

**The Impact of Training in Action Research on School Counseling Students' Data**

**Attitudes and Data Self-Efficacy**

Merry Leigh Dameron

Western Carolina University

Jennifer Perry

Georgia Southern University

Rachel Saunders

University of Cincinnati

Sejal P. Foxx

University of North Carolina at Charlotte

### **Abstract**

Using data to drive decision-making and evaluate program effectiveness is paramount to the school counseling profession. In this pilot study, researchers utilized a quasi-experimental design to examine the impact of training in action research on students' data attitudes and self-efficacy. Participants in the experimental group saw greater increases in data self-efficacy, but not data attitudes, than control group members.

*Keywords:* action research, school counseling, data, quasi-experimental research, self-efficacy

## **The Impact of Training in Action Research on School Counseling Students' Data Attitudes and Data Self-Efficacy**

According to Stone and Dahir (2011), “data is the engine that drives the school counseling program” (p. 1). The standards of the school counseling profession ground this statement, as evidenced by emphasis on data within the American School Counselor Association (ASCA) National Model (2019b) and Counsel for Accreditation of Counseling and Related Educational Programs (CACREP) standards for school counseling (2015). Data-driven decision-making and student data are foundational to the ASCA National Model (2019b) and comprehensive school counseling programs. School counselors analyze both school and counseling program data to determine “how students are different as a result of the school counseling program” (ASCA, 2019b, p. xv). Additionally, scholars acknowledge that the ability to demonstrate the impact of school counselors’ efforts on students’ achievement is critical when stakeholders (e.g., administrators and school board members) make difficult decisions about spending (Hatch, 2014; Stone & Dahir, 2011). Given the emphasis on data within our professional standards (ASCA, 2019b; CACREP, 2015), the acknowledgement that the use of data legitimizes school counselors work within the schools (Hatch, 2014; Stone & Dahir, 2011), and the increased emphasis on assessment and accountability in education (Astramovich et al., 2005; Mason et al., 2016), it is critical that school counselor preparation programs emphasize the use of data and assessment. Additionally, school counselors matriculating from these programs should do so with positive data attitudes and high levels of self-efficacy related to the use of data.

## **School Counselors and the Use of Data**

Comprehensive school counseling programs require the collection, analysis, and implementation of data-driven practices in order to deliver services that benefit students, parents, teachers, administrators and the overall community (ASCA, 2019b; Mason et al., 2016). The ASCA developed a series of competencies that ensure school counselors are equipped to meet the rigorous demands of the profession and the needs of pre-K–12 students (ASCA, 2019a). Within the three competency domains of knowledge, skills/abilities, and attitudes, a strong emphasis is placed on using data appropriately. School counselors are expected to have knowledge of data-driven school counseling practices in an effort to help close the achievement/opportunity gap (ASCA, 2019a). It is also within the expectations of the profession that school counselors possess the skills and abilities to collect relevant data to monitor and improve student achievement, review school data to identify policies and practices that lead to student success, and to use student data to advocate for systemic change (ASCA, 2019a). Through the competencies, the ASCA also encourages school counselors use data to evaluate their school counseling programs and to demonstrate program results (ASCA, 2019a).

The emphasis within the profession does not mean that all school counselors utilize data often or do so comfortably. Research by Holcomb-McCoy et al. (2009) indicated low data usage among practicing school counselors. Cited barriers to school counselors' completing tasks like data collection and program evaluation included: (a) lack of training, understanding, and proficiency in data collection; (b) time; (c) the overwhelming nature of evaluation; (d) lack of support or reluctance from school

administrators; (e) research courses that highlight potential difficulties within the research process over the positive elements of conducting studies; and (f) challenges that come from conducting research with minors (Astramovich et al., 2005; Hatch, 2014; Whitson, 1996). Due to this lack of comfort using data (Holcomb-McCoy et al., 2009), helpful tools need to be put into place to strengthen data-driven practices among school counseling students and practicing school counselors.

### **School Counseling and Action Research**

One tool that may boost the self-efficacy of school counselors in working with data and bolster the connection between practice and research is the use of action research (Rowell, 2005). Several scholars recommend training in action research to aid burgeoning practitioners in the area of data use and assessment (Astramovich et al., 2005; Huber & Savage, 2009; Mason et al., 2016; Rowell, 2005, 2006). Action research is defined as the process of inquiry conducted by and for those taking action (Sagor, 1992). Action research provides the opportunity for individuals to study and analyze their own work environments, collecting and analyzing data, for the purpose of improving some aspect of their professional setting (Song & Kenton 2010; Toulmin & Gustavsen, 1996). Action research is a collaborative process that can empower and build a sense of community among professionals, with the purpose of taking action to make a change (Mason et al., 2017; Rowell, 2006). For school counselors, action research can help bridge the split between theory and practice (Mason et al., 2018; Rowell, 2005).

As previously mentioned, barriers such as the limited training on research, the lack of time, and lack of confidence limit school counselors from engaging in

assessment and accountability activities (Milsom & McCormick, 2015). Acknowledging these challenges, scholars highlight a critical component of training in action research and program evaluation: mentoring (e.g., Mason et al., 2016; Milsom & McCormick, 2015). Milsom and McCormick (2015) examined the effectiveness of a mentoring intervention program with school counselors using action research. The results of the research indicated that school counselors mentored in action research were more confident in their abilities, exhibited more positive attitudes about data, and increased their own self-efficacy surrounding the use of data (Milsom & McCormick, 2015). An additional study by Mason et al., 2016 explored the use of action research to increase student attendance, provide individualized behavior interventions, and decrease the achievement gap. School counselors reported the action research initiatives immensely impacting student behaviors and achievement (Mason et al., 2016). These results demonstrate that participation in action research goes beyond increases in school counselor data self-efficacy, but may also result in positive impacts for students.

According to Mason and colleagues (2016), counselor educators are well-positioned to mentor and support practicing school counselors in conducting action research. Holcomb-McCoy et al. (2009) also recommend that practicing school counselors have opportunities to observe role models to increase data usage. While mentoring and connecting with practicing school counselors is vital, other scholars acknowledge the importance of incorporating mentoring throughout school counselors' pre-service training (i.e., Milsom & McCormick, 2015). Doing so, Milsom and McCormick note, provides indirect opportunities for school counseling supervisors to gain knowledge in the area of assessment.

## **Rationale, Purpose, and Research Questions**

Promising research demonstrates the value of utilizing action research to increase practicing school counselors' data usage and data self-efficacy (Milsom & McCormick, 2015) and positively impact student achievement and behavior (Mason et al., 2017). While mentoring practicing school counselors is critical, there is a lack of research on the usefulness of action research projects in impacting school counseling students' attitudes about data and data self-efficacy. Therefore, the purpose of this pilot study was to explore the effects of participation in a course that included the completion of an action research project during a field experience (i.e., Internship I or II) compared to students who were also engaged in a school counseling field experience, but were not enrolled in a course that included the completion of an action research project. The following research question was addressed: Is participation in a course that includes the completion of an action research project during a field experience associated with improvements in self-reported data attitudes and data self-efficacy for school counseling students when compared with students who do not participate in a course that includes the completion of an action research project?

## **Method**

### **Participants**

Sixteen master's level students enrolled in two CACREP-accredited school counseling training programs participated in the pilot study. The students were split into two groups: an experimental group and a control group. Participants in the experimental group were enrolled in a field experience course (i.e., Internship I or II) and, concurrently, a course taught by the first author that included an action research project.

Members of the control group were students at another university who were enrolled in a field experience course (i.e., Internship I or II) but were not concurrently enrolled in a course that included an action research project. Students at both Universities were required to take two Internship courses (i.e., Internship I, II). Each Internship course consisted of 300 hours of field experience in a school counseling setting, for a total of 600-hours of field experience between Internship I and Internship II. Nine students were in the experimental group, and seven were in the control group. Of the students in the experimental group, eight were female and one self-identified as gender non-binary. All seven participants in the control group self-identified as female. Regarding age, the majority of participants in both the experimental ( $n=8$ ) and control ( $n=6$ ) were 21 to 29 years at the time of the study. One student in the experimental group was between the ages of 30 and 39, and one student in the control group was between 50 and 59. When asked about their race/ethnicity, eight of the experimental-group participants self-identified as non-Hispanic White and one as Black or African American. In the control group, four participants self-identified as Black or African American, one as Latina, and two as non-Hispanic White. Participants were also asked to identify their current field experience level. Six of the participants in the experimental group were in Internship I, as were four of the students in the control group. Three students from each of the experimental group and control group were enrolled in Internship II. In terms of post-graduation plans, all 16 participants indicated they planned to obtain a job as a school counselor.

## Instruments

The student participants took a pre/post-test that included a data attitudes survey and a data self-efficacy survey (Milsom & McCormick, 2015). An example of a question from the nine item data attitudes survey question is: “School counselors **should**: use data to advocate for students.” An example of a survey question from the 10-item data self-efficacy survey is: “You are **confident** that you can: successfully collect needs assessment data.” For each survey, participants rated each item on a six-point Likert-type scale with responses ranging from *Strongly Disagree* to *Strongly Agree*. Milsom and McCormick designed the surveys “based on a review of literature suggesting appropriate school counselor roles and competencies related to data and accountability” (Milsom & McCormick, 2015, p. 29).

## Variables

The dependent variables explored in this pilot study were (a) school counseling students’ data self-efficacy, (b) school counseling students’ data attitudes. The independent variable was participation in a course that includes the completion of an action research project during a field experience. Student participants in the experimental group were enrolled in either Internship I or II and a concurrently enrolled in a course, taught by the first author, that included an action-research project. Students in the control group were enrolled in either Internship I or II at another university, and were not concurrently enrolled in a course that included an action research project.

Students in the experimental group that were enrolled in the action research course were required to: (1) complete a needs assessment at their field placement site (i.e., school), (2) design a specific, evidence-based intervention to meet the identified

need, (3) implement the program, (4) evaluate the outcomes of the program, and (5) share the results with stakeholders. Additionally, student-participants were required to go through the University's IRB to receive permission to conduct research with minors. Students in the experimental group met both on-campus and on-line (hybrid course design) with mentoring from their instructor. Examples of this mentoring behavior included frequent one-on-one emails, phone contacts, and in-person meetings with student participants. Additionally, students in the experimental group met with the first author (their course instructor) once every two weeks to discuss their progress and receive support in a group setting.

Student participants in the control group were enrolled in either Internship I or Internship II at another university. The second and third authors of this study were doctoral students at the university at the time the research was conducted. By communicating with the instructors of the course and examining the course syllabi, the first researcher found that the supports received by these students included, but were not limited to: weekly small-group meetings, case presentations, lesson-plan submission, and site supervision.

## **Design**

The pilot study was quasi-experimental, with a pre-test/post-test non-equivalent groups design. In a quasi-experimental design researchers determine the impact of a program or intervention by utilizing a comparison (i.e., control) group without random assignment (Sheperis et al., 2017). A pre-test/post-test non-equivalent groups design involves an experimental group and control group. Both groups receive a pre-test and a post-test, but the experimental group receives a treatment, while the control group does

not. This design answers the question of whether or not the experimental group improved in the area of measurement (i.e., data attitudes and data self-efficacy) more than the control group (Price et al., 2017). Sampling was purposeful in that we matched the participants in the experimental group and the control group according to field experience level. Purposeful samples are defined as “those that you specifically choose and that contain a certain element that will highlight and inform a particular aspect of the study” (Sheperis et al., 2017, p. 278). In this case, we believed that field experience level may impact student participants data attitudes and data self-efficacy (i.e., those with more field experience may have more positive data attitudes and greater data self-efficacy) and therefore decided to purposefully compose the experimental group and control group based on field experience level (i.e., we attempted to have the same number of students in Internship I and Internship II in each group).

### **Procedure**

The pilot study took place during the spring semester of the 2018-2019 academic year. After receiving IRB approval, participants in both the control group and the experimental group were invited to participate in the study. Student-participants in both the experimental and control groups were asked to complete a demographic questionnaire, data attitudes survey, and a data self-efficacy survey during each of their initial class meetings (Milsom & McCormick, 2015; pre-test). Then, during the final week of class, participants were asked to complete the data attitudes and data self-efficacy survey for a second time (Milsom & McCormick, 2015; post-test). The study was delivered by hand by either the first author (experimental group) or second author (control group). For the pre-test, we provided each student participant with an envelope

containing the informed consent document, a demographic questionnaire and the data attitudes and data self-efficacy surveys (Milsom & McCormick, 2015). To ensure participant confidentiality, each envelope and corresponding study packet was coded with a participant number. Participants in the experimental group were given an envelope with the letter A and then asked to add their birth month and year (e.g., A-10-2) and be coded A-1, and participants in the control group were given an envelope with the letter B and asked to add their birth month and year. Participant names were not included on the study or informed consent documents. Additionally, the participants were not asked their birth month or year on the demographic questionnaire, to protect confidentiality. As the instructor of the course, the first author did not want students to feel coerced into participating in the study. Although it is recognized that this could not be completely assured, student participants were told that their participation was voluntary and that they were able to withdraw from the study at any time without punishment or any effect on their grade in the course. For the post-test, we provided each student participant with an envelope containing the data attitudes and data self-efficacy surveys, which participants also coded by group (A or B) and birth month and year, allowing us to connect their pre- and post-test responses.

### **Data Collection**

An independent samples *t*-test is an appropriate statistical test for a quasi-experimental, pre-test/post-test non-equivalents group design. The independent *t*-test utilizes two samples to represent two different conditions (i.e., a control condition and an experimental condition; Carlson & Winqvist, 2016). In this research, the experimental group comprised students enrolled in a course that included the completion of an action

research project, while students in the control group were not. An a priori power analysis using G\*Power indicated 210 participants (105 per group) would achieve a medium effect size at 95% confidence. Given the results of this a priori power analysis, the research team was aware that the sample size was too small to garner even a small effect size. Understanding this limitation, the research team made the decision to utilize descriptive, rather than inferential statistics. Scholars note that analysis of data from pilot studies should be primarily descriptive (e.g., Bunn et al., 1998; Carfoot et al., 2002). Haden (2019) states, “Descriptive statistical techniques . . . provide succinct and illuminating pictures of the data we record from our own subjects. They do not, on their own, tell us if we could expect to see similar patterns were we to apply our experimental manipulations to other people” (p. 133). Haden also explains that inferential statistics are necessary to make inferences beyond our sample to large populations. The research team understood that results of this pilot study would not be generalizable, and acknowledge this is a limitation of the study.

## **Results**

The research question addressed in this pilot study was: Is participation in a course that includes the completion of an action research project during a field experience associated with improvements in self-reported data attitudes and data self-efficacy for school counseling students when compared with students who do not participate in a course that includes the completion of an action research project? Both the experimental and control groups saw increases in data attitudes and data self-efficacy between the pre and post-test. Further, both saw greater increases in data self-efficacy than data attitudes. Participants in the experimental group saw an average

increase of 2.2 points in their data attitudes score, while the control group increased their score by an average of 4.0 points. Participants in the experimental group saw an average increase of 9.5 points in their data self-efficacy score, while the control group increased their post-test average by 8.7 points. Participation in the course that included an action research project (i.e., the experimental group) appears to have led to a greater increase in data self-efficacy (vs. the control group), but not a greater increase in data attitudes. However, data attitudes score was higher (in comparison to the control group) for the experimental group both before (50.44 vs 47.43) and after (52.67 vs. 51.43) the intervention. The changes in data attitude and data self-efficacy for the experimental group and control group are provided in Tables 1 and 2.

### **Discussion**

This purpose of this pilot study was to explore if participation in a course in which school counseling students participated in an action research project increased their data attitudes and data self-efficacy. Findings revealed that there was a greater difference in data self-efficacy for those that participated in the course in comparison with those that did not. Holcomb-McCoy et al. (2009) found that school counselor self-efficacy and general self-efficacy best predicts school counselor data usage. Knowing self-efficacy is tied with data usage for school counselors, counselor educators should have a vested interest in training and activities that help students increase their self-efficacy.

The course that was taught by the primary researcher and taken by the student participants in the experimental group is an example of taking recommendations from previous research and putting them into action. For example, scholars have

recommended teaching school counseling students data collection, analysis, and how to share outcome results (Dahir & Stone, 2003), including a data collection project within field experiences (Young & Kaffenburger, 2011), and providing mentoring and provision of assignments that allow practice with support (Milsom & McCormick, 2015). Having a stand-alone course that included an action research project provided scaffolding and focus for the school counseling students to receive instruction and support in the implementation of their action research projects. The post-test mean for the experimental group was 56.89 (scores could range from 1-60), indicating a high level of data self-efficacy for students that participated in the course.

Student participants in the control group saw a greater increase in their data attitudes score than did members of the experimental group. This could be attributed to the fact that members of the experimental group started out with higher data attitudes ( $M=50.44$ ) than did members of the control group ( $M=47.43$ ). Additionally, while the control group saw a greater increase, the experimental group's post-test mean (52.67) was higher than the post-test mean (51.43) for the control group. The greater increase in the post-test mean for the control group could also be explained by the fact that there were more Internship I students in experimental group than in the control group. While we initially matched the groups by level of experience, one student dropped out of the experimental group and three students dropped out of the control group, leaving the groups uneven in terms of field level experience. Finally, the data attitudes of the members of the experimental group may have been impacted by their experiences with the IRB process. School counselors engaging in action research do not typically go through the IRB process, as publication of the results of their research is not the primary

goal of action research. While we encourage school counselor practitioners and school counseling students to engage in practitioner-research and the publication and dissemination of the results, we are also able to reflect upon and understand that the challenges associated with going through the IRB process and the potential impact on students' data attitudes.

### **Implications for Counselor Educators**

Part of having a comprehensive, data-informed school counseling program is using data to “determine needed interventions, which are then delivered to help close the information, attainment, achievement, and opportunity gaps” (ASCA, 2019b, p. 18). School counselors are not tasked to have positive attitudes and comfort with utilizing data without reason—*students* are the reason. While it is beyond the scope of this article to detail the results of each of the student-participant action research project, Table 3 lists the names of the projects implemented by the students in the experimental group, including the evidence-based intervention and measure(s) they utilized, and the outcome variable(s) associated with their projects.

Students in the experimental group presented the results of their action research projects to their classmates and to stakeholders. As a counselor educator I (the first author) can report that going through the process with my students and hearing the impact of their interventions was a reminder of why I chose to become a school counselor and a counselor educator. Not only was I able to witness my students increase their self-efficacy surrounding data, but also able to see the impact of each of their interventions at their field placements. While counselor educators may not create a stand-alone course to support school counseling students through action research

projects, elements of this course can be infused into the school counseling curriculum. For example, school counseling students can interact with mock data to identify achievement gaps and can develop evidence-based interventions that could be used during their future work as professional school counselors. This may lead to increased understanding of how to disaggregate data, identify needs, and develop an evidence-based intervention—all critical skills for burgeoning school counselors. An action research project could also be added as a requirement within an already-standing class; for example, a field placement course. The authors would also like to note that the results of this research provide a snapshot, even if it is just of two programs, of where we are in training professional school counselors to use data, and the results are encouraging. Students from these particular programs matriculated with positive data attitudes and high levels of data self-efficacy, which may indicate we are heading in a positive direction in relation to the training of school counselors and their relationship with data.

### **Implications for School Counselors**

While the results of this pilot study are encouraging, previous literature tells the story that practicing school counselors have a progressing relationship with data. Holcomb-McCoy et al. (2009) reported that the majority  $N=130$  of professional school counselors from Maryland and Virginia used data “rarely” to “some of the time.” Six years after this study, Watkinson and Gallo-Fox (2015) found that elementary school counselors did not prioritize the use of data for several reasons, including feeling they needed more education in this area. In 2016, Milsom and McCormick found that practicing school counselors still experienced barriers to utilizing accountability

practices, but that mentoring practitioners in this area led to more positive data attitudes and increases in data self-efficacy. While the current pilot study focused on the impact of a course that included an action research project with school counseling students, elements of this course can be applied to workshops and trainings for practicing school counselors that allows them to go through (or simulate) the action research process.

Based on this pilot study and previous literature, we recommend the following:

(1) Training related to data should be hands on and go beyond content knowledge. For example, trainings could include mock data or live data from schools. In line with recommendations from Milsom and McCormick (2015), we suggest that school counselors at these trainings practice disaggregation of data, coming up with ideas for evidence-based interventions, and plan for the design, implementation, and evaluation of the intervention connected with the identified student need. If participants do not come up with the ideas based on their own data, trainers could help school counselors think through how they might develop a needs assessment, come up with a pre/post-test, and design an intervention. (2) District and university partnerships should be created to help meet training needs. Watkinson and Gallo-Fox (2015) recommend school system and university partnerships that involve small learning communities where counselors acquire evaluation skills by using it to play their interventions with the assistance of an experienced professor. (3) As recommended by Young and Kaffengerger (2011), trainings should emphasize the importance of using data to identify and close achievement gaps. (4) To increase data attitudes, self-efficacy, and skills, school counselors should receive support through mentoring. While one-day workshops may be beneficial, mentorship can provide assistance throughout the action

research process. Potential sources for mentors could be practicing school counselors with experience using data or university faculty (Milsom & McCormick; Watkinson & Gallo-Fox).

### **Limitations and Suggestions for Future Research**

There are limitations to the current research, including the sample size of 16 participants. Another limitation is that participants self-reported the data. Additionally, given the nature of the study, there is the possibility that the study was impacted by coercion, as students in the experimental group were the primary researcher's students. To mitigate this risk, the students were instructed that their participation or lack thereof did not impact their grade, and steps were taken to assure anonymity; however, it is still possible that the relationship between the primary researcher and the members of the experimental group were impactful. Future research could examine how levels of data attitudes and data self-efficacy (for students and practitioners) relate to future data usage. Additionally, future research could examine the types of training and support (e.g., one-day workshops, one day workshops with mentoring, year-long mentoring partnerships) that are impactful for current practitioners.

### **Conclusion**

Use of data is a critical element in the important work school counselors do to support students (ASCA 2019b; Stone & Dahir, 2011). In this pilot study, school counseling students planned and implemented action research projects and share the results of their research with stakeholders. In doing so, they strengthened their data self-efficacy and learned critical skills that they can carry with them into their work as school counselors. This type of training can not only be replicated in other school

counselor training programs, but simulated in other ways (i.e., workshops, trainings) to support and train practicing school counselors. In gaining more positive data attitudes and greater data self-efficacy, we believe that practitioners are better able to do the important work of closing achievement gaps and planning and implementing impactful interventions for all students.

## References

- American School Counselor Association (2019a). *ASCA school counselor competencies*. <https://www.schoolcounselor.org/asca/media/asca/home/SCom petencies.pdf>.
- American School Counselor Association (2019b). *The ASCA national model: A framework for school counseling programs* (4<sup>th</sup> ed.). Author.
- Astramovich, R. L., Coker, J. K., & Hoskins, W. J. (2005). Training school counselors in program evaluation. *Professional School Counseling*, 9(1), 49-54.
- Baker, S. B., & Parikh Foxx, S. (2012). Career and college readiness self-efficacy inventory. *Unpublished scale, Counselor Education Program, North Carolina State University, Raleigh*.
- Brigman, G. A. (n.d.). *Student success skills*. <http://www.studentsuccessskills.com>
- Bunn, V. J., Watling, R. M., Ashby, D., & Smyth, R. L. (1998, June). Feasibility study for a randomized controlled trial of oral calorie supplements in children with cystic fibrosis. In *Proceedings of 22nd European Cystic Fibrosis Conference Berlin* (pp. 13-19).
- Carfoot S., Dickson R. & Williamson P.R. (2002) Breastfeeding: The effects of skin-to-skin care trial (BEST), pilot study. *Celebrating Health Research: the Annual R & D Conference*. North West Regional Health Authority, Manchester.
- Carlson, K. A., & Winquist, J. R. (2016). *An introduction to statistics: An active learning approach*. Sage Publications.
- Council for Accreditation of Counseling and Related Educational Programs. (2015). *2016 CACREP standards*.

- Dahir, C. A., & Stone, C. B. (2003). Accountability: A MEASURE of the impact school counselors have on student achievement. *Professional School Counseling, 6*(3), 214-221.
- Haden, P. (2019). Inferential statistics. In S. A. Fincher & A. V. Robins (Eds.), *The Cambridge handbook of computing education research*, (pp.133-172). Cambridge University Press. <https://doi.org/10.1017/9781108654555>
- Hatch, T. (2014). *The use of data in school counseling: Hatching results for students, programs, and the profession*. Corwin Press.
- Holcomb-McCoy, C., Ileana, G., & Georgina, J. (2009). School counselor dispositions as predictors of data usage. *Professional School Counseling, 12*(5), 343-351.
- Huber, C. H., Savage, T. A., Promoting research as a core value in master's-level counselor education. (2009). *Counselor Education and Supervision, 48*, 167-178.
- Kuypers, L. M. (2011). *The zones of regulation: A curriculum designed to foster self-regulation and emotional control*. Think Social Publishing, Inc.
- Mason, E. C., Land, C., Brodie, I., Collins, K., Pennington, C., Sands, K., & Sierra, M. (2016). Data and research that matter: Mentoring school counselors to publish action research. *Professional School Counseling, 20*, 184-193.  
<https://doi:10.5330/1096-2409-20.1.184>
- Milsom, A., & McCormick, K. (2015). Evaluating an accountability mentoring approach for school counselors. *Professional School Counseling, 19*, 27-35.  
<https://doi:10.5330/2156759X1501900102>
- MCGP Writing Team (n.d.). *Missouri comprehensive guidance program: Linking school success with life*

success. <https://dese.mo.gov/sites/default/files/RSSmallGroupUnitStudySkills6-8.pdf>

Price, P. C., Jhangiani, R. S., Chiang, I. A., Leighton, D. C., & Cuttler, C. (2017).

*Research Methods in Psychology. (3<sup>rd</sup> Edition).*

<https://opentext.wsu.edu/carriecuttler/>

Rowell, L. L. (2005). Collaborative action research and school counselors. *Professional School Counseling, 9*, 28-36.

Rowell, L. L. (2006). Action research and school counseling: Closing the gap between research and practice. *Professional School Counseling, 9*, 376-384.

Sagor, R. (1992). *How to conduct collaborative action research*. Alexandria: VA: Association for Supervision and Curriculum Development.

Savvy school counselor (n.d.). *School attendance matters: A six session small group unit*.

Sheperis, C. J., Young, J. S., & Daniels, M. H. (2017). *Counseling research: Qualitative, quantitative, and mixed methods. (2<sup>nd</sup> Ed.)*. Pearson Education, Inc.

Song, L., & Kenton, J. M. (2010). Action research in schools: The practitioners' perspectives. *Ontario Action Researcher, 10*, 1-13.

Stone, C. B., & Dahir, C. A. (2011). *School counselor accountability: A MEASURE of student success*. Pearson Higher Ed.

Tennessee student success course (n.d.). <https://www.tn.gov/gearuptn/outreach-resources/tennessee-student-success-course.html>

Toulmin, S., & Gustavsen, B. (1996). *Beyond theory: Changing organizations through participation*. John Benjamins.

- Watkinson, J. S. & Gallo-Fox, J. (2015). Supporting practice: Understanding how elementary school counselors use data. *Journal of Professional Counseling: Practice, Theory, and Research, 42*, 30-39.
- White, B. P. (2014). The perceived stress scale for children: A pilot study in a sample of 153 children. *International Journal of Pediatrics and Child Health, 2*(2), 45-52.
- Whitson, S. (1996). Accountability through action research: Research methods for practitioners. *Journal of Counseling and Development, 74*, 616–623.  
<https://doi.org/10.1002/j.1556-6676.1996.tb02301.x>
- Young, A., & Kaffenberger, C. (2011). The beliefs and practices of school counselors who use data to implement comprehensive school counseling programs. *Professional School Counseling, 15*, 67-76.

## Appendix

**Table 1**

*Changes in Data Attitudes and Data Self-Efficacy for Experimental Group*

Data Attitudes	Pre-Test		Post-Test		Difference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	50.44	4.64	52.67	2.59	2.22	3.42
Data Self-Efficacy	Pre-Test		Post-Test		Difference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	47.33	8.66	56.89	3.33	9.56	7.35

*Note.* Attitude scores could range from 9-54. Self-efficacy scores could range from 10-60.

**Table 2***Changes in Data Attitudes and Data Self-Efficacy for Control Group*

Data Attitudes	Pre-Test		Post-Test		Difference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	47.43	4.50	51.43	5.13	4.0	3.06
Data Self-Efficacy	Pre-Test		Post-Test		Difference	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	43.14	6.34	51.86	7.73	8.71	6.05

*Note.* Attitude scores could range from 9-54. Self-efficacy scores could range from 10-60.

**Table 3***Student Action Research Projects*

Name of Project	Evidence-based Intervention	Measure(s)	Outcome Variable
College and Career Readiness	small group intervention using Career Readiness Curriculum (Tennessee Student Success Course, n.d.)	pre/post-test: Career and College Readiness Self Efficacy Inventory (Baker & Foxx, 2012)	career and college readiness self-efficacy
Don't Stop Attending!: Student Success Small Group Intervention for Chronically Absent Fifth-Grade Students.	small group intervention using <i>Student Success Skills</i> (Brigman, n.d.) curriculum	attendance data; pre/post-test; student attendance questionnaire	attendance rates; perception and knowledge of the importance or value of attending school
Improving Student Academic Success through Implementation of a Small Group Aimed at Teaching Metacognitive Strategies	small group intervention using metacognitive strategies	pre/post-test; course grades	course grades; attitudes and experiences of academic self-concept, self-concept, and supportive relationships
The Effect of a Student Success Skills Small Group on the Academic Performance of ELL Students.	small group intervention using <i>Student Success Skills</i> (Brigman, n.d.) curriculum	course grades (math, social studies, science, and ELA)	course grades
The Effects of a Wellness-Based Approach on Perceived Levels of Stress in Elementary Students	Classroom guidance lessons using the <i>Indivisible-Self</i> model of wellness (IS-Wel)	pre/post-test: Perceived Stress Scale for Children (White, 2014)	perceived level of stress

Name of Project	Evidence-based Intervention	Measure(s)	Outcome Variable
<i>The Goal Getters: An Academic Success Intervention for Economically Disadvantaged 7<sup>th</sup> Graders who failed ELA and/or Math in 6<sup>th</sup> Grade</i>	small group intervention using <i>Missouri Comprehensive Guidance Program: Linking School Success With Life Success</i> (MCGP Writing Team, n.d.)	course grades (math and ELA); pre/post-test: Counselor Information Sheet-Student Version (MCGP Writing Team, n.d.)	course grades (math and ELA); academic self-perception
The Impact of a Study Skills and Organization Strategies Small Group on Perceived Achievement Among 6th Grade Students	small group intervention focused on study skills and organization strategies	pre/post-test; course grades	perceived school achievement; academic achievement
The Impact of Participation in a Student Success Group on Student Attendance and Attitude Towards School Among Third Grade Students	small group intervention using <i>School attendance matters: A six session small group unit</i> (Savvy school counselor, n.d.).	pre/post-test: (Savvy school counselor, n.d.); attendance data	attendance; attitude toward school
The Impact of <i>WhyTry</i> Curriculum on Resiliency in Eighth Grade Students	small group intervention using <i>Why Try</i> (www.whytry.org) curriculum	pre/post-test: Brief Resilience Coping Scale (Sinclair & Wallston, 2004)	resiliency
Zoning In on Better Emotional Regulation and Social Skills	small group intervention using <i>The Zones of Regulation</i> (Kuypers, 2011) curriculum	pre/post-test: (Kuypers, 2011); discipline data (i.e., office referrals)	emotional regulation; social skills