

It comes as no surprise to counselor educators, who have taught a master's-level course in research methods, that there are counseling students who are not interested in research (Steele & Rawls, 2015). Some master's-level counseling students have even reported strong emotional responses to content that is typically covered in research methods, such as statistics (Perepiczka, Chandler, & Becerra, 2011). Students who are anxious or lack interest in learning research may not utilize research skills later on in their career when they are professional counselors. Indeed, Wang and Guo (2011) found that students with negative attitudes towards research reported less interest in participating in research in the future. These findings are concerning because the skills learned through coursework in research methods are considered a central part of professional counselor identity and are necessary for counselors to engage in ethical practice.

The Council for Accreditation of Counseling and Related Educational Programs (CACREP; 2016) designates research and program evaluation as one of eight curricular areas that represent the “foundational knowledge required of all entry-level counselor education graduates” (p. 9). Items assessing research knowledge are included in the National Counselor Examination, a test that is used by many states for licensure (National Board for Certified Counselors, n.d.). The inclusion of research training within the core curriculum also is warranted, given the ethical duties that professional counselors have to monitor their effectiveness and maintain an awareness of best practices for working with their client populations (American Counseling Association, 2014). Without the knowledge and skills acquired through coursework in research, students may potentially engage in ineffective or obsolete practices with their future clients. Surveying a national sample ($N = 911$) of professional counselors, Peterson, Hall, and Buser (2016) found that most participants believed that research skills were necessary for effective practice. Therefore, it is imperative that counselor educators develop instructional

methods that support and enhance learning in research in order to prepare students to become effective and ethical professional counselors.

Enhancing Student Engagement in Research

Researchers have argued that the instructor plays a central role in influencing student engagement and learning within a counseling research course. In a review of the literature on counseling students' interest in and attitudes toward research, Dukic (2015) stressed that faculty are integral in establishing an environment for research training that increases students' positive attitudes towards research. According to Perepiczka et al. (2011), "displaying empathy, providing a safe space for students to talk about their challenges, and celebrating their small successes" (p. 105), are strategies that instructors can utilize to increase their students' positive attitudes and self-efficacy towards statistics. Although researchers, such as Dukic (2015) and Perepiczka and colleagues (2011), have suggested that the instructor plays a key role in influencing student attitudes, few examples of formalized instructional strategies for research training of master's-level counseling students exist within the literature.

Rehfuss and Meyer (2012) described a semester-long experiential research project that can be integrated into a master's-level counseling research course. Students work closely with their course instructor in carrying out a formal research study (i.e., selecting a research topic, securing IRB approval, collecting and analyzing data, and presenting the findings) during the semester. A key element of this approach is faculty-student collaboration (Rehfuss & Meyer, 2012). Unfortunately, Rehfuss and Meyer did not report formal outcomes on the utility or efficacy of this instructional strategy. Further, these authors noted that a significant barrier in using an experiential training model was timing. Instructors may struggle with meeting project

deadlines and fitting the project components into what is typically a semester-long (i.e., 16 weeks) course (Rehfuss & Meyer, 2012).

Instructors may be able to increase student-instructor collaboration using an instructional approach that is more feasible than a semester-long experiential research project. Regular collection of and response to written feedback provided by students on their learning experience may help strengthen the instructor-student relationship that Rehfuss and Meyer (2012) described as being critical to increasing students' learning of and engagement in research course material. By participating in a semester-long continuous feedback loop, students may experience a stronger connection to their instructor and to the course as a whole. This in turn, may increase student engagement and learning within the course. Students with higher levels of interest in research may be more likely to utilize these skills in their future counseling practice (Wang & Guo, 2011). In the present study, we examined the utility of a brief learning activity that sought to enhance student engagement and learning by increasing communication between the instructor and students in a counseling research course.

One Minute Essay

The One Minute Essay (OME), also referred to as the one minute paper or half-sheet response (Stead, 2005), is a brief "writing to learn" exercise that provides students with an opportunity to reflect upon and ask clarification questions in written form about course material (Nilson, 2010). The OME typically includes prompts that assess for topics of confusion regarding course material as well as questions, such as what is the most important thing you learned in class today? and what question remains unanswered? (Almer, Jones, & Moeckel, 1998; Chizmar & Ostrosky, 1998) to assist students in summarizing and reflecting upon the course material. The OME can be anonymous or identified (Drummond, 2007) and is ungraded

(Almer et al., 1998). Instructors review student responses to clarify areas of confusion before moving forward to the next topic area. Depending on the size of the class and number of comments collected from the OME, an instructor may review individual responses or summarize key areas of confusion during the subsequent class session (Nilson, 2010).

Effectiveness of the OME

Because it is low-tech and low effort, this strategy has been adapted within a variety of academic settings. Bartlett and Morrow (2001) found that first-year undergraduate students in a pharmacy course were receptive to using the OME and that students believed that the OME increased their understanding of course material and improved student-faculty engagement. The OME also has been found to improve undergraduate student test scores within other disciplines, including accounting (Almer et al., 1998) and economics (Chizmar & Ostrosky, 1998). In a study of 867 undergraduates across 20 sections of an introductory accounting course using a repeated measures design, Almer et al. (1998) found that students in course sections that used the OME scored on average 1.47 points better on quizzes (worth 10 points) in comparison to their peers in course sections that did not use the OME. Chizmar and Ostrosky (1998) observed a 6.6% increase in economics knowledge among undergraduates ($n = 315$) who took the OME following each class session compared to students ($n = 256$) in course sections without the OME. Utilizing a quasi-experimental unequal control design with a sample of 77 undergraduates, Chiou, Wang, and Lee (2014) found that the OME improved undergraduate students' learning achievement and reduced their statistics anxiety within an applied statistics course. In addition to improving test scores and lowering anxiety, the OME increases perceived mastery of course material. Anderson and Burns (2013) found that graduate students in physical therapy ($n = 46$) and nurse anesthesia ($n = 28$) who completed the OME believed that it enhanced their ability to connect course

material with prior knowledge and it helped them apply the concepts learned in class. In a master's-level counseling research course, the OME could potentially help reduce anxiety surrounding the tenets of research and increase course material engagement and learning.

To strengthen the student-to-faculty contact that occurs via the OME, Lucas (2010) responded individually to each undergraduate student's OME via email. These emails included answers to questions that students posed in the OME. Lucas reported student comments from end-of-quarter teaching and course evaluations as data to gauge student perceptions of this modified version of the traditional OME. According to Lucas, many students felt that the brief personalized feedback showed that the instructor cared for their "own personal learning" (p. 40). Further, communicating personalized feedback via email helped Lucas develop relationships with students who rarely participated during class. Although Lucas did present student comments from course evaluations as evidence in support of providing personalized feedback, given the considerable amount of extra effort and time required by the instructor to give this feedback, a more rigorous assessment of student perceptions of the usefulness and benefits of this approach appears warranted. Providing personalized feedback to students requires effort on the part of the instructor, but the personal connections created via these emails may potentially enhance student engagement and learning beyond that of the traditional OME.

Growing evidence exists that the OME improves student engagement and learning. Yet, questions remain about its usefulness as an instructional strategy. Although past research has found that the OME increases learning achievement (Bartlett & Morrow, 2001), the ways in which the OME actually helps students learn have not been clearly elucidated. Further, it is unclear if providing personalized responses to student comments improves the gains in engagement and learning that have been attributed to using the OME. Complaints about the

OME, such as its repetitiveness also have been raised. Stead (2005) commented that some students believed that completing the OME during each class was tedious, especially when they did not have questions or concerns about the material covered during a class session. It is possible that in a counseling research course, students may find the OME unnecessary because some class sessions will not focus on content that has traditionally been known to elicit strong emotional responses, such as statistics or quantitative research. Examining student perceptions of the OME's usefulness within a counseling research course can help determine whether it is worthwhile for counselor educators to use this strategy.

Research Questions

In the present study, the traditional OME was compared to a modified OME (OME+) within separate, semester long research methods courses. The traditional OME included weekly student responses which were collected, summarized, and addressed during the next class period. The OME+ included all of the same features of the traditional OME as well as instructor-communicated personalized feedback. At the conclusion of the semester, student perceptions of the OME were collected and content-analyzed to understand its utility in improving student engagement and learning of course material. The guiding questions that informed our study were:

1. How do students perceive the overall usefulness of the OME?
2. Are there differences in the perceived usefulness of the OME among students who completed the traditional OME in comparison to those who completed the modified version with brief personalized feedback (OME+)?

Method

We used content analysis (Krippendorff, 2013) to develop numerical values and summarize into categories qualitative data collected from the participants on the usefulness of the OME. According to Krippendorff (2013), content analysis can be utilized by researchers to make reliable and valid inferences from textual data. A combination of inductive and deductive coding procedures were used in the present study, which reflects the overlap in quantitative and qualitative approaches found within content analysis (Krippendorff, 2013). To examine differences in student perceptions of the perceived usefulness of the traditional OME compared to the OME+, we used a quasi-experimental non-equivalent control group posttest-only design. One group of students who were enrolled in a counseling research course completed the traditional OME; whereas, a second group of students enrolled in a different counseling research course received the OME+. Tests of independence were then used to assess differences in the proportions of the categories between the two groups. Examining relationships between categories derived through content analysis is one of several quantitative data analytic techniques that compliment this methodology (Insch, Moore, & Murphy, 1997; Krippendorff, 2013).

Participants

Study participants ($N = 48$) were graduate students in CACREP-accredited programs in school counseling or clinical mental health counseling at a mid-sized private university in the Mid-Atlantic region. The traditional OME condition (OME) included 16 participants (15 females) ranging in age from 22 to 46 ($M = 25.63$, $SD = 6.27$); 15 self-identified as White and 1 as Hispanic. The OME+ condition consisted of 32 participants (28 females) that included 25 White students, 5 African American students, 1 Hispanic student, and 1 Asian student, with ages ranging from 21 to 36 ($M = 24.18$, $SD = 2.60$). The two conditions (OME versus OME+) differ

in size because of fluctuations in program enrollment during the semesters when this study was conducted.

Procedure

Participants were enrolled in a 16-week, 3-credit required course on research and evaluation in counseling that met weekly. Student learning outcomes, assignments, and the required textbook were identical between conditions (OME and OME+). The first and second authors served as the instructors for the separate courses that were offered in different semesters. Quasi-experimental non-equivalent control group posttest-only design was used; students were assigned to the OME or OME+ conditions based on when they enrolled in the course. During the first class of the semester, students consented to participate in the study, which included permitting the researchers to collect their OMEs. All procedures were approved by the local IRB.

At the beginning of each class, the instructor distributed the *Faculty Feedback Form* (i.e., OME) to the students. The *Faculty Feedback Form* included several questions that prompted students to reflect on their learning from the course readings and class session lecture. Students were encouraged to fill out the form during the class (e.g., if they had a question about the lecture but did not want to ask during class); however, the instructor also provided time during the final five minutes of class for students to finish answering the questions and return the *Faculty Feedback Form*.

The *Faculty Feedback Form* helped “take the temperature” of the class by identifying content areas that students were struggling with or found interesting as well as to determine what instructional strategies they found helpful. The *Faculty Feedback Form* included four open response questions, three of which were present on all weekly forms used during the semester. These writing prompts were: (a) one thing I learned from my readings, (b) one thing I learned

from today's class lecture, and (c) I am unclear or would like to know more about. The fourth question varied each week, at times prompting students to write about upcoming assignments (e.g., "How is your final paper coming along?") or course material covered during the specific class session. During the class session on ethics, for example, the *Faculty Feedback Form* included the item, "Describe an ethical concern related to your proposed final paper."

Following the class session, the instructor read the *Faculty Feedback Forms* and made adjustments to the subsequent class's instructional plan based on student feedback. At times this included modifying the agenda for the next class to revisit key content areas that students struggled with or to make plans to teach the material differently in future semesters. The instructor also would highlight content areas that students reported they had learned or found interesting during the previous class. Depending on the variability in responses, the instructor would sometimes dedicate time at the beginning of class to review specific questions raised by students. Although students were required to write their names on the forms each week, the instructor never attributed questions or comments to specific students during the weekly review.

In addition to the procedures described above, participants in the OME+ condition received brief personalized feedback written on the *Faculty Feedback Form* by the instructor. The instructor reviewed the forms and wrote comments that included responses to student questions. This process typically took about 2-3 minutes per student each week. These responses might have included a brief comment, reference to the readings, or an invitation for the student to meet with the instructor. Sometimes responses by the instructor also included resources for students to access. At times, the instructor included comments that affirmed student effort or normalized student frustration and struggles with the course material. When multiple students shared similar questions, the instructor would inform each student that the topic would be

revisited in subsequent classes. *Faculty Feedback Forms* were returned to students at the beginning of the subsequent class; students were given 1-2 minutes to read the instructor's feedback before the lecture began.

Measures

During the final class session (week 16), students provided written comments on the usefulness of the *Faculty Feedback Form*. Students were encouraged to elaborate on their experiences with the OME during the semester. The specific writing prompt used to collect feedback on the OME was: *How have these weekly evaluation forms been useful, if at all?* This item was included as the fourth question on the final *Faculty Feedback Form*.

Content Analysis

Procedures described by Insch et al. (1997) for content analysis were used to examine participant written comments about their perceptions of the usefulness of the OME and OME+. These procedures included (a) identifying relevant texts, (b) constructing the codebook, (c) conducting a pilot test of the codebook and coding scheme, (d) data analysis, (e) evaluating evidence of reliability and validity, and (f) reporting the findings (Insch et al., 1997). By using these procedures, the narrative data that we collected from participants were coded into valid and replicable categories for the purposes of quantitative data analysis.

Participant ($N = 48$) responses to the question, *"How have these weekly evaluation forms been useful, if at all?"* were content analyzed by the research team. The research team consisted of the first and second authors, both of whom rotate teaching the research in counseling course in a CACREP-accredited master's program. Using a data-driven, or inductive, approach to codebook development (Schreier, 2012), categories were proposed by each team member after an initial independent review of participant responses. Following this review, the research team

members came to consensus on four categories present within the data that represented student perceptions of the OME: (a) *increased course engagement*, (b) *helped facilitate self-reflection*, (c) *enhanced course materials review and recall*, and (d) *OME was not useful*.

Using approximately 20% of the data ($n = 10$), a pilot test of the codebook and coding procedures was conducted. Disagreements on the assignment of participant responses into particular codebook categories were discussed until there was consensus between the coders. When reviewing the results of the pilot, the research team members added a new category, *other* to capture comments that were inappropriate to include within the initial four categories. Team members also found that, in some cases, participant responses included more than one discrete idea (i.e., coding unit); therefore, some participant responses were divided into more than one coding unit. Each coding unit was placed into a single category.

Immediately after the pilot test, the research team members followed a deductive process, coding the remaining participant responses ($n = 38$) using the finalized codebook categories. Following independent coding, interrater reliability was calculated to assess consistency in coder agreement. Krippendorff's alpha coefficient was .81 (86.5% observed agreement) indicating an acceptable level of concordance (Krippendorff, 2013). Guidelines for the interpretation of chance-corrected agreement coefficients vary within the literature (Krippendorff, 2013), with Neuendorf (2011) recommending an alpha as low as .60 as the threshold for satisfactory interrater reliability. For exploratory research, such as the present study, Krippendorff (2013) argued that alphas ranging from .67 to .80 may be considered acceptable. Further, Schreier (2012) suggested that the number of categories and the amount of interpretation needed to identify categories within the data, should be considered when determining a cut-off level. Based

on these recommendations, we interpreted our alpha as representing an acceptable level of interrater agreement and proceeded to reconciling coder disagreements.

A review of the disagreements did not reveal patterns across categories; in other words, there were no categories that caused a large number of disagreements, suggesting that the codebook possessed acceptable construct validity (Insch et al., 1997). The research team members met to reconcile inconsistencies in coding. Coders discussed areas of disagreement by sharing their rationale for their choice of category; these discussions continued until there was consensus in assigning all responses into a final agreed upon category.

Frequencies and Exact Test Analysis

To examine Research Question 1, counts and percentages of the four categories in total and between conditions were calculated. Next, a series of Fisher's (1935) exact tests (two-tailed) were performed to examine the relations among the frequency of observed categories found among participants and the two OME conditions, OME and OME+ (Research Question 2). Dichotomous variables were used to capture the presence of each category among participants (1 = Present, 0 = Not Present) and fashion 2×2 contingency tables. Fisher's exact test does not rely on approximation, thus making it a valid analytic strategy for small samples and with data that violate the minimum cell size assumptions of the chi-square test of independence (i.e., no cell has an expected value of less than one and at least 80% of the expected values have more than five cell counts; Tabachnick & Fidell, 2013). Family-wise error was controlled for using Bonferroni correction. Statistical significance was achieved if p was less than .0125 (.05/4). Effect size was calculated using Cramer's V ; Cohen's (1988) guidelines were used to determine the magnitude of the effect (small = .1, medium = .3, large = .5).

Results

Most participants (89.5%; $n = 43$) commented that they had found the OME useful. In contrast, only four participants (8.3%) commented that the OME was not useful. We categorized one participant's (0.2%) response as *other*, because it did not indicate if the participant had found the OME to be useful, but rather included a suggestion for how the OME can be used by the instructor. The most common category found across participant responses was that the OME was useful because it *enhanced material review and recall*. This was followed by the categories, *helped facilitate self-reflection* and *increased classroom engagement*. Table 1 contains the counts for each category between conditions with Fisher's exact test results and effect sizes. Because some participant responses ($n = 10$) included multiple coding units, the total category count exceeds the total number of participants ($N = 48$).

Table 1

Categories of Participant Comments on the One Minute Essay by Condition with Fisher's Exact Test Results and Effect Sizes

Category	OME	OME+	<i>p</i>	Cramer's <i>V</i>
OME was not useful			.101	.27
Observed	3	1		
Not observed	13	31		
Increased course engagement			.009	.38
Observed	1	14		
Not observed	15	18		
Helped facilitate self-reflection on learning			.750	.06
Observed	6	10		
Not observed	10	22		
Enhanced material review and recall			.368	.15
Observed	6	17		
Not observed	10	15		

Note. OME = One Minute Essay; OME+ = One Minute Essay plus personalized feedback. *p* values were calculated using the Fisher's exact test.

OME was Not Useful

Two of the four participants who reported that the OME was not useful commented that they had felt rushed completing the questions each week. One participant said that having to fill out the OME actually increased her stress (“They have been more stress inducing than anything”). Another participant wrote that the format of the OME negatively impacted its usefulness, “They kind of feel quiz-like, so I don't know if I spent enough time reflecting on each of them.” Results of Fisher’s exact test revealed no differences in reported usefulness between conditions, $p = .101$, Cramer’s $V = .27$.

Increased Course Engagement

Fifteen participants (31%) reported that they had found that the OME increased their engagement in the course. Nearly all ($n = 14$) responses were from participants in the OME+ condition. Participants felt engaged because the OME helped them pay attention or increased their accountability for completing course readings (e.g., “they've held me accountable for reading each week!”). Several comments demonstrated how the OME served as an opportunity to interact more personally with the instructor, “It was helpful to be able to ask questions and for more information,” and the OME was “a good way for us to communicate with the instructor.” Moreover, some participants commented specifically about the feedback provided by the instructor, “The useful part was when the instructor gave us back articles or other information regarding the previous weeks’ question we had.” Fisher’s exact test results indicate that more participants in the OME+ condition commented that the OME increased engagement, $p = .009$, Cramer’s $V = .38$.

Helped Facilitate Self-Reflection on Learning

One third of participants ($n = 16$) reported that the OME encouraged student self-reflection on learning the course material. According to one participant, the OME was "...useful in getting me to self-reflect on what I actually know." Similarly, another participant commented, "I felt it was important to reflect back on what I was uncomfortable and what was very well understood." Participants commented on how the weekly routine of completing the OME and reviewing it during the next class helped facilitate regular reflection (e.g., the OME helped "see how I've grown in this class from the previous week"). Self-reflection brought about via OME helped increase participants' perceived sense of mastery of the course material, "I have come to see that I see that I learned more from the course than I thought because of the evaluation forms." No differences were observed in participant responses within this category between the traditional OME and OME+ conditions, Fisher's exact test, $p = .750$, Cramer's $V = .06$.

Enhanced Material Review and Recall

The most common response by participants ($n = 23$) was that the OME was useful because it promoted recall and review of the course material. Several participants commented on how the OME helped prompt reflection on the material, within the readings and lecture (e.g., "Good reflection on info gathered in class"). Having to complete the OME, "...forces you to recall information from readings and class" and is a "Good way to summarize key points from readings and class lectures." This process helped one participant, "...consolidate the information and recall it much easier," which helped aid in exam preparation. Writing responses to the OME each week helped participants with understanding the content, "When you have to digest and rewrite concepts, comprehension is more likely (for me)." Results of Fisher's exact test revealed

that there were no differences in the number of responses assigned to this category between groups, $p = .368$, Cramer's $V = .15$.

Discussion

This study had two aims, to examine how students in a counseling research course perceived the usefulness of the OME and to determine whether perceived usefulness differed between two versions of the OME. Overall, most participants found the OME useful. Several benefits of using the OME identified by participants are consistent with student perceptions of the OME found in past studies. Similar to Whittard (2015), who had examined the utility of the OME with business and economics students, participants in the present study commented that the OME helped increase their engagement in the course and provided opportunities to identify and share content areas that they did not fully understand with the instructor.

The most common advantage of using the OME identified by participants was that it enhanced learning by facilitating review and recall of course material. These findings are similar to past research on student attitudes towards the OME (Chiou et al., 2014) and may help explain why the OME improves student test-scores (Almer et al., 1998). The OME may act as an environmental cue that encourages students to critically evaluate the course material. This process may help students develop a more thoughtful and accurate understanding of the content areas that they grasp and the areas that remain unclear. This can lead to more efficient class preparation and studying by the students and more intentional selection of material to revisit each week in class by the instructor.

The category *helped facilitate self-reflection on learning* included comments on how the OME promoted self-reflection on how participants were learning the content in the course. By encouraging self-appraisal, the OME may help increase student interest and confidence in

engaging in the course material (Steele & Rawls, 2015). For instance, students may recognize that learning research was not as difficult as they had anticipated, which may increase their willingness to engage in research-related practices in the future. Self-reflection can also promote learning; Nicol and Macfarlane-Dick (2006) posited that facilitating self-assessment was among seven literature-based principles that supported self-regulated learning. Encouraging teacher and peer dialogue, another benefit of the OME described by some participants, was another principle defined by these authors.

Nearly all comments related to the OME increasing engagement in the course were from participants in the OME+ condition. Many of these participants commented that the personalized responses provided an opportunity to interact with their instructor. Knowing that the instructor would read and respond personally to each OME also motivated some participants to complete the readings before class and be more attentive during lectures. Comments about how participants appreciated instructor responses echoed student feedback reported by Lucas (2010). Lucas found that providing personalized responses to questions posed on the OME helped foster a sense of trust and respect between students and the instructor. Participant comments also showed that the use of the OME+ appears to be consistent with several of the person-centered strategies suggested by Perepiczka et al. (2011) to increase students' interest and confidence in statistics. For some students in counselor education programs, the relational characteristics of their instructor are among the most important factors that help them succeed in didactic courses (Moate, Cox, Brown, & West, 2017). Providing brief personalized responses to the OME appears to be one way that counselor educators can demonstrate their empathy, compassion, and openness to their students.

In general, few differences emerged between conditions. No differences were found in overall usefulness or in the utility of the OME to facilitate self-reflection on learning or to enhance material recall and review. OME+ participants included significantly more comments that were coded as *increased course engagement*. Clearly, the individualized interactions each week helped enhance the utility of the OME in fostering student engagement in the course. Based on the comments provided by participants, the personal connection advanced through the regular exchange of feedback appeared to increase student motivation and interest. These findings suggest that, whereas, the traditional method of the OME can be useful to students by increasing their attention to the course material as well as to the learning process; the OME with personalized feedback has the added benefit of strengthening student engagement in the course through individualized contact with the instructor.

Findings on the OME+ support literature-based recommendations to increase student interest in and learning of research within a master's-level counseling course (Rehfuss & Meyer, 2012). The OME+ increased instructor-student collaboration during the semester, which strengthened student engagement in the course. Prolonged instructor-student engagement is a key ingredient of the semester-long experiential research project described in Rehfuss and Meyer (2012). Regular instructor-student contact provides opportunities for the instructor to offer encouragement and support to students, which are faculty behaviors that have been regarded as essential in helping counseling (doctoral and master's level) students strengthen their research identity (Lee, Dewell, & Holmes, 2014). The OME+ provides the instructor-student contact and regular opportunities for engagement that may enhance student learning of research.

Limitations

Study findings must be interpreted within the context of several limitations. Data were collected using an open-ended question, drawn from past OME research (Chiou et al., 2014; Orr, 2005), which asked participants to comment on the usefulness of the OME. Although the OME was ungraded and students were encouraged to be honest, it is possible that some participants may have responded in a socially desirable manner, describing the benefits of the OME when in reality they did not find it useful. The lack of random assignment is a threat to internal validity; student attitudes about research may have differed across conditions, which would have then possibly shaped their view of the OME's usefulness. OME and OME+ conditions were uniform in terms of course assignments, readings, and student learning outcomes; however, these courses were taught by different instructors and were offered during different times of the academic year (i.e., fall and spring). These dissimilarities in student experience between conditions may have contributed to the observed group differences in OME usefulness.

The samples for each condition were relatively homogenous (mainly Caucasian and female) and unequal in size. Despite our use of a statistical significance test appropriate for small sample sizes, findings should be interpreted with caution. Finally, a limitation of content analysis is that the development of the codebook and coding procedures is influenced by the group of individuals who comprise the research team; therefore, it is possible that another research team would have produced different findings. Moreover, the research team consisted of the course instructors for the OME and OME+ conditions. As a result, it is possible that researcher bias may have influenced codebook development and coding process.

Implications for Research and Practice

Findings suggest that most participants found the OME to be useful; however, whether the OME or the OME+ actually improves counseling student attitudes and knowledge about research remains unknown. Future researchers can examine questions about the effectiveness of the OME to change attitudes, knowledge, and skills by comparing student exam or quiz scores across multiple course sections that utilized OME and OME+ with sections that did not use the OME. Outcomes also can be measured over time across conditions using instruments designed to assess graduate student attitudes towards research (e.g., Research Self-Efficacy Scale; Holden, Barker, Meenaghan, & Rosenberg, 1999). These methods can help establish if the reported increase in course engagement produced by OME+ found in our study enhances student learning above and beyond that of the traditional OME and not using the OME at all.

In addition to investigating outcomes associated with the OME, researchers may wish to explore different uses of the OME in order to identify more efficient delivery methods. This is warranted because some participants in our study did not find the OME useful, with one participant commenting that the OME actually increased her stress. Perhaps utilizing available technology, such as student response software (e.g., Socrative), may reduce the stress of filling out the OME during the class lecture felt by some students. Students could complete the OME using their smartphones during the lecture or immediately (e.g., 24 hours) following class. This would give students additional time to reflect on the OME questions and leave enough time for the instructor to review responses and prepare for the next class session. Utilizing smartphone technology also can provide instructors with a more efficient and timely method of responding to student OME questions; rather than having to wait until the next class, instructors can respond to student comments and questions via the software between class sessions.

Comments by participants who did not find the OME useful seem to support Drummond's (2007) recommendation that instructors needed to periodically check-in and "sell" students on the benefits of the OME in order to keep them engaged in answering the questions each week. Students who are unaware of the benefits of the OME, or have misgivings about its purpose, may view it as a distraction or obstacle to effectively learn the course material. Instructors can present the categories identified in the present study as examples of the potential benefits of completing the OME each week. Clarifying the purpose of the OME also allows students to voice their concerns and questions, which provides valuable information on how to improve the learning activity. Input solicited about the OME during the semester can be used to make modifications to the OME that enhances student commitment to completing it each week. This process can potentially increase the number of students who report that they used the OME to reflect on the course material or their own process of learning.

A key finding that holds implications for counselor educators is that the increased student-instructor contact provided via OME+ appeared to improve student engagement in the course. As a result, counselor educators should consider using the OME+, particularly during class sessions on research topics that students tend to lack interest in or struggle understanding. In other words, this intervention may be especially useful at times during the semester when student anxiety increases and engagement wanes. For instance, it may be beneficial to utilize the OME+ during weeks in the semester when quantitative research or statistics are discussed. Establishing a conduit for direct communication through the OME can potentially help allay student fears and increase their interest in the lecture material. Ultimately, this could increase their confidence, competence, and desire to utilize the research-related knowledge and skills acquired during the course in the future. The brief and simple nature of the OME, coupled with

its potential immediate and long-term benefits, make it a worthwhile endeavor for counselor educators to use in improving student engagement and learning.

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