

COMPARING THREE MODES OF INSTRUCTION IN A GRADUATE SOCIAL WORK PROGRAM

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Educational outcomes are compared for students taking a social work administration course in 3 formats: traditional, Internet, and hybrid. The traditional group had face-to-face instruction, whereas the Internet students received all instruction through the Internet. The hybrid students had a balance between the two. Course readings and assignments were the same for each group. The results indicated no difference among these 3 groups in knowledge gain, course content self-efficacy gain, or student satisfaction. These data add to the growing body of research suggesting that online instruction achieves outcomes comparable with the traditional format.

SOCIAL WORK EDUCATION faces a number of strategic issues related to the convergence of two major trends in higher education: (a) the expansion in distributed education to meet the needs of a growing population of nontraditional students and (b) the revolution in information technology. This convergence has led to a number of nontraditional forms of social work education, including the development of Internet-based, or online, offerings of courses. Nontraditional social work education has been viewed with a skeptical eye by many social work educators, including many key members of the Council on Social Work Education (CSWE), social work's accrediting body. CSWE's recent focus on program integrity

and educational outcomes has relieved the pressure on schools that wish to offer nontraditional options, because they now can simply show that these two issues are being addressed without undue focus on proving they are doing things a certain (i.e., traditional) way.

Although there are a number of studies of certain nontraditional options for social work education, the published research comparing educational outcomes for online students and traditional ones was almost nonexistent in 2004, the time of the study reported in this article. In the study reported here, we offered three groups of master's in social work (MSW) students in one university a course in three formats; in this article, we compare the

various outcomes. The formats were (a) the traditional, face-to-face, classroom approach; (b) Internet instruction; and (c) a hybrid format with one half the normal classes through the Internet and the other half delivered through the traditional format. These three groups of students were compared on course grades, content knowledge gain, student satisfaction, and course-content self-efficacy.

The Challenges and Promises of Nontraditional Social Work Education

According to an experienced accrediting specialist, there have been three phases in nontraditional social work education (Wilson, 1999). The first phase was the offering of social work education in the traditional format at locations distant from the main campus. The second phase entailed the use of interactive television (ITV), whereby the instructor would deliver instruction by television to students at a distant location. Using this format the students had the opportunity to ask questions and engage in a dialogue. The third phase in nontraditional social work education was computer-mediated instruction, whereby the instructor used the Internet to communicate with students in various ways, ranging from modest enhancements of traditional teaching to courses being offered exclusively through the Internet. It is the latter technique that is the primary focus of the present article.

There is some confusion in terminology used in the literature with regard to nontraditional education. In particular, the term *distance education* is used to mean different things in different publications. For the purpose of this article we refer to *traditional* as the face-to-face interaction between the instructor and

students on the campus that grants the degree, whereas *off-campus* refers to face-to-face instruction that is offered somewhere other than the university campus that is granting the degree. The term *Internet instruction* refers to instruction that is offered through the Internet in the absence of face-to-face interaction between the instructor and student. The term *ITV* refers to instruction offered through interactive television, whereby the student and instructor interact through a television hookup between the location of the instructor and the location of the student. There are many combinations of these modes of instruction that might be used by one educational program. One combination we pay particular attention to in this article is the hybrid format, whereby a major portion of the course is offered in the traditional format, whereas another significant proportion of the class is offered as Internet instruction.

Nontraditional social work education is a growing reality for schools of social work. According to Wilke and Vinton (2006), recent data show that about one fourth of MSW programs offer some form of distance education and about 15% offer at least one course online. Most prominent among these offerings is the implementation of the entire advanced-standing MSW curriculum as Internet instruction, which began in the fall semester of 2002 at Florida State University.

The Internet mode of instruction has been advocated by various innovators for a number of reasons, including student individualization and educational access, especially for those less advantaged in social and economic terms. The Internet course can facilitate a self-paced learning process whereby the student

takes pretests on learning-unit content to determine the level of attention required for the unit.

Another advantage of the Internet course is educational access. One review of open-ended comments by students in a community college course revealed that women were more likely than men to mention family responsibilities as a major reason the online course was more convenient than the traditional one. However, both men and women mentioned that convenience was important (Sullivan, 2001). The truth is that many potentially successful students cannot access traditional forms of education.

The key question for social work education, particularly the accrediting body, is whether nontraditional formats are comparable with the traditional one. Are students from nontraditional backgrounds comparable with traditional students in regard to such things as satisfaction, grades, and educational outcomes? If not, the nontraditional students will be discouraged. Of particular importance is the newest option: Internet instruction.

The bias against Internet instruction can be found in the hallways of virtually any school of social work and is exemplified by the position of Kreuger and Stretch (2000), who argued that the nature of social work demands the traditional format for effective teaching. A bias in favor of the traditional format for instruction was acknowledged by a key accreditation specialist in the 1990s (Wilson, 1999), who pointed out that nontraditional forms of instruction are typically scrutinized on the basis of comparability with traditional education, under the assumption that the latter is effective.

Research on Nontraditional Instruction

A number of studies have been published on the distant learning options of the off-campus program and the use of ITV. For example, Petracchi and Patchner (2000) reported comparable student satisfaction for persons studying social work research in the ITV format and the traditional one. In another study, students taking a direct practice course at the graduate level through ITV at a distance location were compared with traditional students. Research revealed that the groups had similar experiences. There were no differences in grade outcomes, interaction with instructor and classmates, or perceptions of the instructor. However, ITV students reported more positive classroom socialization, yet rated themselves lower on advisement, access to the library, and identification with the university (Coe & Elliott, 1999). Wilke and Vinton (2006) cited three additional studies that revealed comparable outcomes between traditional and ITV students. We could not find any scientific studies that revealed superior outcomes for traditional instruction compared with the ITV format.

Similarity of outcomes has emerged as a pattern for research on Internet instruction as well. The wide variety of information sources showing comparability between Internet instruction and traditional instruction is exemplified in the publication by Russell (1999) titled *The No Significant Difference Phenomenon*. In this publication 355 research reports, summaries, and papers were reviewed to compare traditional and Internet instruction. In the same category is the report by the Institute for

Higher Education Policy (Gold & Maitland, 1999), which used the term *distance education* to refer to Internet instruction. The following is a summary.

Most of these studies conclude that, regardless of the technology used, distance learning courses compare favorably with classroom-based instruction and enjoy high student satisfaction. For example, many experimental studies indicate that students participating in distance learning courses perform as well as their counterparts in a traditional classroom setting. These studies suggest that the distance learning students have similar grades or test scores, or have the same attitudes toward the course. (p. 9)

This 1999 Institute for Higher Education Policy report cautioned the reader to seek evidence that controls for extraneous variables before drawing definitive conclusions. In fact, the authors focused much of their attention on the incompleteness of the evidence. Responding to the need for research that controls for extraneous variables was the study by Larose, Gregg, and Eastin (1998), which revealed that Internet students did as well as traditional students when students were randomly selected for the type of instruction to receive. In another report Dutton, Dutton, and Perry (2001) revealed that Internet instruction had comparable outcomes with the traditional format when maturity differences among students were considered.

An interesting development in research on this theme is the emergence of studies that

have revealed that Internet instruction is better than traditional instruction. An example is a study in nursing education that revealed that Internet students achieved a better outcome in two measures of socialization, a variable that most social work educators would likely flag as the biggest risk for Internet instruction (Nesler, Hanner, & McGowan, 2001). A review of research on Internet instruction indicated that, of 86 studies that met the qualifications for inclusion in the meta-analysis, Internet students outperformed the traditional students in two thirds of the studies (Shachar & Neumann, 2003).

This review of research in fields other than social work suggests that traditional instruction is not superior to Internet instruction. In fact, there is a dearth of evidence to the contrary of this observation.

Internet Instruction in Social Work

It would be difficult to argue with the opinion that social work education has lagged behind other fields in the testing of Internet instruction. However, there is a growing body of research on this topic. Comparability in outcomes between Internet and traditional instruction has been revealed in studies of a course on human service administration (Schoech & Helton, 2002) and a field seminar (Wolfson, Magnuson, & Marson, 2005).

Most prominent among the studies of Internet instruction in social work is the report by Wilke and Vinton (2006) on the first fully Web-based program for advanced-standing students in a graduate social work program at Florida State University. Students who entered advanced standing in this MSW program had the option of taking courses in the

traditional format or exclusively through Internet instruction. Students who selected the Internet option were compared with traditional students.

The key question for the Florida State study (Wilke & Vinton, 2006) was comparability of outcome. In general, the two groups were found to be comparable. There were no differences in grades, student self-ratings at posttest of 24 foundation practice skills, student self-ratings at posttest of 12 advanced practice skills, or student ratings of faculty and library services. Similar proportions of Internet and traditional students reported they would recommend this MSW program to others without hesitation (80% vs. 77%). Also similar were student ratings of courses and instructors.

In this study (Wilke & Vinton, 2006) of the first Web-based, advanced-standing program, there were only a few differences between the Internet and traditional students in regard to outcome. Traditional students were rated higher at the end of the program by field instructors on six of the nine criteria for field performance. These differences, however, were slight in practical terms, even though statistically significant. On a scale of 1 to 5, with 5 representing *outstanding* and 1 representing *low or very limited*, the traditional students had a mean rating of 4.76 on "learning, supervision, and identification" compared with a mean of 4.50 for the Internet students. Thus, both groups were rated very positively, but one group was slightly higher. Furthermore, the authors revealed through multivariate statistical analysis that the superior level of experience for the Internet students had been a detriment in regard to field instructor

evaluation, because this analysis revealed that only one of the six differences remained when years of experience was entered into the equation. In other words, the differences between the two groups regarding learning, case management, working with groups, and ethical issues were explained by differences in experience. When the latter was controlled, there was comparability between the two groups. The one difference that remained was an important one: professional communication skills. Even when experience was controlled, the Internet students' ratings on this criterion were lower than for the traditional students. Nevertheless, we return to the issue of practical significance when examining this difference. It appears that both groups were rated as highly successful, but the traditional group was higher than the Internet group on this one evaluation criterion.

All the evidence, however, does not reveal comparability between traditional and Internet instruction. In a study of the delivery of a social work history course in three modes, Faux and Black-Hughes (2000) found that traditional students had the best gain (35.62%), followed by hybrid students (21.57%), with the Internet group achieving the smallest gain (18.77%). All groups achieved a gain, but the size of the difference is noteworthy. In other words, the argument for success for the Internet group can hardly be made when the traditional group had a gain that was twice as large.

In the analysis of modes of instruction, the student as a variable should not be ignored. Some students seem to do better with Internet instruction than others. For example, a study of an information systems course

revealed that students who had a positive attitude toward collaboration as a mechanism of decision making prior to the experiment were more likely to favor the face-to-face method of collaborative problem solving than the computer conferencing method, whereas students without this favorable predisposition to collaboration did not favor one method over the other (Ocker & Yaverbaum, 2001). In a study of statistics instruction in an MSW program, Harrington (1999) found that students with high grade point averages (GPAs) performed as well in a software-based class as those in the traditional class, but students with low GPAs did not perform as well in the software-based class as did students in the traditional one.

From this review of the literature regarding forms of instruction in social work, several things are evident. First, Internet instruction is a growing reality for social work education but a special challenge given the longstanding embrace of traditional instruction. Second, preliminary findings from research suggest comparability in outcomes for traditional and Internet students, but the research is very limited. Third, given the positive bias for traditional instruction, it is imperative that more research be done, particularly research that compares students on the basis of educational outcome. Perhaps the most important consideration is that Internet instruction has the potential for promoting social justice for those seeking social work education but lacking resources for the traditional means of gaining it. This includes members of minority groups and women who are single parents.

It is for these reasons that a study was conducted in the fall of 2004 of three groups of

students taking a program management course in the graduate social work program of a state university in the South. This course was offered in three instruction formats: (a) traditional face-to-face, classroom learning; (b) Internet instruction; and (c) a hybrid format with one half of the normal classes through the Internet and the other half delivered through the traditional format. These three groups of students were compared on course grades, content knowledge gain, student satisfaction, and course outcome self-efficacy. A noteworthy aspect of the methodology of this study is that the same instructor taught each section of this course.

The study reported here is responsive to the admonition by Thyer, Polk, and Gaudin (1997), who said the following:

We want a demonstration that DE [distance education] promotes student learning at least as well as live instruction. This can perhaps best be accomplished by using pre and post-test designs with objective assessments of student knowledge and skills at the beginning and end of courses. Ideally, this demonstration could involve the same instructor teaching two sections of the same class during the same school term, one exclusively by live instruction and the other by distance learning. (p. 367)

Method

In the fall semester of 2004, a course in human service administration was delivered in three instructional formats: traditional, hybrid, and

Internet. The traditional section was delivered through a face-to-face, classroom instructional method and was given to students on the regular campus. The Internet group had the course delivered entirely online, with no face-to-face instruction. The hybrid group had one half of the normal, face-to-face classes and the remainder of instruction given through the Internet. Both the Internet and hybrid classes were composed of students in this school's off-campus program in which students take classes on a part-time basis at a location different from the main campus. The traditional class had 18 students, whereas the Internet class had 11 and the hybrid class 13. This experiment was undertaken in a graduate school of social work in a state university in the southern part of the United States.

All assignments and tests were identical. The Internet assignments entailed the presentation of open-ended discussion questions that students emailed to the instructor for feedback. In addition, there was a limited amount of discussion through the discussion board on Blackboard (Blackboard, Inc., Washington, DC), the university's software for Internet instruction. The traditional classroom sessions were devoted to the same class discussion questions given to the Internet students with the exception that students volunteered their answers for discussion but did not receive individual feedback from the instructor on all questions. All students had feedback from the instructor on the course paper, with the opportunity to submit a revised paper for a revised grade.

The present study offers several significant contributions. First, a number of potential confounding variables were addressed

through statistical analysis of data. Among the most important potential confounding variables is the instructor as a variable, and this was addressed by having the same instructor for all sections of this course. Second, the measurement of gain in course content knowledge through pretest and posttest administrations of final exam questions is another contribution. Third, this study's measurement of gain in course content self-efficacy is an innovative method of assessing educational outcome.

How the Three Modes of Instruction Were Implemented

The course was titled "Program Management in Social Work" and included several major themes: (a) the nature of human service administration, (b) the analysis and resolution of organizational problems, (c) organizational communication, (d) personnel administration, (e) strategic planning and budgeting, and (f) social justice and management. There were several assignments for each theme, some related to the course text and some related to exercises designed to implement major concepts in practice situations. Students in all three sections of the course had weekly reading assignments accompanied by a set of about a dozen discussion questions that called on the student to reflect on the content or apply it to an example. Typical of this weekly task were the following discussion questions: (a) What is the major way the nonprofit manager is held accountable for performance that is different from the profit manager? (b) Does total quality management place more emphasis on productivity or continual improvement of processes? (c) Think of a need that might be met by your agency through a grant

and present a brief statement summarizing the need to be met and the nature of the agency; (d) What should be the focus of the last paragraph of a persuasive document? (e) Explain the connection between the job announcement criteria noted in the text and the goals of affirmative action; and (f) In which type of contract (process or performance) are you more likely to have a better basis for evaluating efficiency?

The traditional group, located on the main campus, had all classes conducted live. The Internet group had no live classes, whereas the hybrid group had half of all classes live and the other half through the Internet. In other words, the hybrid group executed half of the assignments through traditional face-to-face classes and the other half through the Internet experience that was similar to the manner for all assignments for the Internet class.

For the live classes, students typically volunteered their answers. The class and instructor responded to the answer, and there was a brief discussion of the major concept or theme that was the subject of the question. In these discussions the instructor avoided providing his response to the question until several students offered comments. Occasionally, this tendency was frustrating to students who wanted the instructor to offer the precise answer to the question right away, but the instructor offered the opinion that the dialogue along the path of finding a meaningful answer was just as important as securing a response that was consistent with the text. Only a few students volunteered their thoughts on a given question, but the instructor made attempts to ensure that each student offered comments on

at least one question during the class period. This resulted in the typical uneven level of class participation between the vocal students and the quiet ones.

For Internet classes, the student e-mailed answers for each discussion question to the instructor, and the instructor provided feedback on each question through an e-mail reply. The advantage of this approach over the live class was that each student received feedback on each question. However, the disadvantage was the loss of the class dialogue regarding a given response to a given question.

In the testing of three modes of instruction, it is important to discuss how well the modes were implemented according to normal actions. In other words, how was treatment fidelity assured? The instructor in this course had more than two decades of experience teaching social work courses at three different universities, had taught this particular course many times before, and had typically received student evaluations that were at or beyond the university mean. The use of class discussion of reading assignments, rather than lectures, for a graduate social work course is considered normal, even though there is no readily available data on this question. These facts suggest that the traditional class was taught in a relatively normal way, but the lack of lectures may be viewed as a limitation.

The next question is whether the Internet instruction in this experiment was offered in accordance with normal operating procedures. The instructor for this course had used the Internet in a few past situations: several times in the hybrid mode and one time in the Internet-only mode. The fidelity of this imple-

mentation of the Internet class can be examined with reference to a suggested set of guidelines from the literature. According to *Teaching and Learning Online: A Handbook for UMass Faculty* (Poe & Stassen, n.d.), there are several suggestions for the use of the online course. First, the course should be planned carefully, with distinct learning modules that include materials posted online for convenient access by students. This expectation was met in the opinion of the instructor because the complete syllabus was prepared before the beginning of the semester; the content was organized into five major themes, each of which had several subthemes around which assignments were developed; and a variety of information, both required and supplemental, was posted on Blackboard, the software package used by this university for such purposes.

Second, students should be given individual feedback. In the present experiment, students were given individual feedback weekly.

The third general recommendation regarding the online course is that students should be carefully oriented to the online experience with tutorials and should be given frequent reminders. The students in this experiment were given an orientation by the individual who served as off-campus coordinator, but this part of the suggested guidelines was not implemented in an optimal manner. There was no official tutorial experience related to the various nuances of the online course. However, these students were familiar with the use of Blackboard because it had been used in prior courses as an aid to the course experience. In addition, the instructor used e-mail regularly to remind students of what was to happen next.

Fourth, students should be given the opportunity for feedback, with sufficient flexibility in the course structure to make adjustments accordingly. This is a recommendation that was not well implemented in this experiment. The course was not adjusted according to student feedback. It was executed according to the original plan from the beginning.

The final general recommendation from this document from the University of Massachusetts calls on the instructor to facilitate an online dialogue among students. This was a recommendation that was only partially fulfilled. In a few assignments students were given the opportunity for threaded discussions, a tool whereby the instructor posted a question for discussion and students responded to the question and responded to the answers of fellow students. Most students participated in some discussions, but some of these discussions did not entice many observations. There was no grading that was accompanied by these discussions, so they were viewed as voluntary by students, and the participation overall was weak.

In the optimal use of the hybrid mode of instruction, the course would be designed so that certain parts were identified as best implemented through face-to-face instruction and others through online instruction. Perhaps the technique that best uses the face-to-face mode is the group exercise. Some instructors who have taught courses entirely online have given students the assignment to organize their own group and conduct the exercise as a means of fulfilling the designed learning outcome. This was not done in the present experiment. Only one group exercise was used with the hybrid and traditional

classes. This exercise was related to the personnel selection process and was not highly rated by students, so it probably had little, if any, influence on the outcomes measured in the present study. It is my opinion that use of assignment discussion questions is a format for class that can be easily implemented either in the traditional classroom experience or through the Internet. The key distinction is that everyone in the online group receives individual feedback on each question, whereas the traditional group members receive feedback only if they volunteer answers in class. The online class misses the learning that comes through group discussion of the answers to the questions and the instructor's occasional use of the minilecture where appropriate.

Measurement of Educational Outcomes

Four educational outcomes were assessed in the present study: course grades, gain in knowledge, gain in self-efficacy, and student satisfaction. The course grade was determined by two exams and a course paper. The exams were multiple choice, and students were given practice exams with similar questions for study purposes. Students had four choices for the course paper: an analysis of organizational structure, an analysis of work motivation, an assessment of role clarity for a familiar organization, and the examination of an organizational problem. Specific instructions were given for each choice.

Gain in knowledge was measured through a pretest and posttest administration of questions similar to those on the final exam for this course. *Gain in self-efficacy* was measured by

an instrument designed specifically for this course. It contained the following five statements that represented major objectives of the course.

1. How confident are you that you can discuss issues and topics regarding human service administration within a conceptual framework that would seem useful to others?
2. How confident are you that you can analyze organizational behavior using theoretical or conceptual frameworks related to work structure, work motivation, and problem solving?
3. How confident are you that you can suggest ways a familiar human service agency could improve work structure, work motivation, or problem solving?
4. How confident are you that you can apply recognized guidelines for personnel administration?
5. How confident are you that you can analyze a human service agency budget from the perspective of line-item analysis, functional analysis, and program analysis?

For each item the student was asked to enter a number from 1 to 4, with 1 representing *not at all confident* and 4 representing *very confident*. The students were instructed that the numbers 2 or 3 would represent levels between the two extremes of 1 and 4. This instrument was administered at the beginning and the end of the course, and the difference was computed to represent gain in self-efficacy of course outcomes.

Students also were asked to evaluate the course experience overall using a 5-point

scale, with 5 representing the highest rating and 1 representing the lowest rating. Data were analyzed using SPSS for Windows, Version 14.0.

Results

Comparison of the Three Classes on Potential Intervening Variables

Participants in the three classes of students—traditional, online, and hybrid—were compared on a number of variables thought to potentially intervene in the relationship between instruction mode and educational outcome. These students were asked to complete a questionnaire at the beginning of the course experience that solicited information on (a) interest in a career in human service management, (b) years of paid social work experience, (c) years of experience in human service management, (d) pretest scores for course content knowledge, and (e) pretest score for course content self-efficacy. In addition, these groups of students were compared using their mean scores for the Miller

Analogies Test, a measure of academic competence required for admission. Interest in a management career was measured on a 5-point scale, with a score of 1 for *I have no interest in pursuing a career in human service administration* to a score of 5 for *I definitely will pursue a career in human service administration*. The data on these variables are displayed in Table 1.

The only variable from this list that revealed significant differences between groups was the interest in a career in administration. The Internet class had the lowest mean score of 1.67, whereas the hybrid class had a mean of 2.22. The traditional class had a mean of 2.71. When the three groups were compared through a one-way analysis of variance (ANOVA), these differences were found to be statistically significant, $F(2, 41)=3.257, p=.049$. However, this variable did not correlate significantly with any of the outcome measures; therefore, no multivariate analysis of critical dependent and independent variables was undertaken with this interest in administration as a control variable.

TABLE 1. Comparison of the Three Groups on Potential Intervening Variables

Variable	M		
	Traditional	Hybrid	Internet
Interest in a career in administration (1 = no interest; 5 = high interest)	2.71	2.22	1.67
Years of social work experience	3.25	4.89	7.33
Years of experience in management job	1.31	2.44	3.09
MAT score	43.13	38.72	39.83
Pretest knowledge	47.00	44.80	47.75
Pretest self-efficacy	8.31	10.06	7.33

Note. MAT = Miller Analogies Test.

These three groups were not significantly different on years of social work experience, $F(2, 43)=0.82, p=.44$, or years of experience in a management job, $F(2, 42)=0.82, p=.44$. This lack of significant difference also existed on the variables of pretest on course content knowledge, $F(2, 53)=0.38, p=.68$, and pretest score on course content self-efficacy, $F(2, 42)=2.13, p=.13$. Last, there was no significant difference when these three groups were compared on the Miller Analogies Test score, $F(2, 50)=1.56, p=.22$.

Comparison of Three Groups on Outcomes

Course grade. The mean numerical course grade for the traditional class was 89.57 compared with 88.75 for the Internet class and 84.76 for the hybrid group (see Table 2). When subjected to the one-way ANOVA, these differences were significant, $F(2, 57)=3.80, p=.03$. This difference was significant because the hybrid class stood out as lower than the other two sections of the course. The Bonferroni post hoc test for multiple comparisons confirmed the statistically significant difference between the traditional group and the hybrid group and revealed that the difference between the hybrid group and the online group was nearly significant. However, there was not a significant difference between the online group and the traditional one.

Gain in course knowledge. The mean pretest knowledge score for all students was 47.43, compared with a mean of 67.24 for the posttest. This difference was statistically significant, $t(41)=9.51, p<.001$. The three groups, however, did not differ on the level of gain in knowledge. For the traditional group the mean

gain from pretest to posttest was 19.78 compared with a mean of 18.55 for the online group and 20.92 for the hybrid group (see Table 3). When these data were analyzed with the one-way ANOVA, the difference between groups was not statistically significant, $F(2, 39)=0.09, p=.92$.

Gain in self-efficacy. The mean pretest score for course content self-efficacy was 9.16 compared with a mean of 16.13 at the posttest. This difference was significant, $t(30)=9.59, p<.001$. The mean gain for the traditional group was 6.92 compared with a mean of 7.39 for the online group and 6.73 for the hybrid group (see Table 4). These differences between groups was not significant, $F(2, 28)=0.05, p=.95$.

Course satisfaction. The mean course rating, on the 5-point scale, for the traditional group was 3.94. The mean for the online group was 3.75, whereas the mean satisfaction rating for the hybrid group was 3.67. These differences were not significant, $F(2,36)=0.48; p=.62$.

Discussion

The key question posed in this study was as follows: Are educational outcomes different between three modes of instruction? In other words, is one mode better? Although three modes were tested, the critical attention should be on the comparison of the traditional format with the Internet format. The major questions for research method in such a study are

1. Were the modes of instruction offered in the proper manner? In other words, was there treatment fidelity in this experiment?

2. Were educational outcomes measured appropriately?
3. Were confounding variables taken into consideration?

In regard to the first question, treatment fidelity was examined. Information was presented on the teaching experience and student satisfaction ratings of the instructor of the course. Also included was information on the structure of the course and the comparability of assignments and methods of grading for all class sections. In regard to the issue of treat-

ment fidelity, it was concluded that the Internet class was organized in accordance with most of the criteria for good implementation of this format, but that this implementation was weak on student interaction and student input on the design of the course. Therefore, one might conclude that treatment fidelity was somewhat better achieved with the traditional format than the Internet format.

The second major method question was whether the outcomes were measured appropriately. In this experiment grades were assessed in a common manner and were

TABLE 2. Comparison of Three Groups on Course Grade

Group	<i>n</i>	<i>M</i>	<i>SD</i>
Traditional	23	89.57	5.41
Hybrid	21	84.76	6.56
Internet	16	88.75	6.22

Note. $F(2, 57)=3.81, p=.028$.

TABLE 3. Comparison of Three Groups on Knowledge Gain

Group	<i>n</i>	<i>M</i>	<i>SD</i>
Traditional	18	19.78	14.09
Hybrid	13	20.92	15.07
Internet	11	18.55	11.35

Note. $F(2, 39)=0.89, p=.92$.

TABLE 4. Comparison of Three Groups on Gain in Course Content Self-Efficacy

Group	<i>n</i>	<i>M</i>	<i>SD</i>
Traditional	12	6.92	5.68
Hybrid	11	6.73	2.93
Internet	8	7.38	2.61

Note. $F(2, 28)=0.05, p=.95$.

rendered by an experienced teacher who issued the grades for all sections of the course. Knowledge gain was measured through a comparison of pretest and posttest administration of multiple-choice questions typical for the final exam, a format not normally considered vulnerable to biases that would favor one group of students over another. This feature was also present for the measurement of course content self-efficacy, a novel way to assess educational outcome. Gain on this variable was determined through a pretest and posttest. However, this scale was not tested for reliability or validity. Student satisfaction was the final measure of outcome used here. Many of the commonly identified weaknesses of this measure of educational outcome, such as instructor popularity or grade leniency, were addressed because the same instructor taught each section of this course.

The third key question in the assessment of this study's method addressed the issue of confounding variables. Were there variables outside of the treatment that caused the outcomes? In the present case the most important potential confounding variable was addressed by having the same instructor teach each section of the course. Other confounding variables were measured and found not to be important in the examination of the key research questions. However, there are several additional confounding variables that one might address in this type study.

Summary and Conclusions

Internet-based education has achieved a major foothold in the United States, but the field of social work has just recently joined

this development. Although most schools of social work use the Internet for instructional purposes in some limited way, the use of the online course is still a new phenomenon. In the middle of the first decade of the new millennium, there was only one accredited school of social work that offered an entire degree program online. Although many studies have been published on various forms of nontraditional social work education, there is limited research that compares online course experiences with the traditional mode of instruction. Particularly lacking in the present literature is research that compares knowledge gain for online students and traditional students when the instructor is the same for both groups. This was one of the features of the study reported here.

The study reported in this article is similar to the vast majority of reported research in higher education in general in that comparability was found among various forms of instruction. Specifically, I found that students given online instruction did not score lower on various measures of outcome from those given either traditional instruction or a hybrid form. Although there remains a need for additional research, the evidence to date suggests more of a need for additional exploration of the online option, given the advantages of this form of instruction to nontraditional students, especially women with family responsibilities. Furthermore, these results support the new focus of accrediting bodies on program integrity (i.e., "Are you doing what you say you are doing?") and educational outcomes, rather than compliance with a certain (i.e., traditional) form of instruction.

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Accepted: 07/07

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