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Jeanette Harder University of Nebraska at Omaha, jharder@unomaha.edu

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Overcoming MSW Students' Reluctance to Engage in Research

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Overcoming MSW Students' Reluctance to Engage in Research

Jeanette Harder, PhD, CMSW Assistant Professor School of Social Work University of Nebraska at Omaha 6001 Dodge Omaha, NE 68182 E-mail: <u>jharder@unomaha.edu</u>

Abstract:

Social work students are typically reluctant to engage in research. The *Research Partnership* model takes a service-learning approach, allowing students to work with data from a community agency and resulting in a final paper with all the sections of an empirical journal article. Use of this model in teaching social work research enhances student motivation, learning, and skills through hands-on activities within an authentic context, and by using group support with individual accountability, structured and incremental learning opportunities, and teaching from a strengths-based perspective.

Key words:

- Teaching research
- Service-learning
- Incremental learning

Typically, social work students are eager to learn about engaging individuals, families, and communities in positive change. When faced with a required course in research, however, they do not so easily see how this course will aid them in their professional goals. To be honest, the thought of engaging in research, for most students, is an aversive one. As Epstein (1987) termed it, social work students are "research reluctant." Epstein (1987) observed, "No other part of the social work curriculum has been so consistently received by students with as much groaning, moaning, eye-rolling, hyperventilation, and waiver strategizing as the research course" (p. 71). In their article, Green, Bretzin, Leininger, and Stauffer (2001) supported the viewpoint that the combination of social work students and research is not a "match made in heaven." They compared the self-reported research and computer anxiety and research orientations of social work, psychology, and business students, and found that, "Social work students reported more research and computer anxiety and generally believed that research was less important to their profession than students in the comparison groups" (Green et al., 2001, p. 333).

Despite students' reluctance to engage in research (or perhaps precisely because of their reluctance), we must find ways to effectively teach research skills and knowledge. If we wish our students to be well-versed in evidence-based practice, then we must teach them to both be consumers of the professional empirical literature and be skilled in evaluating their own practice. Social work practitioners must become knowledgeable and confident consumers in order to understand and critique the empirical literature. Only when social workers consume the literature skillfully are they able to apply available knowledge to their own practice and best serve clients.

The recent social work literature does show numerous models and approaches used in teaching research knowledge and skills to students. Berger (2002) attempted to make research content more palatable by integrating it into a social work practice course. In this advanced

research course, students chose and administered a standardized measurement tool as part of their assessment on a family. Bolen (2006) reported the utilization of web-based databases to introduce social work content in research statistics courses. In this model, students developed and tested hypotheses based on census data. Anderson (2002) engaged students in community-based research, inviting students to develop research questions, operationalize variables, employ a survey design, and make plans for data analysis. Swanberg, Platt, and Karolich (2003) added the concept of cooperative learning groups to a research course taught online.

At the undergraduate level, several models are presented in the literature. Jacobson and Goheen (2006) engaged students in a participatory approach that involved students in evaluation of their own BSW program. Kapp (2006) and Tolleson Knee (2002) used service-learning approaches to teach research to BSW students. Fabelo-Alcover (2002) took a unique approach to overcoming students' fear of studying research. This model incorporated social learning theory as the instructor intentionally modeled the role of researcher. This model also incorporated cognitive-behavioral theories in teaching students to "assess cognitions about research and to teach students how to clarify distortions and practice progressive relaxation techniques" (p. 133).

In their article, Adam, Zosky, and Unrau (2004) took a wider angle look at the relationship between social work and research by looking at social work's historical relationship to research, and posed a response that focused not on any individual course but rather on institutional change. Taking Bloom's taxonomy, these authors proposed a continuum of learning objectives for students across a sequence of five research courses, embracing both BSSW and MSW programs.

The *Research Partnership* model presented in this article seeks to overcome students' reluctance to engage in research in a slightly different manner. Used in a graduate social work

course, this service-learning model combines hands-on experiences with structured and incremental assignments in a strengths-based perspective. Unlike other models, students conduct data analyses, prepare interpretations and recommendations, and present these to community partners through means of oral and written communication.

The Research Partnership Model

The *Research Partnership* model of teaching a graduate social work course provides students with the beginning skills to understand research methodology, to consume the empirical literature, to conduct basic data analyses, and to engage in the evaluation of their own practice. Using a service-learning approach, students work with data from a community agency. Students complete assignments that guide them through writing all typical sections of an empirical journal article: statement and prevalence of the social problem/issue, literature review, research methodology, sample description, findings, and discussion/implications/recommendations. Gaining support through group work and yet being held accountable individually, each student prepares her/his own hypothesis and conducts data analyses to test their hypothesis. Students present their results and recommendations to the agency through means of oral and written communication.

Context

This course is taught in a school of social work in a Midwestern metropolitan university by a tenure-track instructor. The school offers both graduate and undergraduate degrees in social work. This 3 credit hour course, *Research and Computer Applications*, is required for both Foundation and Advanced Standing students. Foundation students take it as they bridge into the Advanced Standing Program, and Advanced Standing students take it as one of the first courses in their plans of study. The course description for this course reads, This course focuses on the use of research and computer programs in social work practice. Social and behavioral science research methods are reviewed. Students learn to analyze existing data using SPSS and to write an empirical research report. The uses of Microsoft Word, Excel, and PowerPoint in social work practice are explored. The course objectives for the course are shown in Table 1.

All graduate students take a second research course which prepares them more specifically for clinical research (micro) or for evaluation of social programs (macro).

Implementation

As shown in Figure 1, implementation of the *Research Partnership* model stretches from months before the beginning of the course to months after the conclusion of the course.

Before the course.

An immense amount of groundwork must be completed by the Instructor prior to the first day of class. First, the Instructor must have or develop professional relationships with administrators of community agencies and programs. These relationships can be built through previous collaborations or projects, practicum liaison work, community involvement, or other forms of formal or informal networking.

The importance of rapport and positive regard between the Instructor and the community agency cannot be underestimated. An agency cannot be expected to entrust their data to an outside party, let alone a university, without significant trust being built. An agency that participates in this project typically has at least one administrator who is research-minded and who can see how evaluation of their services can benefit them. Typically, the Instructor must spend at least 6 months prior to the beginning of the course in developing rapport with agency staff, and in working with them to prepare a suitable dataset. At times, much service is provided

to the community agency before the course begins. As part of the preparatory process, many community agencies learn about consistent data entry and more efficient and effective data collection systems.

Most community agencies collect process and outcome evaluation data. An ideal dataset contains a client identification number, demographic data (i.e. age, race, gender, marital status, income), service delivery data (i.e. type of service, begin and end dates, number of services) and outcome data (i.e. case closure reason, test scores). A sample (mini-)dataset is shown in Table 2. Even when an agency stores their data electronically, many times their database is a bit of a mystery to them. In my experience, rarely has an agency database been designed in such a way that resulting reports can adequately guide programmatic decision-making, nor can it provide adequate data for a research project such as this one (at least not without significant work). In fact, when wanting to participate in this project, a community agency often finds that their data collection and entry procedures have been grossly inadequate, or worse yet, the data they have been diligently entering into a database is not accessible to them at all (for technical or financial reasons). In these cases, the Instructor may need to provide consulting and/or technical services to the agency, and/or make appropriate referrals.

The Instructor works with the community agency to produce data in spreadsheet format, to understand variables, to clean the data, and to minimize missing data. More often than not, significant time must be spent preparing the dataset before it is ever seen by the students. Additionally, the Instructor meets with the community agency to gain a rudimentary understanding of the agency and program contexts, service delivery, and data collection. Through asking open-ended questions, the Instructor discovers from agency staff what it is they want to know from the data. The opening question of, "What do you want to know from this data?" usually draws empty stares. Rather, ask questions like: "What do you want to know about your clients? About the services you deliver? Which clients are you the most successful with? Which clients are not engaging in services? Which clients are you having the hardest time with?" Quite often, practitioners are focused solely on their clients and service delivery, and are not aware of the ways that data can be used to inform their practice and help them better serve their clients.

Ethical considerations are paramount. The Instructor requests that all identifiers be removed from data prior to it being released to the Instructor. IRB approval is not required as analysis is conducted on secondary data, the data is used for instructional purposes only, and results are presented only to the agency (G. Kotulak, personal communication, July 11, 2007). If conference presentations or journal submissions emerge from the students' work, agency permission is obtained, and IRB approval is sought retrospectively.

During the course.

During the first class meeting, students are presented with project choices. Depending on the number of students and the breadth of possibilities in prepared datasets, students are given two or three choices. Because of prior commitments made to agencies and amount of preparatory work required, no dataset is discarded or set aside for future use. Students sign up to work with a particular dataset in groups of three to eight students. In so doing, an instructor may have two or three projects operating simultaneously. Regardless of the project, all students receive the same lectures and complete the same assignments. Each student must sign a "Data Agreement Form" before being given access to data. This Data Agreement Form reminds students that the data remains the property of the agency, is to be kept confidential, and no further work can be done with the data, without the explicit permission of the agency. Class time is spent in the classroom or computer lab. For most three-hour class periods, the first one to two hours is spent in lecture, discussion, and small-group activities. The remaining one to two hours is spent with the students on computers and the Instructor circulating to answer questions and provide reassurance. The Instructor invites agency staff to come to the classroom in the second or third class period to talk about their agency and program, collection of data, and what they want to know from the data.

A series of 12 *Research Partnership* (RP) assignments are completed by students during the one-semester course (see Table 3). With the exception of RP#11, each of the assignments is completed by each individual student. Students are encouraged to collaborate within their groups, but each student must do her/his own work. For the last one to two class periods of the semester, students go to the agencies to make their final presentations (RP#11). Presentations are coordinated so that all students attend all presentations. The focus of presentations is on service to the agency. Findings must be communicated in such a way that they are understandable and palatable to agency staff. Time for question and answer at the end of each presentation is vitally important.

As their final assignment (and worth 25% of their grade), each student prepares a final report (RP#12). This final report is a compilation of earlier assignments as well as several new sections. It has all the components of an empirical journal article, and students take great care to prepare it in APA format. After grading and a final edit, written reports are submitted to the community agency for their use in decision-making around data collection and service delivery, and grant-writing. Only students whose final reports are of sufficient quality (receiving a grade of 90% or higher) are forwarded to the agency.

After the course.

Agency staff is presented with a large amount of information at the end of the course. Even with the face-to-face presentation, agency staff may not fully understand results and had adequate time to grapple with implications. Each written report prepared by students is 30-50 pages in length, and often too much for agency staff to read in the midst of multiple priorities. To remedy this, the Instructor wrote and received a civic participation mini-grant to allow students to help agencies better understand results. Students are selected by the Instructor based on the student's course performance, and are invited to this opportunity that is above-and-beyond the scope of the course. The student is reimbursed for 5-10 hours of work to prepare a two- to fourpage Executive Summary of their group's findings. At the agency's request, the student may participate in further data analyses, write a brief for the website, or make a presentation to the Board of Directors. For all these activities, students are reimbursed through the civic participation mini-grant.

Discussion

Social work students typically enter required research courses with a great deal of trepidation. Research is not appealing to them, nor do they see the relevance of research to their social work practice. Many components of the *Research Partnership* model help to overcome the typical student's reluctance to truly engage in research and will be discussed here.

Beginning the first day of class, many students make negative self-defeating statements about their ability to work with numbers and with computers. They do not believe they can be successful with "math" and have frequently experienced computers "crashing" on them, resulting in hours of lost work and productivity. Pan and Tang (2005) demonstrated that among the factors contributing to students' statistics anxiety was the instructor's attitude. The instructor of a required research course must be enthusiastic about the material, able to build confidence in others, and ready to partner with students on projects to reach mutual goals. The instructor's enthusiasm for research and belief in the capacity of students can also make a significant impact on the classroom environment. Enthusiasm can be shown through the instructor's sharing of her/his own positive experiences with research, including illustrations of positive outcomes as it relates to affecting practice. An instructor coming to the classroom with a strengths-based perspective will note and exclaim over the successes and strengths of each student, no matter how small. The student can be encouraged to build on those strong areas, and generalize them to other areas. Students' comments on this Instructor's course evaluations reflect the importance of the instructor's attitude:

- The instructor was very approachable, helpful, and encouraging throughout the class.
- The instructor is enthusiastic about her material and relates it well.
- Very enthusiastic about research which helps motivate students.
- I really enjoyed taking this class with the instructor. She is *extremely* enthusiastic about this material you can by far tell that she loves research.

The Instructor must also be approachable and, in my experience, bring an element of playfulness to the classroom. Epstein (1987) suggested a student-centered approach to teaching which included the use of humor. Onwuegbuzie (2004) examined six dimensions of statistics anxiety which included fear of asking for help, and fear of the statistics instructor. Humor can diminish student anxiety, as long as the student is not feeling made fun of. One method of addressing the students' fear of asking for help as well as their fear of the statistics instructor is for the instructor to reward student's questions with praise and even candy or boxes of raisins. Also, helping students to see that learning to conduct statistical analyses on SPSS is like riding a

bike helps them to see that they need to practice a lot, and even when they "fall down," they can get back up and keep trying until they succeed.

The use of structured and incremental learning opportunities is also very helpful. Pan and Tang (2004) asserted that in addition to being responsive to students' anxiety issues, the organization of the class must be structured and provide a supportive learning environment. Onwuegbuzie (2004) suggested that the instructor break up projects into parts, allowing each part to be graded at regular intervals. Each of the *RP* assignment builds on the previous ones. Using a detailed grading rubric, the Instructor has the opportunity to provide specific feedback on each assignment. The student then has the opportunity to take corrective action and incorporate it into her/his final paper, which is a compilation of earlier assignments (plus some new sections). Additionally, students are provided with a course pack at the beginning of the semester, which includes lecture outlines, sample papers, and assignment descriptions with grading rubrics. Students appreciate structure and incremental learning opportunities, as is reflected in this Instructor's course evaluations:

- Breaking up the assignments was crucial for me. It feels good (or will) to have accomplished this project.
- I appreciated that the assignments were broken up and that the final paper was a compilation of all the assignments throughout the class. I think that made learning the material easier to understand.

Student motivation is greatly enhanced through service-learning. Students' motivation to engage in research is related to their understanding of the relevance of research to practice. Through direct and immediate application to real-world situations, students become engaged in exploring a social problem that is substantively interesting and relevant to them. Knowing their work will not only be assessed by the instructor, but will also go to the agency and be instrumental in agency decision-making and delivery of services raises the incentive for high performance. Students become quickly attached to their projects. While their fear and anxiety may not dissipate, it does move from being focused on themselves and their own feelings of inadequacy to being focused on the agency and how they can best provide service and "do no harm." While often overwhelmed with the "messiness" of the data, students learn about the constraints of conducting research in real-life settings. Sometimes key data is missing. Sometimes data collection procedures were inadequate or unreliable. Sometimes outcome measures utilized by the agency are not desirable. Sometimes the sample size is small. Students are encouraged to utilize their practice skills in building rapport with the agency staff while also presenting them with recommendations for change. Students can also incorporate knowledge from policy and human behavior courses as they contemplate service delivery. Special attention is given to ethical considerations around vulnerable populations, confidentiality, and informed consent. Depending on the variables present in the dataset (race, age, sexual orientation, income, etc.), students often confront real diversity issues as they grapple with the data. Students' written remarks on course evaluations reflect their appreciation for this service-learning approach:

- This class was fun because it involved real programs and research.
- Most helpful was service learning format.

Students' Perceptions on Attainment of Course Objectives

This instructor recently turned the course objectives into an inventory to be used at pretest and posttest. Students are invited to rate their knowledge and skills on the first day of the course, and again at the end of the course. As shown on Table 4, students' scores reflect a statistically significant improvement on all course objectives, with the exception of "use of PowerPoint" as students entered the course with high skills with this software. Overall, students' scores reflect more than a 4-point improvement between pretest and posttest in the areas of knowing how to conduct descriptive and inferential statistics, knowing how to interpret univariate and bivariate findings, knowing how to report statistical findings in an understandable way, knowing how to use SPSS to analyze data, and understanding the role of the IRB. As a result of these informal findings, the Instructor has adjusted her lectures so that they focus less on use of Microsoft Word and PowerPoint, and more on the use of Microsoft Excel and SPSS. *Benefits and Risks*

The *Research Partnership* model provides many benefits to students and community agencies. Use of the model in teaching social work research enhances student motivation, learning, and skills through hands-on activities within an authentic context, group support but individual accountability, structured and incremental learning opportunities, and a strengthsbased perspective. Students gain exposure to community agencies – the professional staff, the services provided, and the types of clients served. Students are given the invaluable opportunity of providing a vital service to a community agency through civic participation. In turn, community agencies gain valuable research services at no charge, including a literature review, an analysis of existing data, affirmation of what they are doing, and recommendations for change. Written research reports, prepared by the graduate-level social work students, can be used by agency staff to document and improve service delivery and for grant-writing. Participation in *Research Partnership* nudges community agencies another step towards evidence-based practice. As a final perk, community agencies gain exposure to graduate social work students and have the foundation for future research projects, practicum, and/or employment with these students. The instructor too benefits as the use of this model affects all

three pillars of most school's expectations for faculty performance: research, teaching, and service. The tenure-track instructor can reap the benefits of this model in all three of these crucial areas.

The opportunities for the use of the *Research Partnership* model are endless. Projects often result in conference presentations and professional journal articles, with the permission of the agency and co-authored by students and the Instructor (after seeking IRB approval retrospectively). In my experience, this model has resulted in numerous research collaborations and grants with community agencies, both for me and my students. Many agencies report positive effect on staff morale as they see the results of their labor, and they report increased attention to consistent service delivery and data collection.

On the other hand, this model requires *significant* time and a fair amount of risk. Much time must be allotted for building relationships and preparing datasets, for grading a high volume of student assignments, and for ensuring students correctly run statistical analyses and interpret findings. Not all students blossom under this model, and ethically, the Instructor must pick up the slack in reporting results to the community agency, when needed. Stress runs high in preparation for each semester as the Instructor works with the agency to prepare a dataset. The risk of not having data ready for class is high, as is the very real possibility of negative findings.

Lessons Learned, Plans for the Future

Some lessons learned in the use of *Research Partnership* model include these. The instructor must be community-minded and work ongoing at cultivating professional relationships that may result in the sharing of data. It is helpful for the Instructor to stay in contact with past students as they may be instrumental in helping to connect with potential community partners. Consider working with agencies that are out of geographic range from your School. Much can be

done in helping agencies and students connect through teleconferencing. If possible, hire a past student to help prepare datasets for class.

In the future, I would like to implement more formal assessments of the effects of this model on both students and community agencies. I would also like to develop a sequence of two research courses in which students identify the social problem and community partner, write the literature review, develop methodology, and prepare an IRB application in the first course, and collect and analyze data, and write-up and present findings in the second course.

In summary, the *Research Partnership* model can play a significant role in helping MSW students reduce their reluctance to engage in research. Students become very "attached" to their projects and perform above-and-beyond course requirements. In addition, community partners are thrilled to participate in service-learning and are very responsive. The rewards for all parties (community agency, student, and instructor) exceed expectations.

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Table 1 Course Objectives

- 1. Discuss research in social work and relationship of research to social work practice and theory building.
- 2. Explain the relevance and utilization of research in social work practice.
- 3. Demonstrate skills in evaluating social and behavioral science research.
- 4. Gain working knowledge of research methodology, including design, measurement, and sampling.
- 5. Demonstrate moderate skill in the use of statistical concepts and techniques commonly used in social work research.
- 6. Discuss diversity and populations-at-risk, as it relates to research.
- 7. Demonstrate moderate skill in analyzing existing data using SPSS.
- 8. Demonstrate moderate skill in orally reporting results of student research project to colleagues using Microsoft PowerPoint.
- 9. Demonstrate moderate skill in using Microsoft Excel.
- 10. Demonstrate moderate skill in using Microsoft Word.
- 11. Discuss the role of the Institutional Review Board (IRB) and the laws and policies related to the protection of human subjects.

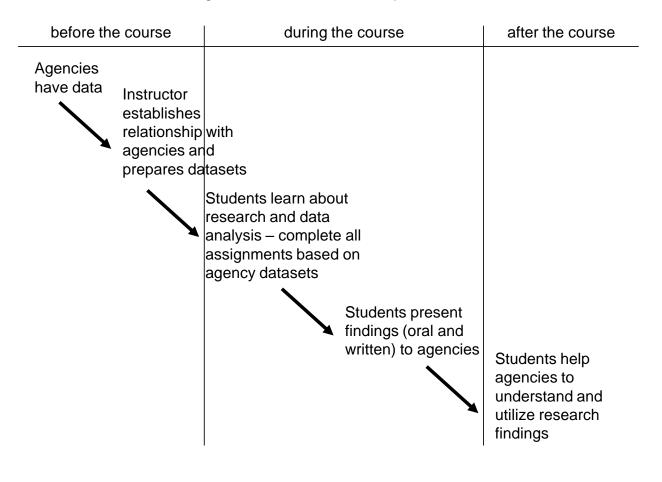


Figure 1 Research Partnership Timeline

Table 2 Sample Dataset # of												
Client #	Age	Race	Gender	Marital status	Length of service	home visits	Close Reason	Pretest score	Posttest score			
π	лус	Nace	Gender	318103	361 1106	13113	Lack of	30016	30016			
3	17	W	F	Single	357	23	participation Completed	83	93			
6	24	W	F	Single	354	43	stated goals Completed	96	91			
8	34	W	F	Separated	311	15	stated goals	94	12			
11	27	AA	F	Divorced	373	36	participation Completed	97	100			
14	18	Н	F	Married	300	30	stated goals	73	30			

	A = = : = = = = = = = = = = = = = = = =	Table 3 Student Assignments				
RP#1	Assignment Using Excel	Description Students get acquainted with their dataset and learn basic spreadsheet skills.				
RP#2	Description of community agency and intervention, definition and prevalence of the social problem/ issue	Students utilize information and materials from the agency, and find definitions and prevalence for social problem from government sources available primarily online.				
RP#3	Data codebook	Operational descriptions of variables and categories, source of data, levels of measurement, and amounts of missing data.				
RP#4	Literature review	Utilize databases to identify empirical journal articles pertinent to project, read articles, and write a literature review (summary, critique and application) based on five articles, in APA format.				
RP#5	SPSS data shell	Become familiar with SPSS, prepare data shell, and move data from Excel.				
RP#6	Research methodology	Based on earlier RP assignments, each student formulates her/his own hypothesis, and writes about the research design, sampling, and measurement tool utilized by the agency, in APA format.				
RP#7	Univariate analyses in SPSS	Learn how to conduct univariate analyses in SPSS, including frequency distributions and measures of central tendency and variation. Practice writing interpretations.				
RP#8	Learning to compute and recode in SPSS	Students compute new variables and collapse categories, as needed.				
RP#9	Sample description	Students learn to make graphs and tables, and write a sample description in APA format.				
RP#10	Conducting bivariate analyses and tests of statistical significance in SPSS	Students begin to test their hypotheses through Bivariate analyses of <i>chi</i> square, <i>t</i> -tests, and ANOVAs.				
RP#11	Presentations to community agencies	Groups make 45-minute presentations to the agency, using PowerPoint slides, on research results. They engage in Q&A with agency.				
RP#12	Final written report	Each student prepares a final written report including: abstract, definition and prevalence of underlying problem/issue, literature review, research methodology, findings, discussion/limitations/ implications/recommendations.				

Table 4 Students Perceptions of	Table 4 Students Perceptions on Attainment of Course Objectives							
	1 = Stron		gly disagree 9 = strongly agr					
Question Bolating to Course Objective	5	4	Pretest	Posttest	Mean			
Question Relating to Course Objective Q1 I understand the role of research in social work	n 26	t -4.595***	Mean 6.54	Mean 7.96	Difference 1.423			
practice.	20	-4.595	0.54	7.90	1.423			
Q2 I think research plays an important role in	26	-3.554**	7.15	8.08	.923			
social work practice.	20	-3.554	7.15	0.00	.923			
Q3 I can read an empirical research article and	26	-6.049***	5.00	7.54	2.538			
understand it.	20	0.045	0.00	7.04	2.000			
Q4 I know how to conduct a literature review.	26	-6.429***	4.88	8.00	3.115			
Q5 I have a good working knowledge of how to	26	-8.674***	5.08	8.27	3.192			
write a hypothesis.	20	0.074	0.00	0.27	0.102			
Q6 I have a good working knowledge of sampling.	26	-8.559***	4.58	7.81	3.231			
Q7 I have a good working knowledge of research	26	-10.405***	4.19	7.62	3.423			
design								
Q8 I have a good working knowledge of research	26	-12.127***	4.00	7.85	3.846			
measurement.								
Q9 I know how to conduct descriptive statistics.	26	-13.292***	3.19	7.69	4.500			
Q10 I know how to conduct inferential statistics.	26	-13.117***	2.96	7.46	4.500			
Q11 I know how to report statistical findings in a	26	-11.872***	3.32	7.64	4.320			
way that can be understood by stakeholders.								
Q12 I know how to interpret statistical, univariate	26	-10.722***	2.81	7.35	4.538			
findings.								
Q13 I know how to interpret statistical, bivariate	26	-10.372***	2.69	7.08	4.385			
findings.								
Q14 I am familiar with social work ethics as they	26	-6.455**	5.69	8.35	2.654			
relate to research.								
Q15 I know how to use SPSS to analyze data.	26	-12.223***	2.58	7.96	5.385			
Q16 I know how to use Microsoft Excel to perform	26	-7.679***	4.35	8.12	3.769			
basic data collection and analysis.				. = .				
Q17 I am proficient in the use of Microsoft Word.	26	-3.682**	8.12	8.73	.615			
Q18 I am familiar with using APA style in writing a	26	-2.881**	7.50	8.19	.692			
research report.		1.0.17						
Q19 I know how to use PowerPoint to make a	26	-1.847	7.73	8.35	.615			
presentation.		0.000***	0.00	0.50	5 400			
Q20 I know what "IRB" stands for.	26	-8.338***	3.38	8.58	5.192			
Q21 I am familiar with the role of the IRB in	26	-8.938***	3.19	8.42	5.231			
protecting human subjects.				1	I			

Table 4 Students' Perceptions on Attainment of Course Objectives