

Business Education Digest



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The Business Education Digest

Business Education Digest is a non-profit refereed national publication of the National Association of Teacher Educators of Business Education (NATEBE), an affiliate of the Business Education Division of the Association for Career and Technical Education (ACTE). The Digest will be available in electronic format at www.acteonline.org beginning with the Spring 2005 issue (May 2005). Hard copies of the Digest may be purchased for \$10.00 per copy.

Manuscripts submitted for consideration by Business Education Digest should focus on instructional philosophy, theory, or practice of business education. Comprehensive reviews of literature and reports of research and methodology are also published. All articles should relate to current issues, cite appropriate literature, and have direct implications for business educators.

Manuscripts should not have been published or be under current consideration for publication by other journals.

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Notes from the Editor

Hello, everyone. Welcome to the first online issue of Business Education Digest! What a whirlwind year it has been for me as the new Editor. I appreciate the support of the Editorial Review Board and for the manuscript submissions I have received throughout 2004-05.

You have probably seen a "Call for Manuscripts" at conferences you have attended this year as I solicited Quality Manuscripts for Business Education Digest at DPE, ACTE, FBD, OSRA, and NBEA. If you haven't submitted one of your manuscripts, you will find the guidelines in this issue of the Digest. Consider the Digest as a possible publication venue! And share the guidelines with your colleagues! Perhaps they, too, will have manuscripts to submit.

The articles you will find in the May 2005 (Volume XIV) issue range from one focusing on resumes, to one addressing profiles of successful online business students, to one exploring the factors that influence computer technology adoption rates of business teacher educators, to one examining the implications of Internet piracy for business educators, to a final article comparing time between instruction and practice in a Business Communication course. All of these articles offer business educators information that might prove useful in making curricular modifications or in restructuring course content.

I hope you enjoy the new format of Business Education Digest. The Association for Career and Technical Education (ACTE) has been willing to work with the National Association of Teacher Educators of Business Education (NATEBE) to secure a foothold for the Digest in the world of online journals. We are very appreciative of the support and assistance Jan Bray and her staff are providing.

Enjoy the Digest!

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Business Students Online: Profiles of Success

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ABSTRACT

With the popularity of online courses increasing, the purpose of this research is to determine if there exists a profile of successful online learners. To accomplish this task, demographic variables, role related variables, and variables measuring internal motivation were measured against two indicators of student success: self-reported grade and attitudinal measures of general satisfaction. The findings from this research indicated that demographic variables of age, sex and student classification and role-related variables such as marital status, number of children, and number of hours worked on the job are not significantly related to student success. On the other hand, several measures of intrinsic motivation were significantly related to student success as measured by both student grade and level of satisfaction.

In the race to reach a wider market of students, universities have plunged head first into the online learning frenzy. Today, 56 percent of all educational institutions offer over 127,000 distance education courses to approximately 3 million students (Chronicle Almanac, 2003). Ninety percent of those distance education courses, commonly referred to as online courses, are conducted either partially or totally through the Internet. Further, Symonds (2001) predicted that the number of students taking online course will grow to five million by 2006 and that universities focusing on online courses could be among the largest higher education providers in the near future.

Of all the academic disciplines in universities, business has led the way in offering Internet courses to its students. One reason for this may be the business philosophy that there is a competitive advantage in seeking a more diverse base of customers. Unlike early programs in higher education that were directed toward young, single, and largely unemployed students, today's competitive business programs include online courses that make allowances for students with diverse demographics and experiences. In the past, students with multiple family roles, job responsibilities, and geographic limitations who desired to pursue higher education were restricted to community colleges and universities located near their homes. Today's increasing prevalence of online education removes traditional limitations to allow students to take courses and receive degrees from any university offering

online distance education courses. This has led to an increase in the number of non-traditional students completing business degrees and the number of degreed professionals seeking online Master of Business Administration (MBA) degrees (Chronicle Almanac, 2003). Twenty years ago it was unimaginable that a working mom from Chicago, Illinois, and a businessman from Tokyo, Japan, could participate in the same finance class offered by a university thousands of miles away from either student. However, the “any time, any where” philosophy of online courses allows students who, increasingly, must integrate schooling with work and other roles to be successful in higher education settings.

While online classes give students more opportunity and flexibility to integrate courses into their daily schedules, many concerns have developed from this form of distance education. Most of these concerns focus on the constructs of effectiveness, satisfaction, and quality relative to traditional classroom-based courses (Baer, 2000; Cappel & Hayen, 2004; Carr-Chellman, 2000). Although several scholars have engaged in research to determine if online teaching and learning experiences are valuable, some report, “We still have not found the best way to evaluate the effectiveness of online courses” (Gunawardena, Lowe, & Carabajal, 2000).

Early publications on distance education focused on case studies and classroom practices that did not incorporate large samples or empirical outcomes. In essence, these “best practices” were based on practitioners’ experiences and opinions (Carr-Chellman, 2000; Cooper, 2000; DeSanctis & Sheppard, 1999). These early reports told us that the keys to effective online versus traditional classes included the development of new teaching methods, frequent and timely interaction through e-mail, weekly discussion boards, the use of collaborative student groups, and an appreciation for students with multiple backgrounds and experiences. Further, faculty and students were advised that they may have to expend more time and effort in their online classes than in traditional courses and that they are largely responsible for motivating themselves to complete required work.

While case studies and surveys of best practices have been beneficial to the early pioneers in this new field of distance education, the true measure of what is efficient and effective online learning is yet to be evaluated. Only recently have researchers applied more rigorous methodologies to study the elements of online learning (Arbaugh, 2001; Arbaugh and Duray, 2001; Dellana, Collins, & West, 2000; Menager-Beeley, 2001).

Purpose of the Study

A review of current literature suggests that more empirical research needs to be conducted to learn what characteristics or experiences lead to students being successful in online business courses. Among the various avenues of online research, student profiling as an indicator of success has revealed that students who possess certain characteristics may perform better and have a

lower attrition rate in online courses than in traditionally delivered courses (Hansen, 2003; Schuemer, 1993; Wang & Newlin, 2002). Existing literature has suggested that the student’s age, classification, gender, and prior life experience are variables with important links to performance outcomes in online classrooms. However, none of these papers attempted to test their propositions with data. The purpose of this research is to determine if a profile of successful learners can be extracted from a sample of undergraduate and graduate business students who have taken online courses. To accomplish this task, demographic variables and other factors that may be linked to indicators of student success were examined. In addition, the current research was extended by examining student success using two measures: self-reported grade and attitudinal measures of general satisfaction and student involvement. Existing studies that have examined student profiles in online learning environments (Schuemer, 1993; Dreyer & Bangeni, 2002) have focused on attrition and student satisfaction– not overall grade as important outcomes.

This research also draws on intrinsic motivation theory to examine if students’ internal motivation has an impact on student success in online classes. Intrinsic motivation theory, as developed by Ryan and Deci (2000), is a multidimensional measurement intended to assess participants’ subjective experience related to a target activity. A particularly important construct in intrinsic motivation is the role that environment plays in development. Extending this to online learning environments, it can be argued that intrinsic motivation would be as important as the technology infrastructure as a predictor of success.

The instrument used to assess intrinsic motivation, the Intrinsic Motivation Inventory (IMI), assesses participants’ interest/enjoyment, perceived competence, effort, value/usefulness, felt pressure and tension, perceived choice while performing a given activity, and experiences of relatedness. This instrument is considered useful in measuring students’ subjective experiences in Internet courses because it determines the extent to which students believe that their experiences are useful or valuable. The IMI has been used and validated through several experiments related to intrinsic motivation and self-regulation (Ryan, Koestner, & Deci, 1991; Deci, Eghrari, Patrick, & Leone, 1994).

This study differs from previous research in the area in two significant ways. First, in developing a student profile using demographic and role related variables, students’ final grades and level of satisfaction as a measure of student success were used. This is opposed to other studies that focused mainly on student attrition and student and faculty perceptions of satisfaction and/or success. Second, intrinsic motivation as a variable related to online learning was introduced. This led to the development of three research questions in our study:

Question 1: Do demographic variables such as gender, age, and classification (Freshman, Sophomore, Junior, Senior, or Graduate) predict success in online courses?

Question 2: Do role-related variables such as marital status, number of children, or job status predict success in online courses?

Question 3: Do intrinsic variables such as interest, competence, pressure, perceived choice, effort, value, and relatedness predict success in online courses?

Methodology

Through purposive sampling, 365 College of Business and Technology students attending a comprehensive four-year, regional university were surveyed about demographics, experiences, and expectations of online courses. Of the 365 business students participating in the survey, which was administered in twelve business classes at the start of the Spring 2004 academic semester, 153 had previously taken an online class. Online courses are defined as courses in which 50 percent or more of the class was administered over the Internet. Of these 153 surveys, 150 were usable.

The student sample was found to be representative of the various disciplines from the college of business based on the make-up of students enrolled at the time of the study: 28 accounting students, 30 general business students, 37 management students, 19 marketing students, 9 finance students, 15 MBA's, and 12 non-business majors taking a business course. The age of participants ranged from 18 to 49 years, with 22 being the median age. Fifty-nine males and 91 females participated in the study. Many of the students commuted at least 30 minutes to campus, and the average hours worked per week was 30. The average self-reported grade point average was 3.2. Students who participated in the study were able to provide data on up to four online courses. In the sample it was found that 60 percent reported experience with one online course, 24.4 percent had taken two courses, 12.4 percent had taken three courses, and only 3.2 percent had taken four courses. Using data from all of the courses, it was found that students had enrolled in a variety of courses in different academic disciplines. A total of 21 courses were identified in the study. Because this study concentrated on business students, it was not surprising that 73 percent of the online courses students had enrolled in were business courses. The majority of the business courses were in the area of economics (36%), general business (26%), management (19%), marketing (13%), and finance/accounting (5%).

Students' success in an online course was measured by their final letter grade. In cases where students had participated in more than one course, success was measured by the average of letter grades provided. In 12 cases, students were unwilling to report their final grade in the courses and their data was withdrawn from analyses involving student success. Additional measures comparing traditional college courses to Internet-based courses were also taken. Six items relating to challenge, amount of effort, involve-

ment, interaction, degree of effort, and satisfaction were measured using a five point Likert scale. As mentioned earlier, internal motivation was examined using a modified version of Ryan and Deci's (2000) Intrinsic Motivation Inventory (IMI) scale. The inventory, a multidimensional measurement device, using a five-point Likert scale, consists of seven subscales that measure different aspects of a participants' subjective experience (see Table 1).

Table 1

Intrinsic Motivation Subscale Measurements

<i>Subscale</i>	<i>Measurement</i>
Interest/Enjoyment	Self-report measure of intrinsic motivation
Perceived Choice & Perceived Competence	Positive predictors of both self-report and behavioral measures of intrinsic motivation
Effort	Perceived degree of effort involved in completing a task
Value/Usefulness	Degree to which people internalize and become self-regulating with respect to activities that they experience as useful or valuable for themselves
Pressure and Tension	Negative predictor of intrinsic motivation
Relatedness	Measures interpersonal interaction, friendship formation, etc.

(Ryan and Deci, 2000)

Past studies using these scales have shown that all but one of the subscales are highly reliable. The only exception is the relatedness subscale. Examining Cronbach's alpha for relatedness in this data, it was also found to possess low reliability.

In addition to demographic and intrinsic motivation scales, the survey instrument contained open-ended questions where students could provide written narrative about their experiences. In the qualitative section of the survey, we asked students to comment on what they liked most and least about their online courses, why they may have dropped their online course, and to provide any additional thoughts about their online classes. Of the 150 usable surveys, 40 contained written narrative answers to the qualitative questions. The qualitative section of our survey was useful in explaining and supporting some of the quantitative outcomes of the research.

Results

Research Question 1: Do demographic variables such as gender, age, and classification predict success in online courses? The first research question regarding demographic variables such as gender, age, and classification as predictors of success in online courses was addressed through a Pearson correlation test comparing students' average grade and level of satisfaction with gender, age, and classification. The results of these tests are shown in Table 2.

Table 2

Pearson Correlation Coefficient between Age, Gender, Classification x Grade and Level of Satisfaction

	Grade			Level of Satisfaction		
	r	p	n	r	p	n
Gender	.158	.064	138	.073	.379	147
Classification	.106	.217	138	-.018	.831	147
Age	.060	.484	137	-.056	.501	146

While other scholars posit that gender, age, and/or classification are predictors of success in online courses (Arbaugh, 2001), there were no significant correlations between these variables and grade achieved or level of satisfaction with the course.

Research Question 2: Do role-related variables such as marital status, number of children, or hours worked on a job predict success in online courses? The second research question examined marital status, number of children, and job status. A Pearson correlation was used to determine the strength of relationship with grade and level of satisfaction. The correlation results revealed that the variables of marital status, number of children, and hours worked on a job had no significant relationship with either grade or level of satisfaction (see Table 3). Given the results from research questions one and two, "being successful online," is defined as overall grade and a single item measure of students' level of satisfaction in the online course.

Table 3

Pearson Correlation Coefficient between Marital Status, Number of Children, and Hours Worked on a Job x Grade and Level of Satisfaction

	Grade			Level of Satisfaction		
	r	p	n	r	p	n
Marital Status	.053	.537	138	.072	.383	147
Number of Children	.028	.746	138	-.048	.566	147
Hours Worked on a Job	-.088	.303	138	.077	.354	147

Research Question 3: Do intrinsic variables such as interest, competence, pressure, perceived choice, effort, value, and relatedness predict success in online courses? For research question three, Pearson correlation was used to determine if intrinsic variables have an impact on grade and level of satisfaction and to rank them according to their strength of relationship to student success. The correlations between grade and the survey subscales perceived competence, value/usefulness, effort, and interest/enjoyment were significantly correlated, while felt pressure and tension, perceived choice, and relatedness showed no significant difference (see Table 4).

Table 4

Pearson Correlation Coefficient of Intrinsic Variables x Grade and Level of Satisfaction

	Grade (n=138)		Level of Satisfaction (n=147)	
	r	p	r	p
Perceived Competence	.492**	.000	.607**	.000
Value/Usefulness	.371**	.000	.643**	.000
Effort	.328**	.000	.532**	.000
Interest	.328**	.000	.696**	.000
Perceived Choice	.163	.056	.336**	.000
Pressure/Tension	.043	.616	-.006	.941
Relatedness	.013	.883	.087	.296

The correlations between level of satisfaction and the survey subscales interest, value/usefulness, perceived competence, effort, and perceived choice were statistically significant. Further, statistical testing revealed no significant difference for the pressure/tension and relatedness subscales.

To validate the results of the IMI, Ryan and Deci (2000) concluded that to be confident in the assessment of intrinsic motivation, free choice behavior and interest/enjoyment must be significantly correlated. Our study showed that free choice and interest were significantly correlated (.327, $p > .001$).

Qualitative Findings

Through qualitative inquiry, students discussed their desire to take online course mainly because of the flexibility afforded in those classes. From the 40 students who answered the qualitative portion of the survey, 38 either used the word “flexibility” or described the idea of having more freedom as a result of taking online courses. One student stated:

I like the flexibility of the classes. It beats commuting and trying to park. I feel the University needs a lot more Internet classes, especially in the business department. This semester, I had to quit my job after four years because

I ran out of Internet and night classes.

Other students expressed that they enjoyed having the freedom to learn at their own pace. One student stated, “I like being able to move along and not have to sit in class and wait for other students to waste time by asking questions that I already have the answers to.” Some students discussed having the freedom to, “work when I feel more productive,” or “have more time to think about the subject.” Finally, while most students reported that their online courses allowed a high degree of flexibility and the ability to complete a degree earlier, there was no significant correlation between student perceptions of flexibility and time with final grade or level of satisfaction in this study.

Conclusions and Recommendations

Considering the rapid growth of online business programs and the increasing number of Internet based courses, it is evident that online education will continue to remain a priority for students and universities (Chronicle, 2003). This fact has raised concern among consumers and providers of online education as to the quality of instruction provided in online classes and the types of students best suited for this learning environment (Shea & Boser, 2001). Contrary to what has been presented in previous literature (Arbaugh, 2001), the results in this study did not show a significant relationship between general demographics (i.e., age, classification, and gender) and grade or level of satisfaction. In addition, findings show that students possessing more role-related characteristics (i.e., being married, having children, and working full time) were not among the most successful. Whether such a relationship existed in the past or not, this finding may provide evidence of a trend in online classes. Whereas online classes may originally have been created to cater to students whose work and family roles prohibit them from participating in traditional classes, we found that students from all walks of life are successfully taking online business courses. Looking more closely at the qualitative responses, the data merely illustrates that the majority of students, regardless of whether they are successful or not, believe that online courses are flexible and will allow them to finish their degree earlier.

The results of the third research question show that intrinsic motivation is significantly related to student success as measured by both student grade and level of satisfaction. The findings that there are significant correlations with variables such as perceived competence, value/usefulness, interest, and effort suggest that the design and implementation of online classes can have a powerful impact on students’ success in online environments. Instructors can improve success by finding ways to provide specific and meaningful constructive feedback on assignments so that students’ belief in their competence in the material is increased (Walker, Wallace, & Juban, 2005). In addition, instructors should stress the relevance of courses in the virtual environment to make them relate to the real world and thereby increase the perceived value of the class (Reeve, 2001; Ryan & Deci 2000). This is especially true for business courses that are predominantly theory oriented.

Further addressing the importance of value is the idea of autonomy and its relationship to intrinsic motivation. Studies show that an increased level of autonomy, evidenced by the ability to make choices about how to pursue an activity, generally increases intrinsic motivation (Enzle, Wright, & Redondo, 1996). Reeve (2001) explains how concepts of autonomy can be applied to education: "'Autonomy support' refers to the amount of freedom a teacher gives to a student so the student can connect his or her behavior to personal goals, interests, and values (§ 3)." Both the qualitative and quantitative results from our study suggest that student participants reported an increased sense of autonomy in online courses. In such classes, instructors can increase autonomy support by providing choices and options to students on how assignments are to be completed, showing respect to students, giving rationale for learning activities, resisting controlling or authoritative behaviors, and supporting student initiatives (Reeve, 2001).

The only positive component of intrinsic motivation that did not show a correlation to either grade or level of satisfaction was relatedness. Given prior research that has purported faculty/student interaction to be one of the most important ingredients for online student success, we believed that a positive correlation between perceptions of relatedness and grade or level of satisfaction would exist. However, after examining the research, reported quantity of faculty/student interactions as well as feelings of closeness did not correlate with grade or level of satisfaction. After considering the overall results, we posit that students may be more motivated to succeed by quality of interaction that leads to increased levels of perceived competence, choice, value, interest, and effort.

Several limitations to this study exist. First, experts are still not to the point where they can fully answer what is effective online education. This study limits itself by attempting to identify successful learners, not the method that makes online learning successful. In addition, the idea of success in any college course goes well beyond the measures currently evaluated. Attrition, student satisfaction, and grade are just small pieces in the puzzle to determine the meaning of effective education. More in-depth analyses comparing what students learn from online classes and how well that learning is retained are still necessary. Second, the data collected here does not take into consideration the impact of the course or the instructor's level of intrinsic motivation. Both of these variables may explain significant variance in predicting student success. The design of online courses varies widely and instructors use their own unique exercises and techniques for presenting material. Similar to the concept of a profile of successful online students, an examination of instructor motivation may provide evidence of a profile for successful online instructors.

In closing, results from this study provide good news for students and college administrators because findings show that success in online courses is not related to any specific demographic characteristics. Therefore, online courses that are designed to increase intrinsic motivation increase the potential for success of all types of students. As the size of programs and the num-

References

- Canadian Journal of Behavioral Science* Web site: http://www.cpa.ca/cjbsnew/1996/ful_enzle.html.
- Gunawardena, C., Lowe, C., & Carabajal, K. (2000). Evaluating online learning: Models and methods. San Diego, CA: Society for Information Technology & Teacher Education. (ERIC Document Reproduction Service No. ED 444 552)
- Hansen, R. (2003). Distance learning self-assessment quiz. Retrieved August 20, 2003, from Quintessential Careers Web site: http://www.quintcareers.com/distance_learning_assessment.html
- Menager-Beeley, R. (2001). Student success in web based distance learning: Measuring motivation to identify at risk students and improve retention in online classes. Orlando, FL: World Conference on the WWW and Internet (ERIC Document Reproduction Service No. ED 466 608)
- Reeve, J. (2001). Motivating others. Retrieved February 10, 2004, from On Course Web site: <http://www.oncourseworkshop.com/Motivation010.htm>.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Ryan, R. M., Koestner, R., & Deci, E. L. (1991). Varied forms of persistence: When free-choice behavior is not intrinsically motivated. *Motivation and Emotion*, 15, 185-205.
- Schuemmer, R. (1993). Some psychological aspects of distance education. Hagen, Germany: Institute for Research into Distance Education. (ERIC Document Reproduction Service No. ED 357 266)
- Shea, R., & Boser, U. (October 15, 2001). So where's the beef. *US News and World Report*, 131, (15), 44-55.
- Symonds, W. (December 3, 2001). Giving it the old online try. Retrieved on February 28, 2004, from *Business Week Online* Web site: <http://www.businessweek.com>
- Walker, J., Wallace, D., & Juban, R. (2005). Success in the online classroom: Communicating to increase intrinsic motivation. *Business Education Forum (in press)*.
- Wang, A., & Newlin, M. (2002). Predictors of performance in the virtual classroom: Identifying and helping at-risk cyber-students. *THE Journal*, 29, (9), 21-28.

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Factors Influencing the Computer Technology Adoption Rate of Business Teacher Educators

Dr. Betty Foust Chapman and Dr. Betty Heath-Camp

ABSTRACT

The focus of this study was to identify factors that influence the computer technology adoption rate of business teacher educators. The study was designed to determine factors that were important in influencing the business teacher educators to adopt computer technology methods and to utilize them in their instruction. The population consisted of 95 members of the National Association of Teacher Educators for Business Education (NATEBE); however, due to misidentification, retirements, etc., only 38 subjects were used in the study. Findings from descriptive statistics revealed that certain social, organizational, and personal motivational factors such as the desire to improve teaching to enhance student learning were very important in influencing the business teacher educators' computer technology adoption rate.

The technological revolution in modern society created various problems in educational institutions (Zakaria, 2001). Business and industry embraced new technology, which placed additional emphasis on the need for training in educational institutions. Changes in the workforce due to the technological revolution created a demand for business teacher educators who are computer literate and are adept in using computer technology in their teaching and preparation of future business teachers. For example, educators in North Carolina plan to increase instructional technology use in secondary schools by focusing on technology-enhanced classrooms. "Special attention was given to infusing instructional technology into computer-based programs in vocational education" (Alston, Miller, & Williams, 2003, p. 38), which includes business education.

Wood (1999) maintained that since the early 1980s, appeals were made by educators and others for educational reform to improve the quality of education to adequately prepare students for changes in the workplace (Brown, 2001). Federal legislation, the Office of Technology Assessment of the U. S.

Congress, and national and state technological standards have regulated educational institutions to provide professional development training to help educators use computer technology effectively in their instruction (Bennett, 2001; Duhaney, 2001; Vannatta, 2000). Longstanding technological standards provide guidance in the use of computer technology to improve teacher preparation programs (Vannatta, 2000). However, according to the National Council for Accreditation of Teacher Education (1997), there is concern that educators are not using technology effectively in their instruction to enhance student learning.

Purpose of the Study and Research Question

The purpose of this study was to identify and assess factors that influence the computer technology adoption rate of business teacher educators. The study seeks to answer the following research question: “What are the innovation factors that influence the business teacher educators’ computer technology adoption rate?”

Literature Review

The literature review revealed recent appeals for educational reform to improve the quality of education to adequately prepare students for changes in the workplace (Brown, 2001; Braathen & Robles, 2000). According to Wood (1999), since 1983, national reform appeals have been made from inside and outside academia for improved teacher education programs. Appeals were made for educational reform to improve the quality of education to adequately prepare students for changes in the workplace (Brown, 2001; Braathen & Robles, 2000), which are “based partly on our changing society” (Wood, 1999, p. 4). In 1983, a report titled *Nation at Risk: The Imperative for Education Reform* was published, and it reported that students in the United States were receiving a mediocre education (The National Commission on Excellence in Education, 1983). This report fueled concern for improved educational quality that brought about the educational reform movement in American educational institutions (Brown, 2000; McCoy, 2001). As a result, national and state standards were developed to improve the quality of education. In the early 1990s, the National Council for Accreditation of Teacher Education (NCATE), in conjunction with the International Society for Technology in Education (ISTE), developed guidelines and standards to support computer use and encourage computer technology integration in teacher preparation programs (Bennett, 2001; Vannatta, 2000). Also, the National Business Education Association responded to the appeal and developed the National Standards for Business Education in 1995 (Brown, 2001; NBEA, 2001). Included in these standards are guidelines for the incorporation of computer technology in the business education curriculum. Additionally, many state boards of education have adopted the NCATE and ISTE technological standards into their educational institutions (McCampbell, 2001; Bennett, 2001). Furthermore, the Carl D.

Perkins Vocational and Technical Education Act of 1998 (Perkins III) strongly emphasized the importance of using technology in education (Hettinger, 1999). However, NCATE (1997) reported that educators are not using computer technology effectively in their instruction to improve student learning.

Various social, organizational, and motivational factors influence the speed that an individual adopts an innovation (Medlin, 2001). According to Rogers (1995) certain factors influence individuals to adopt a new idea at different rates. Rogers (1995) contended that individuals will adopt a new idea faster if they perceive that the innovation will give them an advantage over other methods. The social factors involve social systems and networks (Darley & Beninger, 1981). Rogers (1995) maintained that the rate of adoption is the speed in which a social system’s members adopt an innovation. Innovations have five characteristics that help to explain the speed in which members in a social system adopt a new idea (Rogers, 1995):

- Relative advantage (the innovation is better than the one used previously),
- Compatibility (the innovation is consistent with their values, past experience, and needs),
- Complexity (the innovation is easy to use),
- Trialability (the innovation can be used on a trial basis), and
- Observability (people can see the results of the innovation)

Rogers (1995) theorized that these characteristics increase the adoption rate of members in a social system. Davis (1991) studied social networks in innovation diffusion and determined that advisors, friends, and formal structures may influence the adoption of an innovation. Davis (1991) maintained that “information alone does not produce adoption, but social contact made adoption more likely” (p. 7). According to Havelock and Zlotolow (1995), the size of the personal network and the amount of influence that an individual has determine how rapidly an innovation will be diffused among individuals in an organization.

Organizational factors also influence the speed with which a new idea is adopted. Rogers (1995) suggested that certain internal and external organizational factors could affect the rate of adoption and use of technology. According to Rogers (1995), organizational structures have internal and external characteristics. Internal characteristics include interconnectedness (degree that social system members are united by interpersonal channels), centralization (degree that system control and power is held by a few individuals), formalization (degree that an organization encourages its members to follow procedures), size (an organization’s innovativeness is positively correlated to its size), complexity (extent that system members have a high degree of expertise and knowledge), and organizational slack (degree that an organization has uncommitted resources). System openness is an external characteristic that affects organizational innovativeness and allows information exchange among organizational members as well as individuals outside the system.

Faculty are often motivated by personal aspirations, professional goals, academic rank, and type of institution in which they are employed (Medlin, 2001). Braskamp and Ory (1994) listed faculty stages that reveal career patterns that include failures, successes, and changes in personal interests. Faculty may be motivated to adopt technology by the institution culture that includes its norms, values, and reward system (Rogers, 1995).

Theorists Herzberg (1959) and Maslow (Nickles, McHugh & McHugh, 2005) contended that particular factors, such as need, influence individuals. Herzberg (1959) theorized that hygiene factors increase an individual's motivation and satisfaction in his or her employment. Hygiene factors include working conditions, job security, level of salary, and benefits. Herzberg maintained that if any of these basic work factors were unfulfilled, employees would be dissatisfied. Herzberg also contended self-actualization, self-fulfillment, and creative and challenging work influence an employee's performance and motivation. Recognition, responsibility, and growth connected to an individual's work environment are also motivational factors. Herzberg theorized that an employee's true motivation comes from within, which suggests that both internal and external motivation factors are important in influencing an individual's adoption rate of technology. In addition, Maslow maintained that an individual's motivation was based on his or her unmet needs based on a hierarchy. As a person's lower level needs such as food and safety are satisfied, the person develops higher level needs such as recognition and self-actualization. Maslow theorized that an individual's unmet needs motivated him or her to do something to satisfy the need (Nickles, McHugh & McHugh, 2005).

Medlin (2001) used Rogers' theory to explain the adoption and diffusion process of technology for accounting faculty in higher education. Medlin's study identified factors that motivated accounting faculty members in accredited North Carolina Schools of Business to adopt and use electronic technologies in their instruction. Significant differences were found in (a) social variables: friends, mentors, peer support, and students; (b) organizational variables: mandate from the university and physical resource support; and (c) motivational variables: personal interest in instructional technology, personal interest in improving teaching, and personal interest in enhancing student learning. In this study, the social, organizational, and motivational variables researched by Medlin (2001) and Rogers (1995) were examined in their relation to the business teacher educator's computer technology adoption rate.

Research Methodology

The population for this study consisted of business teacher educators who were members of the National Association of Teacher Educators for Business Education (NATEBE) database (N = 95). Since the literature did not reveal an appropriate existing survey, *the Computer Technology Adoption Survey (CTAS)* was developed based on Medlin's (2001) questionnaire. Medlin's survey questionnaire examined personal, organizational, and social factors that motivat-

ed faculty members teaching an introductory accounting course in a North Carolina four-year public institution in "an accredited School or College of Business" (p. 37) to use "electronic technologies in the classroom" (p. 35). A field test was conducted with 10 members of the National Association of Business Teacher Educators (NABTE) who were not members of NATEBE to validate the survey instrument. The members of NABTE were qualified to field test the survey since they were business teacher educators teaching in a higher education institution, members of a professional organization, but were not members of the population. The instrument was revised to incorporate their suggestions.

An email message with a link to the on-line survey was sent to the members of the population during the Spring 2003 semester. Four weekly follow-ups were made, which consisted of an email message with a link to the survey website to encourage the subjects to complete the survey. Of the 95 surveys emailed, 33 were ineligible because they were retired (12), deceased (1), not business teacher educators (10), email was returned and could not be forwarded (6), on a sabbatical (2), attending a conference (1), or refused to participate (1). Forty-one surveys were received; however, three were ineligible since the respondents were not business teacher educators. Thirty-eight surveys were used for the data analysis, which constituted a final return rate of 61%. The return rate was calculated by applying Dillman's (1978, p. 50) response rate formula as follows:

$$\frac{\text{Number returned}}{\text{Number in sample} - (\text{non-eligible} + \text{non-reachable})} \times 100$$

$$38 / 95 - (33) = 61\%$$

A non-respondent bias check was performed since less than 80% of the surveys were returned. The researcher randomly selected items on the survey instrument, randomly selected 20 non-respondents (Gall, Borg, and Gall, 1996), and called them and asked them to respond to the randomly selected items on the survey. A chi-square test of independence revealed a significant difference concerning the number of years the respondents and non-respondents used computers in their instruction, which implied that the business teacher educators who responded to the survey had more experience using computers in their teaching than the non-respondents.

Descriptive statistics were used to identify the factors that influenced the business teacher educators' computer technology adoption rate. A five-point rating scale was used to interpret the data as follows: 1 = "not important," 2 = "somewhat important," 3 = "important," 4 = "very important," and NA = "not applicable." The level of significance was set at .05.

Findings

Table 1 provides the personal and employment characteristics of the respondents. As shown, 38 subjects responded to the survey; the majority was female.

The largest percentage of the respondents (36.8%) were employed in a research university, eleven (29%) worked in a four-year college, almost one-fourth (23.7%) were employed in a non-research university, and four (10.5%) were employed in other types of educational institutions. As illustrated, a large majority (89%) of the business teacher educators were employed in a tenure-track position and 27 (71%) had tenure. The largest percentage of the respondents was full professors (42%), almost one-third (32%) were associate professors, and eight (21%) were assistant professors. The largest proportion of the respondents indicated that they had achieved a Doctorate (44.7%), and almost 80% possessed either an Ed.D. or Ph.D. A smaller percentage (15.8%) of the business teacher educators have only master's degrees, and one had completed post-doctorate work. Concerning the business teacher educators' years of teaching experience at the university or college level, half of the respondents had taught at the university/college level more than 20 years. As shown in Table 1, most of the respondents (92%) indicated that they had used computers over ten years in the delivery of instruction.

Table 1

Gender, Institution Category, Tenure, Rank, Educational Level, and Teaching Experience

Characteristic	N	%
Gender		
Female	28	74.0
Male	10	26.0
Institution Category		
Research	14	36.8
Non-research	9	23.7
Four-year	11	28.9
Other	4	10.5
Tenure Track		
Yes	34	89.0
No	4	11.0
Tenured		
Yes	27	71.0
No	11	29.0
Rank		
Full Professor	16	42.0
Associate Professor	12	32.0
Assistant Professor	8	21.0
Other	2	5.0
Education Level		
Master's degree	6	15.8
Ph.D.	14	36.8
Ed.D.	17	44.7
Post-Doctorate	1	2.6

Table 1 (continued)

Characteristic	N	%
Teaching Experience		
1-5 years	4	10.5
6-10 years	4	10.5
11-15 years	6	15.8
16-20 years	5	13.2
Over 20	19	50.0
Computer Use		
7-10 years	3	8.0
Over 10 years	35	92.0

The respondents identified the factors that influenced their adoption of instructional technology. Results from the survey are outlined in Tables 2 and 3.

Table 2

Computer Technology Adoption Rate Factors

Adoption Rate Factors	M	SD
The technology is better than the one used previously	3.74	0.64
The technology is consistent with your values, past experience, and needs	3.68	0.57
The extent that the technology is perceived to be easy to use	3.18	0.80
The technology can be used on a trial basis	3.05	0.80
Other people can see the results of the technology	2.89	1.06

Table 2 (continued)

Adoption Rate Factors	M	SD
Access to a computer in your office at school with software installed for use in your teaching	3.97	0.16
Access to a computer, technological equipment, and software in your classroom for use in your teaching	3.76	0.60
Access to a computer at home with software installed for use in your teaching	3.62	0.72
Ability to teach yourself new applications	3.50	0.69
Adequate time in training session	3.18	0.90
In-house training is provided	3.03	1.03
Seminars/workshops are provided	3.03	0.85
On-line tutorials are provided	2.66	1.05
One-on-one technology training specific to the courses you are teaching	2.37	0.94

Note: Factor values were determined using the following rating scale: 1 = not important; 2 = somewhat important; 3 = important; 4 = very important; NA = not applicable was not used in the calculation
 Note: Factor values were determined using the following rating scale: 1 = not important, 2 = somewhat important, 3 = important, 4 = very important. NA = not applicable was not used in the calculation.

As seen in Table 2, business teacher educators' computer technology adoption rate was influenced when the innovation was better than what they used previously and was consistent with their values, past experiences, and needs. They also took into consideration how easy the technology was to use and if it could be used on a trial basis. The least important factor was that they wanted others to see the results of the innovation.

The findings suggest that certain factors influence the business teacher educators' computer technology adoption rate. The adoption rate factors that had the most influence on the business teacher educators' computer technology adoption rate (see Table 2) were access to computers and software in their offices and the instructional technology in the classroom. Training was also an important factor, both self-instruction and professional development

training on the use of instructional technology. However, of less importance were online tutorials and one-on-one training.

Table 3

Computer Technology Adoption Influence Factors

Adoption Influence Factors	M	SD
Social Factors		
Students	3.16	0.95
Shared values in my department	2.62	0.87
Peer support	2.50	0.92
Encouragement of a mentor	2.00	0.94
Friends	1.85	0.93
Peer pressure	1.54	0.70
Organizational Factors		
Physical resources (hardware)	3.86	0.35
Physical resources (software)	3.86	0.35
Physical resources (infrastructure such as Internet connectivity)	3.68	0.46
Technological support	3.62	0.68
Specific technological training related to your teaching	3.24	0.85
Mandate from the University	2.38	1.18
Institutional reward system	2.22	1.12
Formal recognition	1.89	1.04
Personal Motivational Factors		
Personal interest in enhancing student learning	3.86	0.35
Personal interest in improvement in my teaching	3.75	0.50
Adequate time to prepare to teach with technology	3.66	0.63

Personal interest in computer technology use in my teaching	3.59	0.69
Course management software ease of use (e.g., Blackboard, WebCT)	3.44	0.73

Note: Factor values were determined using the following rating scale: 1 = not important; 2 = somewhat important; 3 = important; 4 = very important; NA = not applicable was not used in the calculation.

Social factors that influenced the business teacher educators' computer technology adoption rate related most to the importance of teaching the technology to their students and what was valued in their department. Other less important factors, but significant, were peers, mentors, and friends (see Table 3).

Factors that related to the organization that were very important were having hardware, software, infrastructure, and technological support to integrate instructional technology. Specific technological training that related to their teaching was also important. Less important to their computer technology adoption rate were rewards, formal recognition, and directives from the university (see Table 3).

Personal motivational factors were rated important to very important in increasing the speed in which business teacher educators adopted emerging computer technology for use in their teaching. The most important factors were enhancing student learning, the desire to improve their teaching, and adequate time to prepare to teach with technology (see Table 3).

Conclusions and Discussion of Findings

The study found that the majority of the subjects were highly educated, full and associate, female professors who were tenured or were employed in tenure track positions. Fifty percent of the respondents had taught in a university or college more than twenty years. According to Sheingold and Hadley (1990), teachers need five to six years working with technology to develop expertise. This study revealed that 95 percent of the business teacher educators had used computers in their instruction over ten years, which suggests that the business teacher educators were experienced in using computers in their teaching.

The findings of this study indicated that certain innovation characteristics were an important influence on the business teacher educators' computer technology adoption rate. These factors included relative advantage, compatibility, complexity, trialability, and observability (Rogers, 1995). The results support Rogers' theory (1995) that an individual would be influenced to

adopt a new idea if he or she perceives that it is superior to previous methods he or she has used, meets his or her particular needs, is perceived to be easier to use, which could save valuable time, can be used on a trial basis to determine whether the innovation is satisfactory for the use intended before purchasing it, and people can see what can be accomplished by using the innovation.

The study found that various social, organizational, and personal motivational factors were important in influencing the business teacher educators' computer technology adoption rate, which supports Medlin's (2001) research. The study revealed that various factors such as access to computers, technological support, ability to teach yourself new applications, personal interest in self-improvement to enhance student learning, and adequate preparation time to teach with technology were significant influences of the business teacher educator's adoption rate. This finding also supports Dusick and Yildirim's (2000) research, which found that access to computers, was positively correlated with technological competency and computer use in the classroom.

Due to the evolving nature of computer technology, educational administrators may need to provide specific ongoing computer technology training and support that would help business teacher educators adopt and use emerging computer technologies in their preparation of future business teachers. To help business teacher educators keep up with constantly changing technology, they must be provided the fiscal and technological resources they need in order to successfully adopt and use new computer technology in the delivery of instruction. However, Banks (2002) contended that faculty needs and expectations should be assessed prior to training sessions to help faculty members acquire technological skills to meet specific educational goals.

According to Hasselbring et al. (2000), educators may have the best hardware and software available; however, they must be properly trained to effectively adopt and use the technology in their instruction. When the business teacher educators considered access to training, they indicated that the ability to teach themselves new technological applications was very important in influencing their computer technology adoption rate. The respondents indicated that one-on-one technology training specific to the courses they were teaching and specific technical training related to their teaching were not as important as self-directed instruction. This finding supports the research of McEwen (1996) and Redmann et al. (1999) who found that the majority of business educators were using self-directed learning.

In addition, the findings of this study agree with previous research that educators regard shared values and peer support to be important influences of their computer technology adoption rate. Rogers (1995) contended that faculty members in a department are dependent on each other, and peers can positively or negatively influence a decision to adopt an innovation. Also, individuals who have their colleagues' respect and provide peer support in large social networks can speed up innovation decisions (Havelock & Zlotolow, 1995). Furthermore, Medlin's (2001) research found that shared

values and peer support were important in influencing an individual to make an informed decision to adopt an innovation.

Personal motivational factors that were examined in this study included adequate time to prepare to teach with technology and ease of using course management software (i.e., Blackboard). The business teacher educators indicated that it was very important for them to have time to prepare to teach with technology. The finding in this study is supported by previous research, which indicated that in order for teachers to be effective in the use of computer technology in their instruction, they must have adequate time to prepare to teach with the new technology (Vannetta, 2000). The respondents also indicated that ease of use of course management software (Blackboard) was important in influencing them to adopt computer technology for instructional delivery. This result was encouraging since educators use computers to help them deliver their instruction, manage their courses, and perform administrative tasks (Brown, 2001).

The researchers concluded that certain innovation factors influenced the business teacher educators' computer technology adoption rate. Various social, organization, and personal motivational factors were important in encouraging the business teacher educators to adopt computer technology for use in their teaching.

An implication for business teacher educators is that they need to master continuously evolving computer technology and teach their students to use it proficiently as well. Pre-service business teachers need to be prepared to educate their future students for the constantly changing technological environment. Since many jobs in the future will involve technology, it is imperative for individuals to have the education and skills to perform new tasks in the twenty-first century (Dusick & Yildirim, 2000)

Recommendations

Based on the results of the study, recommendations are outlined below:

1. A research study to identify computer technology instructional methods that would be useful to business teacher educators in preparing pre-service business teachers to use computer technology in the classroom with their future students may be beneficial.
2. Business teacher educators could be studied nationally using a random sample making the results generalizable to a larger business teacher educator population. Business teacher educator adoption rates of emerging computer technology could be compared between academic institutions, academic disciplines, and different states.

References

- Alston, J. A., Miller, W. W., & Williams, D. L. (2003). The future role of instructional technology in agricultural education in North Carolina and Virginia. *Journal of Agricultural Education*, 44(2), 38-39.
- Banks, C. H. (2002). *A descriptive analysis of the perceived effectiveness of Virginia Tech's faculty development institute*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.
- Bennett, L. (2001). Technology standards for the preparation of teachers. *International Journal of Social Education*, 15(2), 1-11.
- Braathen, S., & Robles, M. (2000). The importance of assessment in business education. In J. Rucker, & R. J. Schoenrock (Eds.), *Assessment in business education*, (pp. 11-24). National Business Education Yearbook, No. 38. Reston, VA: National Business Education Association.
- Braskamp, L. A., & Ory, J. C. (1994). *Assessing faculty work*. San Francisco: Jossey Bass.
- Brown, B. J. (2000). *New assessment strategies to improve business teacher preparation*. In J. Rucker, & R. J. Schoenrock (Eds.), *Assessment in business education*, (pp.143-57). National Business Education Yearbook No. 38. Reston, VA: National Business Education Association.
- Brown, B. J. (2001). *Management of business education: A perspective*. In B. J. Brown (Ed.), *Management of the business classroom*, (pp.1-9). National Business Education Yearbook No. 39. Reston, VA: National Business Education Association.
- Darley, J. M., & Beninger, J. R. (1981). Diffusion of energy-converting innovations. *Journal of Social Issues*, 37(2), 150-171.
- Davis, G. F. (1991). Agents without principles? The spread of the poison pill through the corporate network. *Administrative Science Quarterly*, 36(4), 583-613.
- Dillman, D. A. (1978). *Mail and telephone surveys: The total design method*. New York: John Wiley & Sons.
- Duhaney, D. C. (2001). Teacher education: Preparing teachers to integrate technology. *International Journal of Instructional Media*, 28(1), 23-30.
- Dusick, D. M., & Yildirim, S. (2000). Faculty computer use and training: Identifying distinct needs for different populations. *Community College Review*, 27(4), 33-45.
- Herzberg, F. (1959). *The motivation to work*. New York: Wiley.
- Gall, M., Borg, W., & Gall, J. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman Publishers USA.
- Havelock, R. G., & Zlotolow, S. (1995). *The change agent's guide* (2nd ed.). Englewood Cliffs, NJ: Educational Technology Publications.
- Herzberg, F. (1959). *The motivation to work*. New York: Wiley.
- Hettinger, J. (1999). The new Perkins...finally. *Techniques*, 74(1), 40-42.
- McC Campbell, B. (2001). Technology standards for school administrators. *Principal Leadership* (High School Ed.) 1(9), 68-70.
- McCoy, R. W. (2001). Computer competencies for the 21st century information systems educator. *Information Technology, Learning, and Performance*, 19(2), 21-35.
- McEwen, B. C. (1996). Teaching microcomputer software skills. *Business Education Forum*, 50(4), 15-20.
- Medlin, B. D. (2001). *The factors that may influence a faculty member's decision to adopt electronic technologies in instruction*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.
- National Council for Accreditation of Teacher Education (1997). *Technology and the new professional teacher. Preparing for the 21st century classroom*. Washington, DC: Author.
- National Business Education Association. (2001). *National Standards for Business Education*. Reston, VA: Author.
- Nickels, W. G., McHugh, J. M., & McHugh, S. M. (2005). *Understanding business* (7th ed.). New York: McGraw-Hill.
- Reddman, D. H., Kotrlík, J. W., Harrison, B. C., & Handley, C. S. (1999). Analysis of business teachers' information technology needs with implications for teacher education. *NABTE Review*, 26, 40-45.
- Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.
- Sheingold, K., & Hadley, M. (1990). *Accomplished teachers: Integrating computers into classroom practice*. New York: Center for Technology in Education, Bank Street College of Education.
- The National Commission on Excellence in Education. (1983). *A nation at risk*. Washington, DC: United States Department of Education.
- Vannatta, R. A. (2000). Evaluation to planning: Technology integration in a school of education. *Journal of Technology and Teacher Education*, 8(3), 231-246.

Wood, P. R. (1999). *The importance of technical competencies for beginning secondary business teachers in Virginia*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.

Zakaria, Z. (2001). *Factors related to information technology implementation in the Malaysian Ministry of Education Polytechnics*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.

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Internet Piracy: Implications for Business Educators

Dr. Heidi R. Perreault

ABSTRACT

High schools students readily admit to downloading music, movies, and gaming software; and they realize that not paying for the downloaded files is illegal. Students rationalize their behavior as being inconsequential to the producer because their downloading is on a modest scale and only for personal use. Educators play an important role in providing guidance to students on responsible use of the Internet. Discussions focusing on the ethical issues relating to online behavior and computing trends should be included in the curriculum. The goal is to help students recognize ethical dilemmas and to define their personal code of ethics thus leading them to make legal and ethical decisions concerning their Internet usage.

Overview of the Issue

In 2001, considerable press coverage was given to the issue of copyright law with the closing of Napster, a file-sharing network used to distribute music. The Recording Industry Association of America (RIAA) won the legal battle to close Napster, and in 2003 won another victory when Verizon was forced to release the names of subscribers suspected of copyright infringement so that legal action against the individuals could be taken. Yet despite the press coverage and legal actions, the practice of unauthorized Internet downloading continues to grow (Madden & Lenhart, 2003).

Although ignorance of the ethical and legal issues surrounding unauthorized downloading may be the case for some of those involved, many individuals indicate a lack of concern for the issues. A third of the over 1000 Internet users surveyed by the Business Software Alliance (BSA) in 2002 admitted to having downloaded files without paying for the copies they used (Survey, 2002). In a 2004 survey by the same organization, students between the ages of 8 and 18 were asked about their Internet behavior. Twenty-five percent indicated they had downloaded files without paying, and the main reason for not paying was not having enough money to pay for the desired files (Tweens, 2004).

The purpose of this article is to review the types of Internet misuse in which students are engaging and to present educators with strategies to guide students toward becoming responsible online citizens.

Students Use and Misuse of the Internet

High school students are, for the most part, sophisticated and confident computer users who look to the Internet for entertainment and information. The most common online activities include games, instant messages, homework, and music (Levin, 2002). Corbett and Willms (2002) report that approximately 70% of teenage students have computer access from the home, and teens spend more time online than they do watching television. Nationally, the average time spent online (excluding email) for teens is over 16 hours per week (Teens, 2003).

Although all age groups commit Internet violations, teens and young adults are the most likely group to download files and the group most likely not to pay for those downloads (Illegal, 2004). A Bentley University sponsored study surveyed 285 high school seniors who had recently been accepted into a college program to determine the students' downloading habits. Eighty-nine percent of the students admitted to committing at least one illegal download within the past six months, and 39% indicated they never pay for downloaded files (Bellwin, 2004).

Music files are the most common files downloaded illegally by students (Tweens, 2004). Students also are the most likely group of computer users to share illegally obtained music with others (Madden & Lenhart, 2003). Sharing music files has become easier with the use of peer-to-peer network technology, or P2P, that allows individual computers to network for the purpose of sharing files and applications. Popular P2P software includes KaZaa, AudioGalaxy, BadBlue, Morpheus, and Imesh. Although there are business-related uses for P2P technology, the networks are commonly used to share nonbusiness-related files, and many of those files have been obtained illegally. Music and video are the most common files being shared over P2P networks (Heingartner, 2004).

P2P networks can be established with minimum cost and effort, with the necessary software available for as little as \$30. Such networks (often called darknets) are small, private networks that are difficult for outside agencies to detect. The network may be used for legitimate sharing and communication, but often individuals purposely use a darknet to share illegally obtained files with one another without having to risk the exposure that would result from sharing files over public networks (Green, 2003). Darknets, by their nature are designed to be used for relatively short-term activities. The network may be available to users for months or only for days. The use of a darknet to prevent detection while sharing files is an overt action of deception. Although aware of the potential legal ramifications of their actions, individuals engaged in file sharing generally are not concerned about copyright issues

nor do they consider it stealing to download and share files without paying for them (Madden & Lenhart, 2003).

Collier (2002) explains that students download files for entertainment, not financial gain. They may trade or share files with friends, but no money typically changes hands. Since the students view the actions as part of a hobby or pastime activity, they do not perceive the downloading and sharing as being wrong. IPSOS-Insight, a global marketing research firm, "conducted a study through online interviews with 1,000 university and college students and through telephone interviews with 300 college and university faculty and administrators" (Olsen, 2003, para. 12). The findings of the IPSOS study indicate students are aware of their wrongdoing. Students participating in the survey knew their actions were wrong but justified their involvement as being on too small a scale to be of any consequence ("Survey", 2002).

While industry actions in the past may have supported the students' views, organizations are becoming more aggressive in searching for pirated software ("Education", 2002). Prior to 2003, lawsuits against individuals for downloading files were not common and were reserved for only the most serious abusers (Ahrens, 2003). Since the fall of 2003, however, almost 4,000 suits have been filed against individuals for downloading and distributing music. The number of songs listed in the recent suits declined to hundreds instead of the thousands of songs noted in previous years' cases. Most of the lawsuits are being settled out of court with fines averaging \$3,000 (Bridis, 2004).

Students do not download and share only music. Over 75% of the students participating in the IPSOS study indicated they download software, and of those students 89% indicate they don't always pay for it (Survey, 2002). Microsoft's Internet piracy web site indicates that an estimated two million web pages offer unauthorized or pirated ("warez") software or provide links to such software (Internet piracy, 2003). BSA lists the most common distribution methods for pirated software as direct links from illegal web sites, email, newsgroups, auction sites, and P2P networks (Vehicles, 2005).

Educational Strategies

Sankaran & Bui (2003) propose that educators guide students in learning how to deal with situations in which an ethical choice conflicts with their personal interests. While adults tend to use societal ethics when making decisions, students tend to use a personal moral code shaped by their immediate interactions with peers and personal situations. Competitiveness is a factor that influences a student's decision making, and competitive students are more likely than other students to resort to unethical behaviors in an effort to impress other students with either their skill or daring.

Poftak (2002) notes that it is not greed that motivates most young adults to engage in inappropriate Internet activities. Instead, students are more interested in finding out what they can do and how to do it. Students, however, need to take responsibility for their actions and examine how their

actions impact others (Emmans, 2000). Educators can promote ethical decision making while allowing students to experiment and expand their skill sets. Since students enjoy the challenge of mastering the Internet and computer technology, it makes sense to create activities that include current technology trends.

Gillespie (2001) encourages educators to promote responsible behavior while allowing students the experience of creating and managing the technology. Students at the high school level can create a P2P network that aligns with their school's mission. Using the network for a legitimate, school-related purpose provides an opportunity for promoting the concept of using technology responsibly. A component of the activity is discussing appropriate uses and ethical issues surrounding the technology. Students should be involved in determining the rules for using the network, communicating the rules, and monitoring the system.

In classes where creating a P2P network is not appropriate or practical, educators can incorporate activities focusing on research, presentations, discussions, and case analysis. The students can research issues relating to responsible Internet use and create presentations to share results. A good starting place is to visit the Business Software Alliance web site (www.bsa.org) to review current studies on adolescent Internet behavior. Students can replicate one of the studies by surveying students within their school system to determine if local student attitudes mirror national attitudes toward issues such as copyright infringement, illegally downloading files, and distributing pirated files over P2P networks. The students' research can be shared with administrators and other educators to aid in creating awareness programs and lessons on responsible technology use.

Role plays, cases, and discussions encourage students to examine issues from various viewpoints. Instructors can introduce real world examples and assign students the task of determining the motivations behind the actions (Perreault & Keith, 2004). The purpose of the role plays and discussions is to increase awareness and guide students toward responsible decision making. Because students may not immediately be able to identify the ethical issue or problem associated with a case study, the early cases presented should contain blatant examples of wrong doing. As the students become more skilled in defining a case's problem and identifying the issues, cases can be more complicated and/or contain examples of less obvious wrong doing. Woo (2003) notes that students cannot be expected to make quality decisions if they do not first recognize that an ethical issue is present.

Organizations are supporting educators in teaching computer ethics by providing free or low cost instructional materials. Often such materials are designed for young children in an effort to promote responsible online behavior as soon as the technology is introduced to students. "Play It Safe in Cyberspace" is a series of lessons and instructional materials relating to safe and responsible Internet use provided by the Business Software Alliance. The materials are designed for students in grades 3 to 8 and are downloadable

from the organization's web site (<http://www.playitcybersafe.com/curriculum/index.cfm>). Another resource kit on software and Internet-related copyright issues is available through the Software & Information Industry Association and CyberSmart. The materials include lesson plans and students worksheets. The information can be downloaded from the CyberSmart web site (<http://www.cybersmartcurriculum.org/home/>). The activities suggested are varied and include researching legal issues and serving on a mock peer jury to determine the guilt of teens accused of inappropriate technology use.

Whether educators use materials provided from professional organizations or create their own materials, it is important to stress to students that online or offline the ethical issues are the same. The anonymity offered online does not change the issues of ownership and theft. Starr (2000) encourages educators to develop a clearly stated listing of rules for using technology. The rules should focus on what is appropriate instead of a list of what not to do. To be effective the rules must be communicated, and students must be held accountable for their actions.

In addition to enforcing rules, educators must demonstrate proper actions. Rader (2002) encourages educators to create within the classroom a culture of integrity. It is important to discuss the ethical issues relating to online behaviors and to model those behaviors. Staying current with computing issues and terms also is important. Students will be more interested in activities and discussions that relate to real world applications in which they are involved. The IPSOS study's findings, however, indicate that many educators are not aware of current technology capabilities. Whereas 95% of the students surveyed knew about P2P technology and 40% were using the technology, less than 50% of the educators were even aware the technology existed ("Internet piracy", 2003).

Summary

Most students are sophisticated computer users and spend considerable time each week on the computer and using the Internet. They are also the most likely age group to download and share files without authorization. Students, in general, are nonchalant about their online behavior and feel that their actions are inconsequential. They often justify their actions by noting that no financial gain is present since the downloaded materials are used exclusively for their own use and/or shared with a limited number of friends (Madden & Lenhart, 2003).

The increased availability and use of P2P technology supports the practice of unauthorized downloading and sharing. For a small financial investment, students can create a private network to share files. The networks are difficult to detect, providing a relatively consequence-free environment for the unethical and illegal actions. Music and videos are commonly shared over the networks, and students also are pirating software.

Educators can provide opportunities for students to examine issues related to responsible Internet use and develop a code of ethics for online behavior.

Whether requiring students to create and monitor a P2P network or discussing cases, responsible use issues need to be incorporated into the curriculum. Providing instruction on and opportunities to discuss responsible online behavior is a way to help students identify ethical issues and potential outcomes. Modeling appropriate behaviors and establishing classroom rules provides the basis for the learning experience. Students need to be held accountable for their behaviors, but they also need guidance on identifying ethical issues and making quality decisions.

References

- Ahrens, F. (2003, October 1). Music industry will talk before suing. Retrieved February 17, 2003, from <http://www.washingtonpost.com/ac2/wp-dyn/A25435-2003Sep30>.
- Bellwin, M. (2004, April 26). Higher education's problems with illegal student download have just begun. Retrieved January 4, 2005, from http://www.bentley.edu/news-events/pr_view.cfm?id=1440.
- Bridis, T. (2004, August 20). Lawsuits over music download produce twists, trampling. Retrieved January 4, 2005, from http://www.usatoday.com/tech/news/techpolicy/business/2004-08-20-download-suits_x.htm?POE=TECISVA.
- Collier, A. (2002). Young online pirates. Retrieved February 16, 2004, from <http://www.netsmartz.org/PARENTS/news/Jan02-4.htm>.
- Corbett, B. & Willms, J. (2002). Information and communication technology; access and use. *Education Review Quarterly*, 8(4), P 8-14.
- Education, enforcement needed to reverse damaging trend. (May 29, 2002). Retrieved February 16, 2004, from <http://global.bsa.org/usa/press/newsreleases//2002-05-29.1115.phtml>.
- Emmans, C. (2000). Internet ethics. Retrieved February 18, 2004, from http://www.technos.net/tq_09/1emmans.htm.
- Gillespie, T. (2001). www.p2p.edu: rip, mix & burn your education. Retrieved February 18, 2004, from http://www.technos.net/tq_10/2gillespie.htm.
- Green, H. (2003, September 15). Online extra: a key to gated cyber communities. Retrieved February 13, 2004, from http://netscape.businessweek.com/magazine/content/03_37/b3849089_mz063.htm
- Heingartner, D. (January 19, 2004). Carrots, sticks and spies in software piracy fight. Retrieved on February 16, 2004, from <http://www.iht.com/articles/125519.html>
- Illegal music downloading on the rise. (2004, January 16). Retrieved February 13, 2004, from <http://techweb.com/wire/story/TWB20040116S0005>.
- Internet piracy, (2003). Retrieved February 13, 2004, from <http://microsoft.com/piracy/basics/what/ip.asp>.
- Levin, S. (2002, January 24). Region's teens at top of the nation in time online, survey says. Retrieved February 17, 2004, from <http://www.post-gazette.com/regionstate/20020124wired3.asp>.
- Madden, M. & Lenhart, A. (2003). Internet & American life project. Retrieved February 13, 2004, from http://www.pewinternet.org/pdfs/PIP_Online_Pursuits_Final.PDF
- Olsen, S. (2003, September 16). Study: Students unfazed by piracy. Retrieved April 3, 2005, from <http://www.nytimes.com>
- Perreault, H. & Keith, N. (2004). Incorporating ethical decision making into business technology classes. *Journal of Applied Research for Business Education*, 2(1), 1-6.
- Poftak, A. (2002, August 15). Net-wise teens: safety, ethics, and innovation. Retrieved February 16, 2004, from http://www.techlearning.com/db_area/archives/TL/2002/08/netwise.html
- Rader, M. (2002). Strategies for teaching Internet ethics. *Delta Pi Epsilon Journal*, 44(2), p. 73-79.
- Sankaran, S. & Bui, T. (2003). Relationship between student characteristics and ethics: implications for educators. *Journal of Instructional Psychology*, 30(3), p. 240-251.
- Starr, L. (2000). Tools for teaching cyber ethics. Retrieved February 16, 2004, from http://www.educationworld.com/a_tech/tech055.shtml
- Survey spotlights growing problem of online software piracy. (2002.). Retrieved February 13, 2004, from <http://global.bsa.org/resources/2002-05-29.117.pdf>
- Teens spend more time online than with TV. (July 24, 2003). Retrieved February 17, 2004, from http://iventure.com/press_files/teen_tv.html
- Tweens' and teens Internet behavior and attitudes about copyrighted materials. (2004). Retrieved January 7, 2005, from <http://www.bsa.org/usa/research/loader.cfm?url=/commonspot/security/getfile.cfm&pageid=15786&hitboxdone=yes>

Vehicles for theft: forms of Internet software piracy, (n.d.). Retrieved February 13, 2004, from <http://www.bsa.org/resources/loader.cfm?url=/commonspot/security/getfile.cfm&pageid=1240&hitboxdone=yes>

Woo, C. (2003). Personally responsible. *BizEd*, 2(4), 22-27.

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Resumes: Human Resource Managers', Communication Instructors', and Business Students' Opinions

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ABSTRACT

The primary purpose of this study was to determine and compare the views of human resource managers, business communication instructors and business communication students on resume writing. A questionnaire was developed and mailed to the human resource managers of the 200 largest firms in the Dallas/Ft. Worth area. The questionnaire was also mailed to business communication instructors who were members of ABC in the Southeastern and Southwestern Regions and was administered to students enrolled in business communication classes at Texas A&M-Commerce. One of the questions asked "What is the Most Effective Way to Submit a Resume?" One significant finding indicates that 75 percent of the students and 49 percent of the instructors responded that hand delivering the resume is the most effective means of submittal. In contrast to their views, none of the human resource managers responded to this method as being the most effective.

In the current economic environment, when companies are not hiring and many are laying off employees, the job search indeed presents many issues with which the newly minted business graduate must contend in order to successfully find satisfactory employment. One of these issues is the preparation of an effective resume and the determination of to distribute the resume to prospective employers to enhance hiring prospects. Of possible interest to both students who are approaching graduation and instructors who teach the preparation of resumes would be the views of those seeking and reviewing resumes – company human resource managers. Other studies have reviewed these populations individually, but little work has been done to analyze and compare the views on resume preparation, content, and methods of distribution of these three populations. Important differences among the three groups regarding the preparation and the distribution of resumes will be noted.

The purpose of this study is to analyze and compare the views of students, business communications instructors, and human resource managers on the preparation, content, and proper distribution of resumes.

Review of Literature

Since the focus of this research study is to present and compare the views of human resource professionals, business communication instructors, and business communication students regarding what should be included in a resume, an attempt was made to review relatively recent literature concerning these areas.

Hornsby and Smith (1995) state, "No aspect of job preparation is more important than the development of an effective resume; obtaining employment is based primarily on a resume" (p. 4).

Teaching students proper resume preparation typically falls to the high school teachers and university professors. A plethora of literature has been written about resume design. However, teachers of resume development would like more information on resume writing to "be based on empirical research." Blackburn-Brockman and Belanger (2001) further emphasize the "literature on job searches need to be more grounded in research" (p. 30).

What to teach students to include in a resume is a major concern of teachers as they prepare students for employment in this century. Weinstein (1993) states, "many large companies receive 1,000 resumes per week and further found that 45 seconds is the average time it takes employers to read a resume" (p. 27).

In a study of personnel administrators at Fortune 500 organizations in the United States, Hutchinson and Brefka (1997) obtained their preferences for content in the resume of college students entering the job market. The 1994 study was compared to the results of a study completed in 1984. Items more important than a decade ago included grade point average (especially if high), awards, and employment.

Hornsby and Smith (1995) surveyed human resource specialists in a wide range of fields, asking them to address resume format and content. Their findings suggest that a resume should include educational qualifications (post-high school), work experience, and achievements (honors, awards, extracurricular activities), depending on the job the applicant is considering. In the study, recruiters were asked to examine one of three different resume formats: one detailing the student's work experiences, a second focusing on the student's campus activities, and the third emphasizing a student's academic experiences. Recruiters rated both men and women applicants with resumes emphasizing work experience as more qualified for an entry-level position than the applicants focusing on campus activities or education experiences.

According to Sharon Fulkerson, Career Services Director at Texas A&M University-Commerce (personal interview, January 14, 2003), Texas A&M-Commerce's approaches to resume writing are the following:

- resumes must be absolutely error-free;
- one-page resumes (for new college graduates) are recommended;
- chronological formats are probably best for traditional students, and descriptions of skills used (in both paid and non-paid experience) should be included;
- personal information, high school information, and hobbies do not belong on the resume (unless they somehow relate directly to the position/field the student is applying for); and
- content should be written as lists of phrases, rather than paragraphs or sentences.

In recent years, because of the increasingly competitive job market, many articles have been written to help resume writers obtain the interview. In 2003, Lublin posed the questions "What are employers looking for?" and "Have the skills and abilities employers are looking for changed in recent years?" The researcher posited that college students are "often unsure how to best showcase their talents" (2003, p. B1).

How should current resumes be submitted to the employer? Should this be done online or by traditional paper copy? In the article, *Online Employment Applications: Employer Preferences and Instructional Implication*, by Jennings, Carnes, and Whitaker (2001), 100 employers were surveyed.

"Although a large majority of employers accept electronic resumes...thirty percent of the employers prefer that resumes and job application documentation be submitted electronically. However, 24 percent prefer paper copies submitted by traditional mail, and an additional 11 percent prefer paper copies submitted in person. The remaining 35 percent have no preference. Sixty-three percent prefer to receive a letter of application with a submitted resume." (p. 34)

Your Guide to Resume Writing (2003) published online by JobWeb.com reports the top 10 qualities employers seek, the top 7 new hire skills, resume tips, pitfalls in resume writing, and 12 steps for resume writing. The article emphasizes the Three R's, known as Research, Research, and Research. The prospective employee must research what the company does, what the position requires, and how his/her skills and abilities will fit with the qualifications. The article further states that employers want "job candidates who have excellent communication skills, good grooming habits, and relevant work experience. Employers say they want trustworthy new hires who can move right in, get along with their co-workers, and get the job done . . ." (para. 3).

When writing a resume, teachers and students alike realize they usually do not know the opinions and preferences of the prospective employers. Maher emphasizes, “prospective employers apply widely differing standards to the resume” (p. B1). The article further states “appropriateness (of the resume) is in the eye of the beholder” (p. B1).

When trying to get attention drawn to their resume, prospective employees might be tempted to stretch the truth. “Besides being unethical, lying can quickly get you into deep professional trouble if detected. Job applications are legally binding, and false information is grounds for firing” (Maher 2003, p. B8).

Methodology

A questionnaire was developed to solicit the opinions of the three distinct groups studied. Questions pertaining to resume preparation, content, format, methods of delivery, and the estimated time of resume review by prospective employers were included. The students surveyed in the study were class members from all sections of the business communications courses at a southwestern university during the Spring, Summer, and Fall semesters of 2002. A total of 231 students were enrolled in all sections of the course, and all completed the questionnaire.

For the instructors’ views, questionnaires were sent to the 244 members of the Southeastern and the Southwestern Regions of the Association for Business

Communication. One hundred and fifteen questionnaires were returned, of which 103 were usable, representing a return rate of 42.2 percent.

The human resource managers of the largest 200 firms located in Dallas/Fort Worth, Texas, were sent questionnaires to obtain their views on resume preparation. Seventy-five responses were received, of which 72 were usable, a 36 percent rate of return.

Findings and Analysis

Table 1 presents the number of respondents and their gender for all three groups. Forty percent of the students were male. Females largely comprised the instructor and the human resource manager groups.

Table 1
Gender of Respondents

Response	Students		*BCI		**HRM	
	Number	Percent	Number	Percent	Number	Percent
Male	92	40	31	30	16	22
Female	139	60	72	70	56	78
Total	231	100	103	100	72	100

*Business Communication Instructors

**Human Resource Managers

The first question in the survey of the student and the instructor respondents asked "how valuable is resume writing in applying for a job?" Table 2 presents the summary of the responses from the two groups. Virtually all of the respondents rated the value of resume writing in obtaining a job as being either “very valuable” or “valuable” with a high majority of students—71 percent and an even higher percentage of business communication instructors—83 percent—responding that it is “very valuable.”

Table 2
How valuable is Resume Writing?

Response	Students		BCI	
	Number	Percent	Number	Percent
Very Valuable	163	71	85	83
Valuable	66	28	18	17
Little Value	2	1	0	0
No Value	0	0	0	0
No Opinion	0	0	0	0
Total	231	100	103	100

Importance of Contents

In constructing a resume, which area do the respondents feel is most important? The students and the instructors agreed, with about 40 percent of both groups indicating that the work experience is the most important element (see Table 3). An even higher percentage of human resource managers – 67 percent—report the work experience of the candidate as being the most important category on applicant resumes. This result would indicate that prospective employees should emphasize and give high priority to their work experience in presenting their credentials. Also, this finding should indicate to students and those advising students the importance of seeking internships, working during the summer, and of working at part-time jobs. As to the applicant's education, higher percentages of both students and instructors—30 percent and 25 percent respectively—feel this is the most important dimension of the entry-level resume, compared with only 12% of the human resource managers.

Table 3
In Your Opinion, Which is the Most Important Category of a Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Work Experience	93	40	40	39	48	67
Education	70	30	26	25	9	12
Specific Skills	41	18	24	23	6	8
Objective	20	9	5	5	9	12
Other	7	3	8	8	0	0
Total	231	100	103	100	72	100

References

Some disagreement existed between the students and the other respondent groups on the question of whether references should be included on the resume itself.

Table 4
Do You Believe References Should Be Included on the Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Yes	138	60	37	36	22	31
No	76	33	63	61	26	36
Undecided	17	7	3	3	24	33
Total	231	100	103	100	72	100

Table 4 indicates that 60 percent of the students responded that references should be included on the resume, while 36 percent and 31 percent of the instructors and human resource managers, respectively, felt this way. Students should be made aware of this finding, a method by which to shorten their resumes. Somewhat surprising is the fact that 33 percent of the human resource managers were undecided on this point.

Those respondents who indicated yes to “references should be included on the resume” were asked to indicate the number of references that should be included.

Table 5
If yes, How Many References should be Included?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
One	0	0	0	0	0	0
Two	23	17	2	5	4	18
Three	106	77	33	90	18	82
More than three	9	6	2	5	0	0
Total	138	100	37	100	22	100

As indicated by the data in Table 5, the majority of these respondents indicated that three would be the appropriate number of references to be included on a resume—77 percent students, 90 percent instructors, and 82 percent human resource managers.

Extracurricular Activities

Table 6 provides data on the importance of extracurricular activities for entry-level employment as perceived by the three groups. Substantial agreement existed between the student views and those of the human resource managers on this point. Thirty-six percent of both groups felt that extracurricular activities were either "important" or "very important," compared to 60 percent of the instructors. Another surprising result was that almost one-fifth of the human resource managers felt that extra curricular activities were not at all important. Instructors should become aware of this finding. Faculty members may place a higher value on participation in extracurricular activities on campus than is warranted.

Table 6
How Important are Extracurricular Activities for Entry-level Employment?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Very Important	27	12	28	27	7	10
Important	56	24	38	33	19	26
Of Some Importance	119	52	33	32	33	46
Not Important	29	13	4	4	13	18
Total	231	100	103	100	72	100

Grade Point Average

The majority of each of the respondent groups agreed that the GPA of the college graduate should be included on the resume.

Table 7
Do You Believe Entry-level College Graduates Should Include Their Grade Point Average on their Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Yes	130	56	70	68	39	54
No	58	25	22	21	15	21
Undecided	43	19	11	11	18	25
Total	231	100	103	100	72	100

Fifty-six percent of the students feel the GPA should be present on the resume. Agreeing with this view are 68 percent of the instructors and 54 percent of the human resource managers. Table 8 addresses the acceptable GPA stipulated for each of the three groups.

Table 8
If Yes, What GPA do you think is Acceptable?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
2.0	9	3	1	2	0	0
2.5	6	5	5	7	8	21
2.75	9	6	2	3	0	0
3.0	96	74	50	71	25	64
3.25	6	5	0	0	0	0
3.5	6	5	12	17	2	5
3.8	2	1	0	0	0	0
4.0	1	1	0	0	0	0
No Response	0	0	0	0	4	10
Total	130	100	70	100	39	100

The majority of each group selected 3.0 as the acceptable GPA—74 percent of the students, 71 percent of the instructors, and 67 percent of the human resource managers.

Time Spent Reviewing Resumes

When the three groups were asked as to how much time they think that a prospective employer spends reviewing an unsolicited resume, all agreed that it is a very short time.

Table 9
How Much Time do you Believe Potential Employers Spend Reading an Unsolicited Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Less than one minute	95	41	72	70	38	53
1-2 minutes	102	44	25	24	29	40
3-4 minutes	26	11	5	5	5	7
More than 4 minutes	8	4	1	1	0	0
Total	231	100	130	100	72	100

Eighty-five percent of the students indicated that a person reviewing a prospective employee's resume would do so in two minutes or less. The business communication instructors and the human resource managers were more pessimistic in their views with 94 percent and 93 percent, respectively, feeling that the resume would be reviewed in two minutes or less. Seventy percent of the instructors indicated that the resume would be reviewed in a minute or less, compared to 53 percent of the human resource managers. All human resource managers indicated that unsolicited resumes would be reviewed in four minutes or less.

A question was asked concerning the time spent by employers to review a solicited resume. Here the responses were somewhat different than those obtained from the earlier question concerning unsolicited resumes. However, the view of all respondents is still clear that not much time is spent in reviewing even solicited resumes (see Table 10).

Table 10
How Much Time do you Believe Potential Employers Spend Reading a Solicited Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Less than one minute	22	10	18	17	4	5
1-2 minutes	75	32	45	44	30	42
3-4 minutes	79	34	25	24	28	39
More than 4 minutes	55	24	15	15	10	14
Total	231	100	103	100	72	100

Eighty-six percent of the human resource managers report solicited resumes being reviewed in four minutes or less compared to 100 percent of unsolicited resumes. This finding strongly indicates that resumes must be brief and well organized in presenting the experience, education, qualifications, and accomplishments of the job seeker. Also, this result reinforces the need for using methods that will appeal to the reader of the resume.

Submitting the Resume

Table 11 presents very important information on the views of the three groups on the effectiveness of methods of resume submission to prospective employers.

Table 11

In Your Opinion, Which is the Most Effective Way to Submit a Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Hand delivered hard copy	173	75	50	49	0	0
Makes No Difference	21	9	21	20	11	15
Mailed Hard Copy	21	9	13	13	15	21
Electronic Submission	9	4	10	10	39	54
Fax	7	3	0	0	5	7
Other	0	0	9	8	2	3
Total	231	100	103	100	72	100

Seventy-five percent of the students and 49 percent of the instructors feel that hand carrying the resume is the most effective means of submission to a prospective employer. In contrast to their views, none of the human resource managers indicated this form of transmission to be the most effective. Fifty-four percent of the human resource managers stated that electronic submission of the resume is the most important means, while only 4 percent of the students and 10 percent of the instructors agreed. This disparity of views between the instructors and students, compared to the human resource managers, must be addressed in order for students to utilize effective means of submitting resumes to prospective employers.

Length

One can see from Table 12 that all respondents clearly feel that the college graduate's resume should be brief.

Table 12

How Many Pages do you believe an Entry-level College Graduate Resume Should be?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
1 page	139	60	80	78	57	79
2 pages	82	36	22	21	14	20
3 pages	10	4	1	1	1	1
More than 3 pages	0	0	0	0	0	0
Total	231	100	103	100	72	100

Sixty percent of the students and nearly 80 percent of both the instructors and the human resource managers indicate that a single page is appropriate. Thirty-six percent of the students and about 20 percent of both the instructors and the human resource managers believe that two pages is the appropriate length for a resume. Not one of the respondents felt that a resume should exceed four pages.

Format

Tables 13 and 14 provide information on typing font size to be used and the color of the paper for the resume.

Table 13
What Font Size do you Believe should be Used for a Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
8	0	0	0	0	1	1
10	38	16	32	31	26	36
12	181	78	69	67	35	49
14	12	5	1	1	0	0
Larger than 14	0	0	0	0	0	0
Makes no difference	1	1	1	1	10	14
Total	231	100	103	100	72	100

Table 14
What Color Paper do you Believe should be Used for a Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
White	141	61	56	54	45	63
Off White	81	35	38	37	10	14
Colored	6	3	2	2	0	0
Makes No Difference	3	1	7	7	17	23
Total	231	100	103	100	72	100

The majority of responses called for a size 12 font and for white or off white paper to be used.

Electronic Resume

A question was asked about the preparation of two versions of a resume—a traditional hard copy resume and an electronic version, which would be scannable. The responses are indicated on Table 15.

Table 15
Do you Believe Students Should Prepare Two Resumes- Traditional and Electronic (Scannable) Versions?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Yes	176	76	89	86	42	58
No	26	11	6	6	20	28
Undecided	29	13	8	8	10	14
Total	231	100	103	100	72	100

Seventy-six percent of the students said "yes" and 86 percent of the instructors agreed, while only 58 percent of the human resource managers responded that this was a good idea.

Table 16 indicates data regarding the respondents' beliefs on whether a large number of companies scan resumes.

Table 16
Do you believe a Large Number of Companies Scan Resumes?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Yes	108	47	59	57	13	18
No	55	24	25	24	58	81
Undecided	68	29	19	19	1	1
Total	231	100	103	100	72	100

Forty-seven percent of the students indicated "yes" and 57 percent of the instructors indicated agreement. However, 81 percent of the human resource managers responded "no" to the question.

Results for companies who use the Internet for job searches is reported in Table 17.

Table 17

Do You Believe Most Companies Use Internet Sources for Entry-Level Job Searches?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Yes	123	53	19	18	52	72
No	47	20	47	46	20	28
Undecided	61	27	37	36	0	0
Total	231	100	103	100	72	100

The instructors seem to feel that this is not done to a large extent, with only 18 percent indicating so. Seventy-two percent of the human resource managers indicate that they feel that most companies do indeed use the Internet for entry-level job searches. A majority of students agree with 53 percent responding "yes" to the question.

Problems in Resume Preparation

Resumes do often contain errors and false information. Table 18 presents data as to where the respondents believe that students make the most errors.

Table 18

In What Areas do you Believe Students Make the Most Errors on Resume?

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Incomplete Information	57	25	65	63	19	26
Unprofessional Appearance	118	51	65	63	37	51
Grammatical Errors	102	44	59	57	40	56
Spelling Errors	78	34	59	57	50	69
Punctuation Errors	69	30	46	45	22	31
Length	88	38	29	28	44	61
Too Much Detail	114	51	25	24	33	46

Response	Students		BCI		HRM	
	Number	Percent	Number	Percent	Number	Percent
Incorrect or False Information	49	21	19	18	21	29
Other	0	0	17	17	0	0

All three groups of respondents had over 50 percent indicating that unprofessional appearance of the resume is a significant error. Over 50 percent of the instructors and the human resource managers feel that grammatical errors and spelling errors are major errors. Forty-four percent of the students feel that grammatical errors represent problems on resumes, and only 34 percent of the students reported that spelling is a problem on resumes.

Sixty-three percent of the instructors report incomplete information as being an error on student resumes. Compared to this, only 25 percent of students and 26 percent of human resource managers agree that incomplete information is a concern. Sixty-one percent of the human resource managers indicate that length of the resume is a problem area, and 46 percent indicate that the resumes provide too much detail. Only 28 percent of the instructors indicate that length of the resume and 25 percent indicate that too much detail are problem areas. All three respondent groups reported that incorrect or false information is a problem area, with the human resource managers rating it the highest at 29 percent.

Summary and Conclusions

Over 400 individuals participated in the study from the three groups under consideration. Students constituted 57 percent of the respondents; business communications instructors, 25 percent; and human resource managers, 18 percent.

The vast majority of student and instructor respondents indicated that resume writing is an important or a very important topic to be taught in business schools. The respondents reported that very little time is spent in reviewing unsolicited resumes—two minutes or less. Very little additional time is spent when solicited resumes are reviewed – about one minute or two. High percentages of all three groups of respondents identified that the most important category on a resume is the work experience of the individual. The category of resume content receiving the next highest percentages of responses for all three groups of respondents is "education." The category "career objective" was tied with education for second highest percentage of responses by the human resource managers.

The majority of both the students and the human resource managers stated that extracurricular activities were “of some importance” in preparing resumes. Almost one-fifth of the human resource managers felt that extracurricular activities are “not important.” In comparison, the majority of instructors felt that extracurricular activities were either “important” or “very important.”

The majority of instructors and human resource managers indicate that references should not be included on the resume. In contrast, most of the students reported that they should include references on their resume. Of those respondents who indicated that references are to be included on the resume, the highest percentages in each group of respondents indicated that three references should be identified.

Virtually all of the respondents indicated that a resume should be one or two pages in length, the font size should be 12, and the preferred paper color was either white or off-white.

Considering the areas where students have problems in resume preparation, the majority of the three groups reported that resumes with an unprofessional appearance were a major problem. Grammatical errors and spelling errors received high percentage responses from both the instructors and the human resource managers. Less than half of the students identified these as problem areas. The majority of the human resource managers also identified the length of resumes submitted by prospective employees as a problem, and relatively high percentages of all groups identified resumes containing incorrect or false information as being problems.

The majority of all groups feel that the GPA should be included on the recent college graduate's resume. And the majority indicate that 3.0 or above would be an acceptable GPA.

High percentages of both students and instructors answered that the most effective means of transmitting a resume to a prospective employer is by hand delivering a hard copy. None of the human resource managers agreed. Rather, the majority of the human resource managers indicated that electronic submission of the resume was the most effective means.

All groups indicated that the student should prepare two forms of a resume—traditional hard copy and an electronic version. High percentages of both students and instructors responded that a large number of companies scan resumes, but the large majority of human resource managers do not perceive that companies do this. A low percentage of instructors indicated that companies use the Internet for job searches at the entry level. A slight majority of students feel that they do; while a very large majority of the human resource managers indicated that companies do use the Internet for their entry-level searches.

In this very tough environment, a college graduate must pay careful attention to preparing his or her resume. The resume is a key instrument in suc-

cessfully obtaining a job. A well-constructed resume can make all the difference between success and failure in the job search process. The results of this study indicate that a college graduate would do well to keep the resume to a page or two, to emphasize prior work experience and education, to include the GPA, to be sure that the resume is error free and grammatically correct, and to be sure that the contents are accurate. A job candidate should prepare the resume on white or off-white paper and use a standard font size. He or she should consider carefully whether to include references or extracurricular activities in view of the need to keep a resume brief, emphasizing experience and education so that the resume can be read and the contents digested in two or three minutes.

References

- Blackburn-Brockman, E., & Belanger, K. (2001). One Page or Two? A National Study of CPA Recruiters' Preferences for Resume Length. *Business Communication Quarterly*, 38(1), 29-57.
- Fulkerson, S. (Personal Interview, January 14, 2003). Director of Career Services, Texas A&M University-Commerce, Commerce, TX.
- Hornsby, J., & Smith, B. (1995, Winter). Resume Content: What Should be Included and Excluded. *Sam Advanced Management Journal*, 4-9.
- Hutchinson, K., & Brefka, D. (1997). Personnel Administrators' Preferences for Resume Content: Ten Years After. *Business Communication Quarterly*, 60(2), 67-75.
- Jennings, M., Carnes, L., & Whitaker, V. (2001, February). *Business Education Forum*, 34-35, 42.
- Lublin, J. (2003, April). Job Hunting Tougher with Weak Resume. *Wall Street Journal-Eastern Edition*, B1.
- Maher, K. (2003, September 29). The Jungle. *Wall Street Journal-Eastern Edition*. B8.
- Your Guide to Resume Writing. (2003). Retrieved September 26, 2003, from <http://www.jobweb.com>
- Weinstein, B. (1993). *Resumes don't get jobs: The Realities and Myths of Job Hunting*. New York: McGraw Hill.

Bibliography

- Besson, T. (1997, October). The Artful Resume and Cover Letter. *Black Collegian*, 28(1), 34.

Block, B., & Sellers, J. (1994, December). Resume Content and Format—Do the Authorities Agree? *The Bulletin*, 27-30.

Executives Spend Two Minutes Per Resume for Advertised Job. (1996, January 22). *Hudson Valley Business*, 6(45), 26.

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Time Between Instruction and Practice in a Business Communication Course

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ABSTRACT

Using instructional time effectively is one of the most important challenges for all instructors. After time has been spent in a single class session on non-instructional tasks, such as taking roll, listening to or giving announcements, and addressing individual student's issues, time has become one of the most valuable resources in education and must be used as effectively as possible to promote maximum learning. Instructors who incorporate various teaching methods are often faced with the problem of how to allocate limited instructional time. How soon after instruction should tests or practice be administered? How much time should be allocated to allow students to practice a new skill? Should instruction be broken into small or large segments? This study was designed to investigate the effectiveness of two methods of allocating time when offering instruction and practice in a business communication class. Using a population of 66 students enrolled in two intact sections of an undergraduate Business Communication course at a southern university, the authors' examination of research findings indicated no statistically significant difference in student performance relative to skill ability in good-news letter writing between the group that utilized instruction periods and immediate practice and the group that utilized instruction periods and delayed practice.

The following scenario is probably familiar to many business teachers. A business communication instructor is faced with the challenge of teaching students good-news letter writing. This instructor is confident in his or her skill in creating good-news letters but must make critical decisions concerning delivering the instruction. The instructor desires to use the tools and time available to optimize learning and the skills of the students. At this instructor's disposal is a traditional classroom that was designed to facilitate lecturing. This room has an instructor's station with an overhead projector and a desktop computer that is connected to presentation hardware to facilitate lecturing and modeling. The students have a computer lab at their disposal to practice assignments such as creating good-news letters. A few of the questions this instructor and most other instructors must answer is, "Should I lecture the entire period and allow the students to practice the new skills

the next period?" "Should I lecture and demonstrate a half period and allow students to practice the other half?" "Will this decision change the outcome of the students' skills?"

Using instructional time effectively is one of the most important challenges for all instructors. After time has been spent in a single class session on non-instructional tasks, such as taking roll, listening to or giving announcements, and addressing individual student's issues, time has become one of the most valuable resources in education and must be used as effectively as possible to promote maximum learning. Instructors who incorporate various teaching methods are often faced with the problem of how to allocate limited instructional time. How soon after instruction should tests or practice be administered? How much time should be allocated to allow students to practice a new skill? Should instruction be broken into small or large segments? These are some of the questions instructors must answer when considering the allocation of instructional time.

Problem

The use of all resources available to instructors must be maximized to facilitate and encourage learning. Since instructional resources are limited, the methods by which instructors use their resources must be systematically researched to determine the instructional value of each method. "Teacher educators should provide leadership in conducting and applying research which assumes that instruction is based on valid information, new concepts, and technological advances" (Policies Commission for Business and Economic Education, 1993). Business communication instructors are faced with determining the most effective use of the limited resources of time for instruction and practice and the physical resources at their disposal. The type of classrooms available may dictate how some instructional time is used. If a business communication class meets in a traditional classroom, the opportunity for practice may be limited. The problem this study investigates is "how should the limited time for instruction and practice be distributed in a business communication course?"

Purpose

This study was designed to investigate the effectiveness of two methods of allocating time when offering instruction and practice in a business communication class. The specific research questions to be addressed are:

1. Is there a significant difference in the unit test performance between students who were exposed to instructional segments and immediate practice after instruction and students who were exposed to instructional segments and delayed practice after instruction in a good-news letter writing unit of a business communication course?
2. Is there a significant difference in skill performance between students who

were exposed to instructional segments and immediate practice after instruction and students who were exposed to instructional segments and delayed practice after instruction in a good-news letter-writing unit of a business communication course?

3. Is there a significant difference in the perceptions of the unit between students who were exposed to instructional segments and immediate practice after instruction and students who were exposed to instructional segments and delayed practice after instruction in a good-news letter-writing unit of a business communication course?

Related Literature

A thorough review of the literature was conducted and revealed no empirical studies concerning the relationship between the length of instructional time and time until student practice in business communication classes. Information was found concerning effective instruction and factors that affect student success in business communication courses.

The literature supports the idea that students' attitudes affect their success in business communication classes. Possessing adequate writing skills affects students' attitudes toward writing. While some students enjoy writing, most business students dislike writing. Most students have had prior experience in writing some forms of business letters. Therefore, many business students view business communication classes as courses of little value (Pullis, Means, & Johnson, 1998). O'Neil (1998) stated, "A person's communication effectiveness is directly proportional to his or her attitude" (p. 28). Attitude plays a significant role in communication and is vital to enhancing communication skills, and students possessing appropriate communication skills, e.g. writing skills, are imperative to their success in the classroom and the workplace today. Moody, Stewart, and Bolt-Lee (2002) surveyed U.S. employee recruiters to determine which skills they seek in applicants during the hiring process. The top skills recruiters listed were as follows: "(a) communication (written and oral), (b) computer literacy, and (c) interpersonal skills" (p. 28).

Instructional strategies in business communication classes can enhance student attitudes. Activities that focus on student involvement and participation improve communication skills. "When students are actively involved in the learning process—versus more passive learning—empowerment occurs" (O'Neil, 1998, p. 30). In a study of the effects of collaborative and independent writing on student attitudes toward writing and instructor's effectiveness, Ownby and Perreault (1992) recommend that business communication teachers provide students with collaborative writing experiences. With group-oriented instruction, students become active and responsible participants in the learning process (Roebuck, 1998).

While building team cohesiveness, business communication application exercises should be designed to promote learning of essential concepts and skills. The nature of the assignment will have an effect on the quality of the

learning experience. Roebuck (1998) stated that the application-oriented team assignment should require the teams to produce a tangible output . . . challenge their understanding of course concepts . . . give students the opportunities to practice dealing with the same kind of issues and problem situations they will encounter in later course work or in future jobs . . . stimulate interest and be fun (p. 42).

“Because these assignments are an important part of the learning process, the professor must give time in class for the teams to complete them” (Roebuck, 1998, p. 42). Thomas (1995) addressed problems that exist in teaching business communication courses and recommended that students complete in-class writing assignments in a computer lab, if possible. Thomas appeared to support the instructional method of having students practice in a computer lab.

Technology has influenced teaching methods used in business communication courses. “Traditional business communication methods have been changed by advances in telecommunications, networking systems, and computer processing” (Amini, 1995, p. 52). During the past decade, instructors in business communication classrooms have infused instruction related to computer technology into the business communication course. Instructors believe that this focus on technology is warranted because computers have revolutionized communication (Bordia, 1997). Traditional skills such as business letter writing and résumé creation are frequently completed at desktop computers where students practice business communication skills. The use of computer processing in the classroom encourages active learning by involving students in interactive activities to receive immediate feedback from classmates or faculty (Amini, 1995). A combination of classroom demonstration/teaching and scheduled computer lab sessions can provide the “best of both worlds” for students. Lundgren, Lundgren & Mundrake (1995) state, “the combination approach requires planning to accommodate all students and scheduling considerations” (p. 20).

Methodology

This section describes the research procedures used to address the research hypotheses posed in this study. The problem this study investigates is "how should the limited time for instruction and practice be distributed in a business communication course?"

This research study utilized a field experimental design that is quasi-experimental due to the inability to randomly place members into the groups. Two collegiate groups (intact business communication classes) at a southeast university were studied and randomly designated as Treatment Groups A and B (N = 66). A random number generator was used to designate the treatment groups. Randomly assigning treatments strengthens the use of a field experiment study. Kerlinger (1986) stated, “If an experiment is a ‘true’ experiment, they (investigators) can also exercise control by randomization. They can

assign subjects to groups at random, or can assign treatments to groups at random” (p. 349).

In Treatment Group A of the business communication class, students were administered periods of instruction (for 50 minutes) and practiced the new skills immediately after instruction (for 25 minutes) in a computer laboratory.

Table 1

Treatment Group A: Distribution of Time Between Instruction and Practice

Group A	T	Th
Instruction	50 min.	50 min.
Practice	25 min.	25 min.

In Treatment Group B, students were administered periods of instruction (one complete class period/50 minutes) and met at the computer laboratory to practice the new skills the next class meeting (50 minutes) on a Monday, Wednesday, & Friday (MWF) schedule.

Table 2

Treatment Group B: Distribution of Time Between Instruction and Practice

Group B	M	W	F
Instruction	50 min.	00 min.	50 min.
Practice	00 min.	50 min.	00 min.

To further define the population sample, the Organizational/Business Communication class is a senior level course at the university and students must have at least a junior standing and must have completed English Composition I and II to enroll in the course. All business, business education, office administration, and hospitality management students are required to complete this communication course. In this particular study, 95% of the students were of senior standing and 84% of the study participants were business majors. Students’ participation in this study was voluntary, all participants signed the appropriate consent forms, and students were assured complete confidentiality during this research project. The two sections of classes were taught by the same business communication instructor, the study began in the Fall 2000 semester, and the duration of the study was approximately seven weeks.

Treatment Groups A and B were administered the same amount of instructional time and practice time during the course of a week of class meetings. Both groups used the same course materials and read the same textbook content and completed skill development assignments. The text used to teach

the business communication course was a 12th edition version of a college business communication textbook (Lehman & DuFrene, 1999). The equivalency of instruction of the outlining, proofreading, editing, and good-news units taught to Treatment Groups A and B was assessed by having an experienced business instructor who was independent of this study, review and make suggestions/comments about detailed lesson plans and writing activities for the units and both groups of students. The lesson plans outlined the objectives for the writing units, the procedures to be used by the instructor, the student activities required for the units, the time allotment to be spent on both the instructor procedures and student activities, and the materials needed by students and instructors to complete the unit.

A rubric from the instructor's manual provided by the textbook publisher was used to grade and calculate students' scores on the good-news writing assignment, which was administered at the conclusion of the seven-week study. The good-news letter-writing rubric from the instructor's manual divided the components of the letter writing instruction into the following categories with the following possible scores assigned to each category: (a) content—worth a possible score of 30 points, (b) organization—possible score of 20 points, (c) style—possible score of 30 points, (d) format—possible score of 5 points, and (e) mechanics—possible score of 15 points. Total possible points on the good-news letter-writing assignment equaled 100.

A unit test taken from the business communication textbook test bank was administered at the conclusion of the writing unit/study period. Content validity for the unit test was confirmed by having three experienced business communication instructors, who were otherwise independent of this study, examine the instrument to determine whether the content and format of the instrument was appropriate. Internal consistency for the document was demonstrated by using the Kuder-Richardson (Knapp, 1991) approach to reliability.

The test for the good-news unit contained 49 questions—true/false and multiple choice questions—that were worth one point per question or a total of 49 points for the entire test. According to the Kuder-Richardson approach, the good-news unit test has a reliability coefficient of .85. The Kuder-Richardson test is a statistical procedure for estimating the reliability of a test (Hopkins, Stanley, & Hopkins, 1990, p. 132). The unit test key provided by the textbook publisher was used to grade the unit test.

A perceptions questionnaire was administered at the end of the treatment. The questionnaire was adapted with permission from an instrument created by Dr. Dennis LaBonty (1989). The instrument was adapted to measure students' perceptions concerning a particular business communication unit. The internal reliability for the adapted perceptions survey was .86 and determined by applying Cronbach's Alpha statistical analysis (McDonald & Bartlett, 2000).

Two sets of variables were identified in the study. The independent variables were (a) instructional periods and immediate practice and (b) instructional periods and delayed practice. The dependent variables are (a) student

achievement in content knowledge, (b) student performance in skill achievement, and (c) student perceptions of the unit.

For purposes of the research study, students in group A and B were given instructions for completing their assignments in the outlining, proofreading, and editing, good-news letters and allowed to key their completed work on computers in computer labs. In the good-news writing unit, for example, students in Treatment Group A, who were taught on a Tuesday/Thursday schedule, were reviewed for the first 20 minutes of class concerning the basics of writing good-news letters as outlined in the reading assignment for the previous night. Students were then allotted ten minutes of class time to review and complete a handout about writing a good-news/goodwill letter. The apology-writing handout was instructor-created and contained five categories of sentences including the following: (a) central idea sentences, (b) details, (c) transition sentences, (d) measures taken to prevent future reoccurrences of the incident, (e) closing sentences. Both correct and incorrect sentences were included for each category. For the ensuing 20 minutes of class, students and the instructor reviewed the correct choices of sentences from each category and discussed why incorrect choices were incorrect.

At the conclusion of the in-class writing activity, students in Treatment Group A were escorted to the computer lab to work on the good-news letter-writing assignment that was due at the conclusion of the next class meeting. Students were allotted 25 minutes of time to work in the computer lab. At the following class meeting, students were again given a review of good-news letter-writing concepts/skills via lecture and discussion for 20 minutes. For the next 15 minutes, students were allowed to proofread and critique each other's good-news letters they had started writing in the lab at the previous class meeting. The letters were then returned to the original writers and the students were given an additional 15 minutes to make changes/revisions to the documents and ask the instructor for clarification of questions about the letters before adjourning to the computer lab to make final revisions during the last 25 minutes of class.

Students in Treatment Group B, who were taught on the Monday/Wednesday/Friday schedule, were given 50 minutes of instruction on the good-news writing unit during the 50-minute Friday class meeting. The students in Treatment Group B completed the same apology-writing activity and received the same lecture and discussion as the students in Treatment Group A. The following Monday, students in Treatment Group B again received 50 minutes of lecture, review, and discussion of the writing concepts/skills for writing a good-news letter. Treatment Group B students reviewed and critiqued examples of good-news letters during this 50-minute period. When the students met for class on Wednesday, they were escorted to the computer lab where they practiced their writing skills by creating and keying the good-news letter-writing assignment. Again, the final steps in this field experiment were to administer the good-news unit test and the perceptions questionnaire.

To determine if a significant difference existed between the intact groups identified as Treatment Group A—that utilized instruction periods and immediate practice, and Treatment Group B—that utilized instruction periods and delayed practice, a single factor analysis of variance or ANOVA was applied to the group's unit test scores, letter writing scores, and perceptions questionnaires. The data was tested at the .05 confidence level. The independent variables were the two treatment methods. The dependent variables were the students' mean scores on the unit test, students' mean scores on the letter writing assignment, and students' mean scores reported on the perceptions questionnaire. The results of the study are presented in the following section.

Findings

The population of the study consisted of 66 students enrolled in two intact sections of an undergraduate business communication course at a southern university. The test that was administered to both Treatment Group A and Treatment Group B had an overall possible score of 49. Treatment Group A (n = 33) had a mean score of 37.455. Treatment Group B (n = 33) had a mean score of 40.121. Descriptive statistics consisting of means and standard deviations of the unit test scores for Treatment Groups A and B are presented in Table 3.

Table 3

Good News Letter Writing Content Achievement: Means and Standard Deviations

Groups	n	Sum	Mean	Standard Deviation
Treatment Group A	33	1236	37.455	24.006
Treatment Group B	33	1324	40.121	23.172

* The test had a possible score of 49

Table 4 presents the results of single factor analysis of variance (ANOVA) for the treatment groups on content knowledge scores. The analysis resulted in a statistically significant difference between Treatment Group A that received periods of instruction and immediate practice and Treatment Group B that received periods of instruction and delayed practice. The mean test scores on content test were higher for students who received periods of instruction and delayed practice.

Table 4
Analysis of Variance for Treatment Groups on Content Achievement

Source of Variation	df	SS	F	MS	p
Between Groups	1	117.333	4.974	117.333	0.029*
Within Groups	64	1509.697		23.589	
Total	65	1627.030			

*p<.05

To determine if a significant difference existed between the skill level achieved by Treatment Group A and Treatment Group B, a single factor analysis of variance (ANOVA) was applied to the groups' good-news letter writing exercise scores. The letter-writing exercise had a total possible score of 100. Treatment Group A (n = 33) had a mean score of 88.091. Treatment Group B (n = 33) had a mean score of 85.091. Descriptive statistics consisting of means and standard deviations of the report writing exercise scores for Treatment Groups A and B are presented in Table 5.

Table 5

Good-News Letter Writing Skill Achievement: Means and Standard Deviations

Groups	n	Sum	Mean	Standard Deviation
Treatment Group A	33	2907	88.091	13.351
Treatment Group B	33	2808	85.091	258.601

* The assignment had a possible score of 100

Table 6 presents the results of the single factor analysis of variance (ANOVA) for the treatment groups on skill level achievement. Analysis of the two group's good-news letter writing exercise scores resulted in no statistically significant difference between the two groups.

Table 6
Analysis of Variance for Treatment Groups on Skill Achievement

Source of Variation	df	SS	F	MS	p
Between Groups	1	148.500	1.092	148.500	0.299
Within Groups	64	8702.455		135.976	
Total	65	8850.955			

*p<.05

To determine if a significant difference existed between the perceptions of the unit by Treatment Group A and Treatment Group B, a perceptions questionnaire was administered to the participants. A single factor analysis of variance (ANOVA) was applied to the data. Descriptive statistics consisting of means and standard deviations of the unit perceptions between Treatment Groups A and B are presented in Table 7.

Table 7
Student Perceptions: Means and Standard Deviations

Groups	n	Sum	Mean	Standard Deviation
Treatment Group A	5	130	26	316.500
Treatment Group B	5	135	27	212.500

Table 8 presents the results of the single factor analysis of variance (ANOVA) for the treatment groups on the unit perceptions. Analysis of the scores the two groups reported on the perceptions questionnaire resulted in no statistically significant difference between the two groups.

Table 8
Analysis of Variance for Treatment Groups on Students' Perceptions of the Unit

Source of Variation	df	SS	F	MS	p
Between Groups	1	2.500	0.009	2.500	0.925
Within Groups	8	2116.000		264.500	
Total	9	2118.500			

*p<.05

Summary

This experiment was conducted in the Fall 2000 semester to compare two instructional methods that involve the allocation of time in business communication classes. The study examined which of the two methods promoted higher student performance relative to good-news letter writing content

knowledge and skill ability. In addition, the effect on students' perceptions of the unit when the two methods were used also was examined in this experiment.

Data for the study was obtained from 66 students enrolled in two intact sections of an undergraduate business communication course at a university. The same business education instructor taught both sections during the 2000 Fall Semester.

Analysis resulted in a statistically significant difference in student performance on a test of content knowledge of good-news letter writing between the group that utilized instruction periods and immediate practice and the group that utilized instruction periods and delayed practice. The mean unit test score grades were higher for the group that utilized instruction periods and delayed practice.

Analysis resulted in no statistically significant difference in student performance relative to skill ability in good-news letter writing between the group that utilized instruction periods and immediate practice and the group that utilized instruction periods and delayed practice. Further, analysis resulted in no statistically significant difference relative to students' perceptions of the unit between the two groups.

Conclusions

Field experiments are especially suited for educators conducting research to assess teaching methods. According to Kerlinger (1986, p. 370), "Field experiments have values that especially recommend them to...educators because they are admirably suited to many of the social and educational problems of interest to social psychology, sociology, and education." Kerlinger went on to state because of the realistic nature of field experiments, they contribute to the strength of the external validity of a study and the generalizations drawn are more applicable to other situations (p. 370). Therefore, assuming the data collected is reliable, valid, and representative of collegiate students represented in the population of the study, the following conclusions are drawn:

1. Students subjected to instruction periods and delayed practice exhibited stronger content knowledge on a good-news letter-writing test than students subjected to instruction periods and immediate practice. Analysis of variance test resulted in a significant difference between the two groups of students in favor of the group that utilized longer instruction periods and delayed practice. This finding would support the teaching method of using an entire class period to present instruction and later allowing students to practice in a computer lab which may be in a different location than the instruction classroom.
2. Performance on a writing assignment related to the content of the test was not significantly different between the group that utilized instruction peri-

ods and immediate practice and the group that utilized instruction periods and delayed practice. This finding would not support the hypothesis that either teaching method investigated is more effective for promoting student achievement in good-news letter writing.

3. The group that utilized instruction periods and immediate practice and the group that utilized instruction periods and delayed practice reported similar perceptions of the unit. This finding would not conclude that applying immediate practice after instruction or delayed practice after instruction promotes higher student perceptions of the unit

Recommendations for Further Study

1. This study should be replicated using a larger sample size to ascertain if sample size had an effect on the outcome of the research.
2. This study should be replicated at other universities to investigate if the findings would be replicated with other student populations.
3. This study should be replicated using other selected units of a business communication course.
4. This study should be replicated to investigate the effects on student outcomes on other business subjects.

References

- Amini, M. S. (1995). A framework for simulating computer-based individual and work-group communication. *Journal of Education for Business*, 71(1), 49-53.
- Bordia, P. (1997). Face-to-face versus computer-mediated communication: A synthesis of the experimental literature. *Journal of Business Communication*, 34, 99-120.
- Hopkins, K., Stanley, J., & Hopkins, B. (1990). *Educational and Psychological Measurement and Evaluation* (7th ed.). Needham Heights: Prentice Hall.
- Kerlinger, F. N. (1986). *Foundations of Behavioral Research* (3rd ed). New York: CBS College Publishing, 348-370.
- Knapp, T. R. (1991). *Focus on Psychometrics*, Coefficient Alpha: Conceptualizations and Anomalies. *Research in Nursing & Health*, 14, 457-480
- LaBonty, D. (1989). Computer-assisted homework in accounting: Effects on student achievement and attitude. *The Delta Pi Epsilon Journal*, 31 (2), 47-55.

- Lehman, C. M., & DuFrene, D. D. (1999). *Business Communication* (12th ed.). New York: South-Western College Publishing.
- Lundgren, C., Lundgren, T. & Mundrake, G. (1995). Teaching computer applications. *Delta Pi Epsilon*, (pp. 17 – 29). Little Rock, AR: *Delta Pi Epsilon*.
- McDonald, M., & Bartlett II, E. (2000, Spring). Comparison of web-based and traditional delivery methods in a business communications unit. *Delta Pi Epsilon Journal*, 90-100.
- Moody, J., Stewart, B. & Bolt-Lee, C. (2002). Showing the skilled business graduate: Expanding the tool kit. *Business Communication Quarterly*, 65(1), 21.
- O'Neil, S. L. (1998). An empowered attitude can enhance communication skills. *Business Education Forum*, 52(4), 28-30.
- Ownby, A. C. & Perreault, H. R. (1992). Effects of collaborative and independent writing on student attitudes toward writing and instructor's effectiveness. *NABTE Review*, 19, 31-35.
- Policies Commission for Business and Economic Education. (1997). [This we believe about the role of business education in technology, 1993.](#) (Statement 53). South-Western Educational Publishing Co.
- Pullis, J. M, Means, T. L., & Johnson, G. H. (1998). Popular misconceptions about business communications. *Business Education Forum*, 53(2), 30-31.
- Roebuck, B. D. (1998). Using team learning in business and organizational communication classes. *Business Communication Quarterly*, 61(3), 35-42.
- Thomas, S. G. (1995). Preparing business students more effectively for real-world communication. *Journal of Business & Technical Communication*, 9(4), 461.

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ber of online course offerings increase, efforts in this area can focus more on intrinsic factors such as motivation and less on issues outside the student's control. This line of research does not relegate online courses to obscurity or to students with special needs, but potentially opens up online education to all students with a motivation to achieve.

References

- Arbaugh, J. B. (2001). How instructor immediacy behaviors affect student satisfaction and learning in web-based courses. *Business Communication Quarterly*, 64, (4), 42-54.
- Arbaugh, J. B., & Duray, R. (2001). Class section size, perceived classroom characteristics, instructor experience, and student learning and satisfaction with web-based courses: A study and comparison of two online MBA programs. *Proceedings of the Academy of Management, USA*, 2001.
- Baer, W. (2000). Competition and collaboration in online distance learning. *Information, Communication, & Society*, 3 (4), 457-473.
- Cappel, J. & Hayen, R. (2004). Evaluating e-learning: A case study. *Journal of Computer Information Systems*, 44 (4), 49-56.
- Carr-Chellman, A. (2000). The new frontier: Web-based education in US Culture. *Information, Communication, & Society*, 3, (3). 326-336.
- Chronicle Almanac (2003). Distance-education programs by type of institution, 2000-1. Retrieved August 24, 2003, from the Chronicle of Higher Education Web site: <http://chronicle.com>.
- Cooper, L. (2000). Online courses. *THE Journal*, 27, (8), 86-91.
- Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality*, 62, 119-142.
- Dellana, S., Collins, W. & West, D. (2000). Online education in a management science course: Effectiveness and performance factors, *Journal of Education for Business*, 43-47.
- DeSanctis, G., & Sheppard, B. (1999). Bridging distance, time, and culture in executive MBA education. *Journal of Education for Business*, 157-160.
- Dreyer, C., & Bangeni, N. (2002). Profiling learners studying within a distributed learning environment. Retrieved August 24, 2003, from Potchefstroom University for CHE Web site: <http://www.puk.ac.za/tls/ICTE/2002/icte2002proceedings/DreyerBangeni.pdf>.
- Enzle, M., Wright, E., & Redondo, I. (1996). Cross-talk generalization of intrinsic motivation effects. Retrieved February 28, 2004, from

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