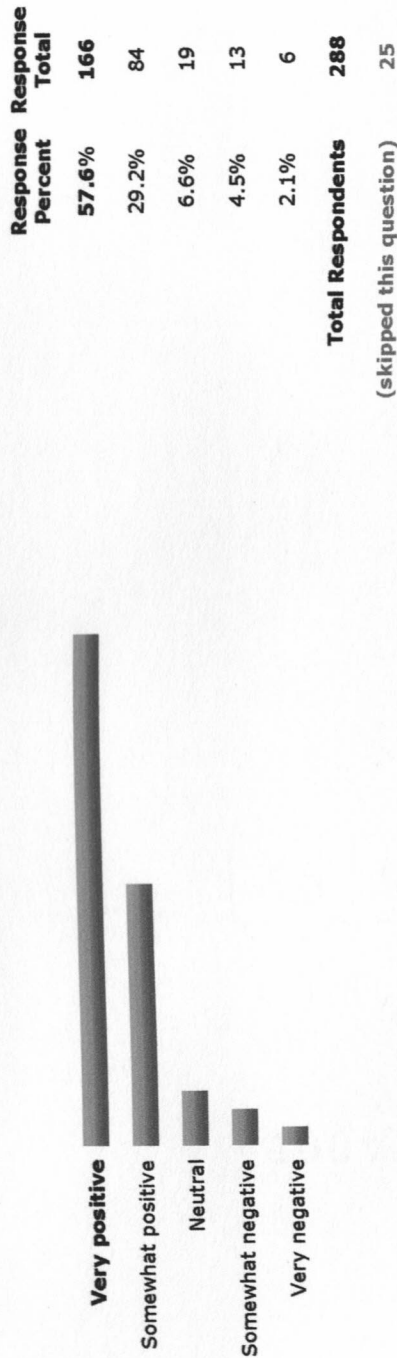
## Appendix B Instructor Summary

### 6. Instructor Attitudes

17. Please rate YOUR level of agreement with the following statements about online learning. Online learning...	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A	Response Total
Is more convenient and flexible than face-to-face classes.	<b>45% (132)</b>	37% (108)	7% (21)	7% (20)	3% (8)	1% (3)	<b>292</b>
Allows me to balance my education with work and family obligations.	<b>37% (107)</b>	33% (96)	12% (34)	6% (18)	3% (10)	9% (26)	<b>291</b>
Has improved my work habits.	14% (41)	27% (79)	<b>34% (99)</b>	12% (35)	6% (17)	7% (19)	<b>290</b>
Has improved my ability to work independently.	19% (54)	27% (77)	<b>32% (91)</b>	10% (30)	4% (11)	8% (23)	<b>286</b>
Allows me to communicate more frequently with my students than in face-to-face classes.	29% (83)	<b>31% (90)</b>	11% (33)	17% (48)	11% (33)	1% (3)	<b>290</b>
Allows me to communicate my ideas more effectively than in face-to-face classes.	12% (36)	15% (44)	<b>30% (87)</b>	24% (69)	18% (52)	1% (3)	<b>291</b>
Requires more work than face-to-face classes.	<b>41% (120)</b>	29% (84)	16% (48)	10% (28)	3% (9)	1% (2)	<b>291</b>
Is frustrating due to technical problems.	9% (26)	27% (77)	21% (60)	<b>29% (83)</b>	13% (38)	2% (5)	<b>289</b>
Is more satisfying than face-to-face classes.	6% (16)	12% (35)	<b>38% (111)</b>	28% (82)	15% (43)	1% (2)	<b>289</b>
Makes me feel isolated from my students and other instructors.	7% (21)	24% (70)	17% (49)	<b>29% (83)</b>	21% (62)	1% (4)	<b>289</b>
						<b>Total Respondents</b>	<b>292</b>
						(skipped this question)	21

**Appendix B  
Instructor Summary**

18. How do you feel about your online teaching experience?



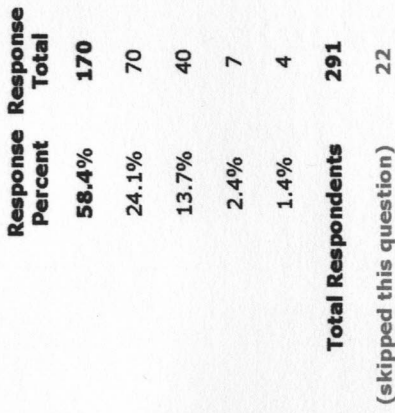
19. As a result of teaching online, how have your work skills changed in the following areas?

	Improved Greatly	Improved Somewhat	No Change	Decline Somewhat	Declined Greatly	N/A	Response Total
Productivity	18% (53)	33% (97)	41% (120)	3% (10)	2% (7)	1% (3)	290
Interpersonal skills	10% (28)	23% (67)	59% (173)	6% (18)	1% (3)	1% (2)	291
Dependability	9% (25)	20% (58)	69% (200)	1% (3)	0% (1)	1% (4)	291
Communication skills	14% (42)	35% (103)	44% (128)	5% (15)	0% (1)	1% (2)	291
Ability to work independently	13% (37)	23% (67)	61% (177)	1% (3)	0% (1)	2% (5)	290
Computer skills	26% (75)	51% (149)	22% (64)	0% (0)	0% (1)	1% (2)	291
Personal time management	13% (38)	34% (100)	45% (131)	5% (15)	2% (5)	0% (1)	290
Overall job performance	12% (36)	32% (94)	50% (145)	4% (12)	1% (3)	0% (1)	291
Project management	13% (39)	31% (89)	51% (148)	1% (3)	2% (5)	2% (6)	290
<b>Total Respondents</b>							<b>291</b>

(skipped this question) 22

### Appendix B Instructor Summary

20. How satisfied are you NOW with the decision to teach an online course?



21. If a friend told you that he/she was interested in teaching an online course like you, would you:

