

Suggested APA style reference: Wang, S. -C., & Guo, Y. -J. (2011). *Counseling students' attitudes toward research methods class*. Retrieved from http://counselingoutfitters.com/vistas/vistas11/Article_30.pdf

Article 30

Counseling Students' Attitudes toward Research Methods Class

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Introduction

The core training domains for professional counselors have been defined by the Council for Accredited Counseling and Related Educational Programs [CACREP] (CACREP, 2009). Research training is listed among the eight domains for counselor education. At least one course of research methods is required for master's level counseling training programs. State licensure boards that adopt the CACREP standards will also require counseling students to take one research class in order to meet licensure qualification (Haight, 1992). There are major obstacles students might encounter while studying in research methods classes and applying learned knowledge to future research endeavor.

Learning difficulties in research methods classes hinder students' interest and attitude toward research and future research productivity (Astramovich, Okech, & Hoskins, 2004; Bauman, 2004; Fong & Malone, 1994; Wheeler & Elliott, 2008; Woolsey, 1989). Many factors contribute to the learning difficulties in research methods classes. The study of research design and statistics often elicits graduate students' anxiety and resistance (Forte, 1995; Royse & Rompf, 1992; Sheperis, 2010). Students exhibit low self-efficacy (Bard, Bieschke, Herbert, & Eberz, 2000; Bishop & Bieschke, 1998) with insufficient training in graduate programs (Bauman et al., 2002; Lee & Workman, 1992; Mallinckrodt, 1997) and are inclined to dismiss the research relevance in professional practice (Campbell & Robinson, 1990; Deck, Cecil, & Cobia, 1990; Heppner & Anderson, 1985; Lee & Workman, 1992).

Counselor educators notice the adverse influences encountered in research methods classes contain immediate and long term effects. Counseling students manifest increasing difficulties on learning research methods in research methods classes (Epstein, 1987; Forte, 1995; Holley, Risley-Curtiss, Stott, Jackson, & Nelson, 2007). Students show low motivation to actively participate in research methods classes and research

activities (Bauman et al., 2002; Heppner et al., 1999; Kahn, 2001; Lee & Workman, 1992; Papanastasiou, 2005; Reisetter et al., 2004). Their low motivation in research methods classes contributes to less dedication in future research productivity (Bauman, 2004; Deck, Cecil, & Cobia, 1990; Gelso, 1979, 1993; Lee & Workman, 1992) and higher resistance to acceptance of research implication in their professional practices (Anderson & Heppner, 1986; Bauman, 2004; King & Otis, 2004; Wheeler & Elliott, 2008; Woolsey, 1986). Counseling students start with negative attitudes toward research methods learning and move on to a decrease in research productivity as well as resistance to research-based clinical practices (Fong & Malone, 1994; Lundervold & Belwood, 2000; Gladding, 2000; Vachon et. al., 1995). A careful examination of research methods classes and the learning process in such classes is imperative to instilling the importance of research into counseling students.

The 2009 CACREP standards explains that the study of research methods is for emphasis of learning “research in advancing the counseling profession,” “research methods such as qualitative, quantitative, single-case designs, action research, and outcome-based research,” and “the use of research to inform evidence-based practice” (CACREP, 2009, p. 13). Counselor training programs should incorporate the teachings of various research methodologies to promote research for the future successes of counseling practices and the overall advancement of the counseling profession (CACREP, 2009; Sheperis, 2010). CACREP standards clearly promote the learning of research methods and its future implications in counseling practices and development of the counseling profession. However, there is a lack of focus on practices of designing and conducting research projects for master’s counseling students (Campbell & Robinson, 1990; Huber & Savage, 2009).

Doctoral counseling students need to undergo a vigorous dissertation process to learn a complete research experience, from research design and data analysis, to publishing research results. Unlike doctoral counseling students, master’s students receive academic training that places more emphasis on practical counseling skills and knowledge than on counseling research training (Hazler & Kottler, 1994). A thesis or research project is usually optional or not included in a degree plan. Without a graduation requirement of research, master’s counseling students may not perceive research methods classes as pivotal as other core courses. Their attitude and interests in taking research methods classes and involving future research activities could be minimized. Our study is investigating whether or not a required research component, such as thesis and research project, improves students’ attitude towards research methods classes and stimulates students’ interests in research.

Methods

Research Design

This study is set to investigate the difference in attitudes towards required research methods classes between two groups of master’s level students. These students enrolled either in Special Education or Counselor Education program. These two graduate programs were housed in the same department with different graduation requirement on research. The Special Education program requires a research project to complete its degree plan, but the Counselor Education program has no involuntary

research component for graduation. By comparing the students from the two programs, we intend to examine whether or not an involuntary research requirement plays an influential factor on students' attitudes and interests towards research methods classes. A "mixed methodology inquiry" (Newsome, Hays, & Christensen, 2008, p. 89), or Mixed Design, is planned to investigate the research question of this study. Mixed design incorporated both the quantitative and qualitative inquiry methods and enabled the use of both quantitative and qualitative data analysis procedures. Such design collected and analyzed qualitative and quantitative data to generate the diverse and valid supports to research findings.

Procedure

This study applied an anonymous survey to graduate students of the two programs, the Special Education and Counselor Education programs. Approval of human subject research and anonymity survey was obtained from IRB before data collection. Students in the two graduate programs were notified of their voluntary and involuntary research requirements for graduation before they enrolled in the graduate studies. Students were approached in classes for their participation in this study. They were provided with an information letter addressing research purposes and their rights as research participations. Voluntary participation was completed when students returned completed surveys to researchers.

Participants

The participants were 164 graduate students, 34 male and 130 female, enrolled either in Special Education or Counselor Education programs at a Hispanic-dominated public university in the southwestern region of the U.S. There were 76 of the 164 participants (46.3%) from the Special Education program and 88 (53.7%) from the Counselor Education program.

Measurement

The quantitative inquiry was conducted through a research attitude survey. This survey questionnaire was composed by the researchers through a comprehensive literature review. The questionnaire assessed students' attitude and motivation towards learning in research methods classes and research in general. It included a 7-point Likert rating scale, with 1 indicating "strongly disagree" and 7 "strongly agree." The 20-item questionnaire contained the following question items:

1. I trust research results reported to public.
2. I do not question research results reported to public.
3. I need more knowledge to question research results.
4. I will take research related classes even it is not a requirement of my program.
5. I think every graduate student should take research related classes.
6. I can be a more effective individual if I am able to have educated critique about the quality of research.
7. I can be more effective individual if I am able to conduct research activities
8. I can become an effective professional if I am able to have an educated critique about the quality of a research project.

9. I can become an effective professional if I am able to conduct research activities.
10. I am happy about taking research classes.
11. I am scared for taking research classes.
12. I will join a research group actually conducting a research if I have a chance.
13. Research is too complicated and is not for everyone.
14. Research is important for my profession.
15. Research is important for my daily activities.
16. I do not care much about taking research class.
17. Research classes are the most challenging class of my program.
18. I am afraid of taking a research class.
19. I wish I could substitute a research class with another class related to my profession.
20. I will try my best to learn as much as I can in a research class.

Six factors emerged from a Principal Component Factor Analysis. The attitude factor, which consists of items 3, 4, 12, and 16, was the focus of this study. A composite score of these 4 items was computed for each participant to explore the attitude difference between the two groups of students.

The qualitative inquiry was also conducted through survey, but it collected participants' written responses to each questionnaire item. A writing space was provided for each survey item to assess participants' thoughts and opinions about that particular item. Participants could write their opinions on the provided spaces.

Results

One-Way Analysis of Variance (ANOVA) is known for its merit of mean difference comparison. ANOVA was conducted in Statistical Package for the Social Sciences (SPSS, 2008) to compare mean difference between the Special Education and Counselor Education student groups. The critical value of statistical significance for this study was set at $p < .05$. Levene's test was applied to test for the homogeneity across groups.

A composite score (item 3, 4, 12, and 16) was computed to reflect participants' attitude toward inquiring research knowledge through research methods classes. The responses to item 16 were converted in composite score computation due to its negative wording. Equal variance was evaluated with Levene's test. Levene's test result indicated equal variance between the two groups, $F (1,162) = 1.049$, $p = .308$. ANOVA analysis follows the insignificant Levene's test and revealed a non-significant result, $F (1,162) = 1.589$, $p = .209$.

Qualitative Results

The qualitative data were collected from voluntary written responses for each survey item. Not all participants completed written responses. The analysis of qualitative data was processed by comparing responses derived from the two student groups. Attitude toward research methods classes determines students' interest and motivation in learning of research methods and future endeavor in research productivity and research-

based practices. When students were asked about interest in taking the required and additional research methods classes, Counselor Education students responded as follow:

- 1) I do not have the funds to side-track from my degree plan.
- 2) I have a family; I will take only the required.
- 3) I didn't have the time to be doing research for "fun."
- 4) I don't like research classes.

Counselor Education students' responses depict a lack of interest and motivation in learning research methods. The presented phenomena here indicate the clinically-focused mentality of counseling students when students would not take additional time and efforts to learn research methods or conduct research projects. Their negative attitude and dislike of attending research methods classes will hinder counseling students' potential development of research knowledge and productivity.

Special Education students seemingly show a different attitude toward research methods classes in their qualitative responses:

- 1) I want to do research.
- 2) I will take classes that will improve my career.
- 3) I think I would consider taking another research class on my own interests.
- 4) I like to meet challenge without fear.

Special Education students clearly presented a more positive attitude toward research methods classes. Their responses convey messages indicating their eagerness to learn and experience research. They are willing to take additional time for extra research courses and meet the challenges in the research learning process. The qualitative comparison of research attitudes between Special Education and Counselor Education students demonstrates that Special Education students realize the emphasis on research and Counselor Education students consider learning to conduct research a less relevant component in their counseling training.

For future research participation, Counselor Education students wrote down some short but powerful answers:

- 1) Afraid of.
- 2) Not sure.
- 3) Do not research.
- 4) No time.

These answers reflect a lower interest in research learning described in previous answers of attitude toward research methods classes. It is reasonable to draw an assumption to explain these answers. When a link between negative attitude toward research methods classes and low future research endeavor and productivity is established (Bauman, 2004; Deck et al., 1990; Gelso, 1979, 1993; Lee & Workman, 1992), it is understandable that counseling students are not interested in learning research in research methods classes and extend such low interest to resistance of engaging in future research projects.

The answers provided by Special Education students indicate a more positive picture of their attitudes toward future research activity and productivity:

- 1) It is a good opportunity to learn more.
- 2) Sure – my data input will surely make a difference.

- 3) I will benefit from a group activity/effort.
- 4) I am already part of one.

On the positive attitude toward future research involvement, Special Education students presented a different aspect compared to that of their Counselor Education counterparts. Their positive attitude in learning research methods likely extends to a positive expectation of continued engagement in research. A major difference between two sets of qualitative data from either Special Education or Counselor Education students is the presentation of attitude toward research methods in classes. Such difference of attitude also influences students' expectation to their future participation in research activity and productivity.

Discussion

Facing increasing demands on clinical training, Counselor Education programs encounter the dilemma of balancing various training criteria (CACREP, 2009, 2010). The extension of curriculum credit hours and the clinically-focused professional orientation definitely suppress the needs of reinforcing counseling research. Although there is no statistically significant difference between the research attitudes of Special Education and Counselor Education students, there is a higher mean score (17.11) of Special Education students than the mean score (16.13) of Counselor Education students. Special Education students responded more positively on the research attitude survey than Counselor Education students did. This result reflects the concerns of low research interest and motivation among Counselor Education students.

The qualitative comparison of written responses indicates that there is a different tone of research attitude between these two student groups. The display of qualitative comparison in this study shows the higher interests and motivation of Special Education students toward the study of research methods and their future research productivity. An alienated attitude and low motivation toward research methods classes are reflected in Counselor Education students' qualitative data. The attitude and motivation toward future research productivity are not positive among counseling students. Our assumption states that an involuntary research component might raise students' positive research attitude and extend positive attitude toward future research. Between Special Education and Counseling Education students, the major difference is the involuntary research requirement for graduation. Special Education students need to complete a research project before graduation while counseling students do not. Our research results attest to the assumption that an involuntary research requirement has a positive impact to students' attitudes and motivation toward learning research methods and future research productivity.

Unlike the research training requirements for doctoral counselor education programs, the typical master's level counseling programs include less focus on research in their overwhelming clinical training curriculum (CACREP, 2009; Hazler & Kottler, 1994). Master's counseling students either receive insufficient research training (Bauman, 2004) or perceive research as less important in their graduate studies and future counseling practices (Lundervold & Belwood, 2000). It becomes a trend for master's counseling students to be less encouraged in counseling research and disengage in research training, activity, and productivity (Reisetter et al, 2004).

To increase students' interest and positive attitude towards research and research productivity, educators have indicated that an experience in a research project can be a positive factor (Astramovich et al., 2004; Heppner et al., 1999), as well as adding additional research training courses. It has also been suggested that integrating research and counseling practices in counseling research training could motivate students' learning in research methods classes (Olsen, 1990). Although additional research methods classes or a full scale research project or thesis might not be adopted into clinically-intensive counseling programs, the principles of research projects or theses could be integrated in research methods classes to stimulate counseling students' attitudes and motivation in counseling research.

Our research findings sheds light on possible directions that counseling programs can take to assist counseling students to embrace counseling research and re-engage in research activity and productivity. However, counselor educators and graduate students may encounter extreme difficulties (Okech, Astramovich, Johnson, Hoskins, & Rubel, 2006) when they try to insert a required graduate research component in counseling programs, which are now under stress of increasing clinical emphasis (e.g., CACREP's upcoming increase of credit hours requirement [CACREP, 2009]). We also like to point out that the current double foci of both quantitative and qualitative research methodologies are not explored in this research. It is certainly more difficult to learn two types of research methodologies, and this might add more learning and teaching obstacles to both educators and students (Berrios & Lucca, 2006; Hanna & Shank, 1995).

A tough critic on counseling research (Kaplan, 2009) utters a loud warning sign to the counseling profession. Kaplan (2009) criticizes the low interest and motivation of counselors to engage in counseling-focused and meaningful research activities, and he points out that systemic deficits in counselor training consistently lessen students' involvement in counseling research. Kaplan (2009) prefers counselors to focus on counseling tasks rather than steer to mediocre research efforts. It is urgent for counselor educators to insert necessary interventions to turn this trend around.

We understand that master's counseling programs focus graduate training on educating future practitioners (Hazler & Kottler, 1994) and students have more interest in learning knowledge and skills for future counseling careers. However, counselor educators need to consider the phenomenon that master's counseling students are less interested and motivated in counseling research training. Innovative teaching strategies should be considered in order to enhance the educational goals of counseling research training (Lee & Workman, 1992).

Limitations

The current research has limitations due to the nature of selected research design and procedures. The use of regional participants in this research fits the design of a pilot study. The convenient sampling on a smaller population certainly restricts the replication and generalizability of research results. The use of Likert rating on items can have deficits due to participants' response patterns. Thus, we like to caution readers on the interpretation and implication of our research results. Future investigations on similar counseling research issues are recommended.

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Note: This paper is part of the annual VISTAS project sponsored by the American Counseling Association. Find more information on the project at: http://counselingoutfitters.com/vistas/VISTAS_Home.htm