Mentoring Doctoral Students in Counselor Education for Research Competence: A Developmental Perspective

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Abstract

Doctoral students in counselor education should develop varying competencies in the degree program including research capabilities. However, there is a dearth of research addressing different characteristics of the students based on their research competence development. This article aims to provide a detailed guideline using a developmental approach that counselor educators may use in research mentorship and doctoral students can refer to in understanding their development and validating their struggles. Specifically, the authors used three themes including (a) tasks, (b) self-efficacy, and (c) researcher identity in the comprehensive framework for counselor educators-in-training researcher development (CFCRD). Implications for counselor educators and counselor education programs are discussed.

The Council for Accreditation of Counseling and Related Educational Programs (CACREP; 2015) notes the role of doctoral counselor education programs in preparing counselor educators-in-training (CEITs) to serve as (a) counselor educators, (b) supervisors, (c) practitioners, (d) researchers, and (e) leaders and advocates (Section 6. A.). Although multiple required roles help CEITs be a well-rounded professional, CEITs may find it challenging when they have to develop varying identities and competencies collectively. This challenge has led researchers to study CEITs experiences and ways to support them within each role at different levels (Carlson et al., 2006; Limberg et al., 2013). Researchers have found that doctoral students face distinct challenges such as acquiring necessary skills and developing a new professional identity as they advance in their degree programs (Carlson et al., 2006); thus, they may have a broad range of needs. Accordingly, understanding how to effectively and appropriately support CEITs is of great importance.

Existing literature addresses CEITs training experience in various areas including counseling, supervision, and teaching (Baltrinic et al., 2016; Frick & Glosoff, 2014), however, only a few studies have investigated their experience in training research competence and no study has explained their subsequent developmental levels in depth. To promote CEITs' research competence, it is essential that counselor educators and CEITs understand different stages they may experience in research competence development and the needed support in the transformations. Increasing scholarly productivity is critical in securing jobs for future counselor educators given that CEITs are likely to pursue faculty positions upon graduation (Woo et al., 2017). Woo and colleagues (2017) investigated the career intentions of CEITs ($N = 132$) and found that 80% of the participants expressed their aspirational goals to teach counselors-in-training at universities and colleges. To increase marketability in academia, facilitating their research competence throughout their education program is crucial. Thus, informing counselor educators

and CEITs regarding the different developmental needs of the students may help their transition better.

With increasing pressure to show their capability to conduct research, an effective mentorship in the area is necessary to promote CEITs to be better equipped as strong researchers (Limberg et al., 2020; Kuo et al., 2017). Specifically, offering research mentorship in a developmentally appropriate way may boost student learning. Brown et al. (2009) pointed out that focusing on the process of growth would maximize the advantages of mentoring for both mentors and mentees. For example, counselor educators may provide CEITs with opportunities to acquire critical thinking and research skills at earlier stages, benefitting them by applying the skills to their forthcoming practice (Brown et al., 2009). Briggs and Pehrsson (2008) found that pre-tenured counselor educators received research mentorship to develop scholarly writing competence, which is regarded as heavily important to their future career (i.e., tenure process). Overall, research mentorship for CEITs may provide opportunities for their development as competent researchers, in addition to having a more fulfilling learning experience.

The purpose of this article is to present a conceptual model that can assist CEITs in research competence development, which can ultimately promote their success in academia. Although Carlson and colleagues (2006) proposed a conceptual model to help counselor educators who are facilitating CEITs' professional identity, further descriptions of their research competence development in depth will benefit counselor educators who need more specific guidelines. Another article from Brown and colleagues (2009) suggested a developmental approach for research mentoring, yet attention toward specific stages in CEIT development was not achieved. Thus, this manuscript aims to provide a framework that may (a) inform counselor educators with ways to assist doctoral students in developing research competence, and (b) provide a systematic method

to support CEITs' professional transitions. It is hoped that the information may increase knowledge for CEITs to assess their own developmental stages as researchers, validate their struggles, and seek support as needed; and work as a structure for counselor educators to provide appropriate assistance for CEITs.

Training Research Competence for Doctoral Students in Counselor Education

Since Boyer (1990) addressed the meaning of scholarship in higher education, the definition of scholarly productivity has been discussed among various disciplines including counselor education. Ramsey and colleagues (2002) pointed out that counselor educators utilized a broader meaning of scholarly productivity than relevant traditional activities. Counselor educators recognized that the prior definitions including journal articles, books, and conference presentations are important for their tenure and promotion while having pressure to additionally work on other scholarly works such as writing grants and conducting workshops (Ramsey et al., 2002). In order to define research competence, Wester and Borders (2013) suggested a list of research competence for scholars in the counseling field including: (a) knowledge about the trends of the field, (b) research design and methods, (c) data collection procedures, (d) understanding the relationship among the research processes, (e) limiting bias and increasing objectivity, and (f) enhancing applicability. Overall, a variety of activities involve research competence, necessitating CEITs to be equipped with these skills during their doctoral study.

In addition to the expectation as future researchers, doctoral students in counselor education programs need to develop research competence ultimately to take on the responsibility of completing dissertation research (CACREP, 2015; Section 6) and achieve future success in academia (McGrail et al., 2006; Ramsey et al., 2002). Lambie and colleagues (2008) emphasized the importance of CEITs further engagement in the academic writing process because learning

ways to conduct research and get manuscripts published (e.g., peer-reviewed journal articles) are necessary for graduation and scholarship attainment. In addition, the relevant training may also enhance analytical thinking skills and clinical judgement (Belar, 2000). Barnard-Brak and Saxon (2011) showed faculty who graduated after 2000 had a higher number of publications than those who graduated before the year 2000, suggesting overall trends in academia towards greater pressure for publication. Overall, researchers suggested that research competence development is a pivotal part in counselor educator training (Perera-Diltz & Sauerheber, 2017).

Despite the significance of developing research competence, researchers claim that CEITs do not engage in as much research training as their peers in other disciplines (Border et al., 2014; Kuo et al., 2017; Lamar et al., 2019; Lambie & Vaccaro, 2011; Lambie et al, 2014; Paradise & Dufrene, 2010). In fact, there has been little attention granted to examining the factors that influence research development and scholarly productivity in counselor education (Hoskins & Goldberg, 2005; Kuo et al., 2017; Lambie & Vaccaro, 2011). Other than Lamar et al. (2019) addressing the self-concept theory to better understand the researchers' development among CEITs, there is a lack of exhaustive principles regarding the issue.

Previous researchers in counselor education (e.g., Lambie & Vaccaro, 2011) have referred to other mental health professions. For instance, researchers have provided a guideline to facilitate research development within the field of counseling psychology (Brown et al., 2009; Gelso, 1979; 1993). In his seminal piece, Gelso (1979) suggested ten ways to encourage students to have positive attitudes toward research and Mallinckrodt and Gelso (2002) provided a list of them including: "(a) faculty modeling of appropriate scientific behavior, (b) reinforcement of student research, (c) early involvement in research, (d) untying of statistics and research, (e) facilitating students' perceptions of research ideas, (f) the concept of science as a partly social experience, (g)

teaching that all experiments are flawed and limited, (h) a focus on varied investigative styles, (i) combining science and clinical practice, and (j) training that focuses on how research is achieved in agencies" (p. 62). Gelso (1993) also proposed a theory of the research training environment (RTE), which affects research attitudes, self-efficacy, and productivity of counseling psychology graduate students. The theory has been updated and supported by empirical evidence (Gelso, 2013).

The effort for rigorous research training is not limited to the counseling and psychology field. Gaillard and colleagues (2020) addressed the effort of various scientific societies and organizations to support early-stage researchers in the National Institute of Allergy and Infectious Diseases (NIAID). The NIAID spent $107 million on research training, fellowships, and training programs to support intensive and supervised career development experience (Gaillard et al., 2020). According to various sources and reports about research training, educators should consider both the unique characteristics of a profession and the common needs of early researchers. In regard to a unique training method, Chaussabel and Rinchai (2018) demonstrated how they can utilize a certain type of data (i.e., collective omics data) as a source material to train immunologist researchers. This specific demonstration could be beneficial to early-stage researchers. Meanwhile, research training typically includes experiential pieces (i.e., learning by experience) and common knowledge about collecting, analyzing, and presenting research data (Tuffrey-Wijne et al., 2020) Schmidt and Kirby (2016) also noted the common needs of researchers in a rural setting: systems that support research such as funding, collaboration opportunities with other researchers, access to expertise, and preparation for a long term research activity. These examples have the potential to apply to CEITs based on the common aspects of building research expertise.

Research Mentorship

Mentorship is vital when CEITs face challenges and accordingly need support. In order to explore their experience and reduce relevant stressors, researchers investigated protective factors, indicating a positive role of a mentoring relationship between faculty and CEITs on student persistence (Hoskins & Goldberg, 2005; Protivnak & Foss, 2009). In addition, researchers noted that effective mentorship could be accomplished via purposeful mentorship practices (Castro et al., 2004). Brown and colleagues (2020) noted that mentorship involved relationships with faculty outside of classroom, indicating the need to put intentional efforts to build relationship with students. Kahn (2001) suggested that mentoring experience particularly related to research provided opportunities for CEITs to learn from faculty, resulting in the development of relevant skills. As such, previous researchers have attempted to provide specific strategies that counselor educators may use. For instance, Brown et al. (2009) introduced Kram's (1986)'s three strategies for facilitating mentoring of beginner psychologists at the institutional level as follows: (a) establishment of formal mentoring programs at which early career psychologists can be matched with experienced psychologists, (b) education programs to inform psychologists at various developmental stages with encouragement to make mentoring relationships, and (c) encouragement of mentoring relationships based on specific needs. The framework of RTE and these strategies are greatly beneficial to create a positive research environment—ultimately enhancing the 'scientist-practitioner model' of the counseling psychology field (Brown et al., 2009), which may provide examples that can be adopted to CEITs.

In addition to general mentorship, CEITs need specific help for their research competence development (Carlson et al., 2006; Limberg et al., 2020). Carlson and colleagues (2006) focused on CEITs in early stages, emphasizing the need for developing collaborative relationships in the counselor education program; and Kuo and colleagues (2017) found that advising relationships

were crucial for scholarly productivity during their doctoral study. Furthermore, a recent study conducted by Limberg et al. (2020) examined CEITs' experiences ($N = 11$) when developing research identity by using a grounded theory. The researchers stressed the pivotal role of mentorship and modeling as one of the positive factors for CEITs' growth in their research competence. A participant stated "I did have a research graduate assistantship where I worked under some faculty and that definitely exposed me to a higher level of research, and being exposed to that higher level of research allowed me to fine tune how I do research. So that was reassuring in some ways and educational" (p. 496). Limberg and colleagues (2020) noted that all CEITs in the study shared how important faculty mentoring was for them, suggesting more attention should be paid for research advising relationships for CEITs.

Although a few studies addressed the importance of research mentorship and some ways to support CEITs, there is still a lack of literature providing a specific guideline considering CEITs' developmental stages in the field of counselor education (Kuo et al., 2017). Both understanding the manifestation of research competence development and providing a clear framework for research mentoring are critical to facilitate effective mentorship for CEITs. Taken together, the authors of this manuscript presented a conceptual model entitled "Comprehensive Framework for CEIT Researcher Development (CFCRD)" as a guideline for both CEITs and counselor educators. In this article, we provided the tenets of CFCRD, characteristics of different stages in research competence development, and finally, detailed ways of support for CEITs.

Comprehensive Framework for CEIT Research Development (CFCRD)

Counselor education programs should prepare their students (i.e., CEITs) to become both independent researchers and members of academia who understand how to collaborate with other scholars. There is a dearth of literature that investigates the underlying process that CEITs may

undergo when developing their research competence. A detailed description of researcher developmental level will give counselor educators a deeper understanding of their students, and will help guide their mentorship regimen. As such, the current article intends to fill the existing gap by identifying CEITs' researcher developmental stages and addressing the principles that counselor educators should refer to when mentoring for research and scholarship (See Tables). Comprehensive Framework for CEIT Researcher Development (CFCRD) consists of three themes to depict the characteristics of CEITs at each stage (i.e., Levels 1, 2, and 3), including (a) Task, (b) self-efficacy, and (c) research identity.

Task

Existing research supports that CEITs need to learn different content knowledge as well as have experiential practices to enhance their research competence (Limberg et al., 2020). To clearly demonstrate the essential knowledge and experience that CEITs should have, we identified tasks as one important element for this model. For instance, Carlson and colleagues (2006) recommended several tasks that CEITs may work on in their early years of the program including: (a) working with other peers in a research team, (b) learning to become a critical consumer of different research studies, (c) attending research related workshops, and (d) submitting articles to newsletters at regional/national organizations and articles jointly authored to professional journals. Moreover, they suggested CEITs seek opportunities for learning about grant writing and apply for funding to support their conference attendance (Carlson et al., 2006). In addition, Brown and colleagues (2009) specifically noted that mentors need to assist mentees in improving their writing skills for conference proposals, critical analysis abilities for quality articles, and grant application, indicating example work CEITs are expected to accomplish. Overall, previous researchers suggested multiple activities and tasks enhancing CEIT research competence and we collectively

put them based on CEIT research developmental levels and provided according guidelines for faculty.

Self-Efficacy

Research self-efficacy refers to individuals' confidence in their ability to conduct research (Lent & Brown, 2006). Researchers indicated that the level of self-efficacy is positively related to individuals' research interest and outcome with the samples of CEITs (Lambie & Vaccaro, 2011) and doctoral students in other fields (Morrison & Lent, 2014). Despite the possibility of including self-efficacy as a part of research identity elaborated in the next section, the authors determined to have self-efficacy as a distinctive component. Considering the huge influence of self-efficacy on researchers' attitudes and emotions toward research activities, addressing self-efficacy as a separate component in a mentoring relationship would be beneficial to effectively cultivate CEIT research development.

Research Identity

Previous researchers defined research identity with different components including individuals' perception of themselves as researchers, self-efficacy, and attitudes (Jorgensen & Duncan, 2015; Lamar & Helm, 2017; Limberg et al., 2020; Ponterotto & Grieger, 1999). For instance, Limberg et al. (2020) from their qualitative study found that research identity development is a process. They revealed different elements related to research identity formation such as (a) not knowing what research identity is and (b) identifying themselves as researchers. Although the researchers from this study did not identify the factors they found as linear nor link them with specific CEIT characteristics, we included some of these outcomes in our model based on CEIT developmental stages. In addition, the researchers (2020) identified four aspects regarding CEIT research identity development including (a) purposeful program design, (b)

knowledge relevant to research, (c) practical learning opportunities, and (d) self-efficacy. One quote from a participant includes "I still see myself as a student. … I still feel like I have a lot to learn and I am in the process of learning, but I have a really good foundation from the practical experiences I have had [in my doctoral program]" (p. 494). While Limberg et al. (2020) had an overlapping component of self-efficacy as part of research identity formation, the authors of the manuscript have self-efficacy and research identity as separate elements as noted above based on the extant literature. Taken together, research identity is an essential part of developing research competence for CEITs.

It should be noted that, in accordance with other developmental theories, a later stage does not immediately replace the previous stage; rather, a developmental stage transforms into another one with an increased level of complexity (McAuliffe & Eriksen, 1999). Therefore, different stages may overlap and be strengthened nonlinearly. The following section details each stage of CEIT research development and relevant support that can be provided by faculty.

Developmental Levels and Guidelines

Level 1: Critical Research Consumer & Emerging Scholar

Based on previous literature explaining the year as an important variable in growth, the current article defined level 1 CEITs as first-year and second-year doctoral students who are planning to submit a manuscript to a peer-reviewed journal (Carlson et al., 2006; Lambie & Vaccaro, 2010). Level 1 CEITs are students who do not have any experience with conducting research and/or have little experience participating in research teams as assistants. Transitions are different and varied for individuals but still, the shift from readers of research to research producer may take more than a year. These students may have read multiple research articles as consumers of scholarly work but do not consider themselves as agents of conducting research. In this stage,

CEITs may need to learn a broad range of new skills (Carlson et al., 2006), from brainstorming research interests/ideas to submitting proposals for conference presentations and manuscripts to academic journals.

Regarding the *tasks* of level 1 CEITs, Carlson and colleagues (2006) addressed the requirements of opportunities for scholarly discussion with peers and faculty members. Since the tasks are closely related to professional identity and self-efficacy, it is critical to provide various tasks for early-stage CEITs. Indeed, CEITs have multiple opportunities to gain knowledge by reading articles or evaluating the qualities of such pieces in class as a component of their degree completion. CEITs are required to take a few methodology classes to enhance their knowledge as it relates to research, and learn applications essential to their research agendas. Specifically, they are asked to acquire various skillsets, including conducting quantitative and qualitative methods, using different online survey programs, establishing research protocols, and running statistical programs. At the beginning of this stage, CEITs may consider themselves consumers of research studies and thus assume that published articles are themselves faultless. While these students may read articles based on their interest, they may not read them critically; or under the direction of the instructor. CEITs in this stage would learn that research is conducted through vicarious collaboration (i.e., by studying the materials) and direct collaboration (i.e., by participating in research teams). In addition, CEITs may start applying for funding to attend conferences that are relevant to their field (Carlson et al., 2006). They may not, however, be able to apply for research grants without first developing their own research ideas.

The level of *self-efficacy* is low for Level 1 CEITs, as they typically have high levels of anxiety and insecurity. Hughes and Kleist (2005) interviewed first-semester CEITs and found they doubted their ability and suitability to succeed in the program. They may experience high levels

of frustration and self-doubt when their manuscripts or conference proposals are rejected. These beginning researchers' high anxiety levels are thus likely to increase an extrinsic motivation for research (e.g., increasing the number of publications and getting acknowledged by others) rather than an intrinsic motivation for investigating their own research interests. When they are eager to learn and improve themselves, these CEITs tend to say yes to every project they are invited to regardless of topic, possibly resulting in poor time management and increased confusion about their research. On the other hand, some level 1 students may avoid participating in research activities due to high levels of anxiety, delaying their development in research competence.

The *research identity* of Level 1 CEITs is critical to develop because a solid identity as researchers will make them resilient against various challenges. Austin and colleagues (2009) found some of first-semester CEITs struggled with a sense of identity. Nerad and Miller (1996) noted that students who left graduate programs early reported a feeling of alienation and not 'having a calling' for research. CEITs may develop research identity based on their exposure to different research related materials and discussions and also may experience a high level of stress in their transitions as they juggle a host of other identities, such as future supervisors and teachers (Dickens et al., 2016). Still, CEITs at Level 1 do not have a strong research identity and have more opportunities to criticize and evaluate existing studies. As their knowledge and experience increase, CEITs may develop their own research interests and agendas. Over time, they generally exhibit an identity shift from research consumer to research producer.

Guidelines for Level 1. Guidelines are provided based on three domains as noted above. With regard to the *tasks* that Level 1 CEITs must accomplish, counselor educators should personally seek to achieve a wide range of goals when considering their developmental level, including: (a) providing a manageable amount of work, (b) teaching for time-management, (c)

offering direct feedback, (d) helping set small goals, (e) encouraging them to learn different basic methods, (f) encouraging them to ask questions/help, (g) submitting conference proposals with CEITs and helping them join research teams, (h) modeling professional language (Carlson et al., 2006), and (i) encouraging CEITs to seek funding for conferences and pertinent training. Carlson and colleagues (2006) emphasized that starting the publication process early would help CEITs develop scholarship competency, which will be useful in their future as faculty members. Scheduling regular meetings would be helpful as well. As Level 1 CEITs may find it difficult to juggle these tasks, counselor educators should also emphasize self-care by encouraging their students to explore a variety of wellness strategies.

To address CEITs' *self-efficacy*, it is recommended that students raise their awareness of the expectations established by their program curriculum as well as their faculty advisor (Carlson et al., 2006). Counselor educators may come forward regarding the minimum requirements and what CEITs may pursue for their further development. Establishing mutual expectations is essential as researchers have indicated that higher attrition rates occur when discrepancies in expectations exist between faculty and CEITs (Hoskins & Goldberg, 2005). In addition, addressing CEITs' anxiety by reminding them of their developmental level and validating their feelings is both reassuring and important (Dollarhide et al., 2013). Hughes and Kleist (2005) noted the effects that positive feedback could have on CEITs' growth. Specifically, students who experience self-doubt and uncertainty may develop a strong belief in their capabilities when given positive feedback.

Regarding their professional *identity development as a researcher*, CEITs at Level 1 may find it difficult to understand the values and priorities of their new profession (Kerlin, 1995). Emerging scholars, in particular, may struggle with juggling various duties. Hughes and Kleist

(2005) indicated that CEITs who change their belief system from that of a clinician (i.e., who may only be a consumer of research products) to one who actively conducts research may require a different attitude. Thus, conversing with CEITs about the culture of the professional community and supporting them in their transition may be of great help. Overall, mentors may serve as role models to their mentee's future involvement in research projects and their desire to enter—and contribute to—the professional field (Brown et al., 2009).

Table 1

Comprehensive Framework for CEIT Researcher Development- Level 1 (CFCRD-1)

Level	Theme	CEIT Characteristics	Guidelines
1	Task to achieve	- Gain knowledge by critical reading of articles - Take methodology classes - Acquire research skillsets (quant & qual methodology, survey design, research protocols, and statistical programs) - Participate in a research team - Start to apply for funding to attend conferences	- Facilitate relationship building - Create a safe space - Provide practical experiences/guidelines - Help time management & goal setting - Encourage CEITs to learn basic methods - Submit conference proposals with CEITs - Model professional language usage - Encourage CEITs to seek funding - Schedule regular meetings - Visit a self-care plan
	Self-efficacy	- High level of anxiety, frustration, and self-doubt - Feel insecure & overwhelmed - Dependent on their advisor - Extrinsic motivation resulting in poor time management	- Raise CEITs' awareness of expectations established by the program and advisor - Establish mutual expectations - Remind CEITs of their developmental level to validate their anxiety - Provide positive feedback for growth
	Identity	- Transition from research consumer to producer - High level of stress caused by juggling many other identities and responsibilities	- Converse with CEITs about the culture of the professional community - Support transition - Serve as a role model to CEITs and help them connect the faculty role with their own future job as counselor educators

Level 2: Imperfect Perfectionist

Level 2 CEITs have typically developed their research competence further, thereby increasing the number of research projects they have personally worked on. We defined level 2

CEITs as at least second-year doctoral students who strive to actively develop research competence (Limberg et al., 2013) and have some experiences in submitting manuscripts to peer-reviewed journals. As CEITs enhance their research competence, they must advance themselves by seeking out and accomplishing more *tasks*. This may involve collaborating with other scholars more frequently by offering to help others, while at the same time starting conversations about their own research proposals (Carlson et al., 2006). These students often collaborate with senior researchers, come up with new research ideas to develop, and initiate research projects. Based on their own personal experiences, they are aware of their own strengths and weaknesses and are more intentional when selecting research projects to participate in and who to collaborate with (Borders et al., 2012). Furthermore, they seek out internal grants to support their research projects.

The level of *self-efficacy* that CEITs demonstrate at this stage is more enhanced than what appears at Level 1; this is because Level 2 CEITs are able to approach one or two methods with familiarity and mastery. They may develop more research agendas based on the knowledge of research methods and designs, thus resulting in a reduced level of anxiety and concerns about their performance. The students may earn increased trust from co-researchers, which allows them to be more assertive when developing their own interests. Although they show a higher level of self-efficacy compared to the former stage, however, such self-efficacy is still dependent upon the number of outcomes, including acceptance of publication. As such, CEITs at this level sometimes exhibit a strong degree of frustration and discouragement. In addition, CEITs may show a higher level of perfectionism when it comes to research, which may cause heightened stress due to the absence of certain skills and an inability to manage different responsibilities.

As they become more independent, CEITs at Level 2 are still developing their *research identity*. Though they may continue to struggle with their identity as future counselor educators,

they are typically able to grasp what is expected of them more easily. Specifically, CEITs understand the importance of building research competence so that they can continue to work on their dissertation and publish their manuscripts in the future. Still, they are likely to feel disappointed when their manuscripts are rejected, as they typically have a strong emotional attachment to the work. In addition, they may experience imposter syndrome as they are exposed to more experienced researchers and may have a high expectation of themselves as CEITs such as having multiple publications and several grants for their research.

Guidelines for Level 2. While CEITs at this level develop more competence, they are still on a developmental path, resulting in their confidence sometimes fluctuating and obsession with outcomes such as having their manuscripts published. To assist these students, providing developmentally appropriate *tasks* may help. Specifically, encouraging them to collaborate with others as well as initiate research projects as a principal investigator may give them the opportunity to more thoroughly develop their research capacity. Faculty may introduce other researchers who have similar research interests with CEITs including senior doctoral students, alumni, and other scholars who may have expertise. Even in a bigger project, faculty may allot additional work that CEITs may benefit from. As students raise their awareness on their strengths and areas for improvement, counselor educators may provide resources for them to establish their primary research methods as well as challenge them to expand their scope of methodologies. Furthermore, inviting CEITs to a team applying for grant applications and/or supporting them in submitting their own small grant application would be advantageous.

CEITs' level of *self-efficacy* may be higher as they are equipped with more skills and knowledge as compared to the previous stage. Still, they may exhibit instabilities in self-efficacy or self-confidence because they do not have enough experience related to research. Thus, faculty

may boost CEITs' autonomy and self-efficacy by allocating both major and minor tasks and providing feedback on their overall projects. In addition, counselor educators need to validate their feelings when their manuscripts are rejected and address how to cope with failures. Furthermore, faculty may facilitate their self-awareness by encouraging them to reflect on their strengths and weaknesses. Some CEITs may rush their development, resulting in the need for counselor educators to help them establish their own pace and develop strategies together. Specifically, mentors can consistently assist students in creating their own self-care plans while monitoring their own wellness as the amount of work CEITs are working on increases.

To bolster Level 2 CEITs' *research identity development*, counselor educators may model behaviors including how to: (a) bring up a conversation regarding authorship, (b) demonstrate how to say no to projects that may not help their career or learning, and (c) address specific challenges such as conflicts between co-authors. In addition, checking in with CEITs and gradually treating them as a colleague who has their own voice would be beneficial. Finally, encouraging CEITs in their own research projects as well as promoting research collaboration would be valuable.

Table 2

Comprehensive Framework for CEIT Researcher Development- Level 2 (CFCRD-2)

Level	Theme	CEIT Characteristics	Guidelines
2	Task to achieve	- Collaborate with other scholars more frequently - Come up with new research ideas to develop - Initiate research projects - Raise awareness of their strengths and weaknesses - Become more intentional when selecting projects - Seek out internal grants to support their research projects	- Encourage CEITs to collaborate with others as well as initiate research projects as principal investigators - Introduce other researchers with similar interests - Provide resources to establish the primary research methods as well as challenge them to expand the scope of methodologies
	Self-efficacy	- Demonstrate more enhanced self-efficacy than before	- Boost autonomy and self-efficacy by allocating both major and minor tasks

	- Be familiar with one or two methods in research - Have a reduced level of anxiety and concerns - Gain increased trust from co-researchers - Self-efficacy is dependent upon the number of outcomes; therefore, there is a strong degree of frustration and discouragement based on outcomes	- Provide feedback for overall projects - Validate CEITs' feelings when their manuscripts are rejected and address how to cope with failures - Help CEITs to raise awareness on their strengths and weaknesses
Identity	- Understand the importance of building research competence - Stress from transition decreased but desire to develop research competence increased; sometimes they suffer from imposter syndrome	- Be a role model: (a) bring up conversations regarding authorship, (b) demonstrate how to say no to projects that may not help their career or learning, and (c) address specific challenges such as conflicts between co-authors

Level 3: Advanced Researcher with Realistic Vision

Level 3 CEITs may have conquered more advanced work than those in the prior stages including getting several manuscripts published in peer-reviewed journals, establishing a group of co-authors they may work with together for different topics, and expanding the scope of their research agendas and methods. Although CEITs who leave programs are likely to do so at an early stage rather than at a later one (Nerad & Miller, 1996), there is still doctoral student attrition at this level in counselor education (Willis & Carmichael, 2011), indicating the need of support for their maintenance in the program. The *tasks* CEITs at Level 3 may need to achieve based on their research experience and skill acquisition include grant seeking and interdisciplinary research collaboration. They may benefit from seeking funding opportunities for their research both internally and externally from a university and outside institutions and establishing a line of research based on the projects that they would selectively choose to work on. Furthermore,

collaborating with scholars across disciplines may help them broaden their range of research agendas and methodologies. In addition, working with junior doctoral students may provide opportunities for Level 3 CEITs to practice their roles as counselor educators by supporting and assisting students at Levels 1 and/or 2 in their own research development.

The level of *self-efficacy* CEITs at Level 3 have is advanced as they know how to use several statistical programs or qualitative methods with which they can develop research ideas further. Specifically, the students gain more confidence as they achieve certain goals and are more willing to share their weaknesses in order to discuss strategies for better approaches. Experienced doctoral students are more willing to expand their scope of knowledge by learning new things such as a different methodology or a statistical program. In addition, going through the publication process may give a deeper understanding of the nature of editorial work. Over time, CEITs develop full confidence in their research ability and naturally lead different research projects as principal investigators. These individuals often feel less rejected when their manuscripts are not accepted due to increased understanding that they can learn and improve their work based on the feedback provided.

The *research identity* of Level 3 CEITs is integrated at this point as they stabilize their workload for research and other responsibilities. In addition, they have a balanced level of motivation both extrinsically and intrinsically because they have pressure to finish their dissertation and get an academic position after graduation, as well as find inner joy in answering their research questions. CEITs at this level are autonomous and independent and know how and when to discuss authorship, delineate roles, and hold co-researchers accountable for their responsibilities and due dates. These advanced students might experience increased academic

responsibilities and scholarly productivity as they prepare for the transition from trainees to professionals (Brown et al., 2009; Kaslow et al., 1992).

Guidelines for Level 3. CEITs at level 3 are advanced researchers with realistic visions and they have achieved sophisticated tasks through their own experience in research and scholarship. Accordingly, counselor educators need to work with them as independent researchers while consulting with them as needed (Brown et al., 2009). In terms of developmental *tasks*, providing challenging work to facilitate learning may help. In addition, encouraging CEITs to lead research teams and collaborate with others for interdisciplinary agendas may expand their research span. Furthermore, supporting CEITs in broadening their methodological research approaches and applying for both internal and external funding can be beneficial (Carlson et al., 2006).

The level of *self-efficacy* for CEITs at Level 3 may be high as they have increased their amount of experience as principal investigators and work with other scholars. They may also have a high motivation to learn different strategies to conduct research more effectively and explore different learning experiences. Or on the contrary, they may find themselves revolving around the same topic or methods and may feel burned out. Thus, faculty need to ensure that the students spend time taking care of themselves and continuously remind them of the importance of wellness. As Level 3 CEITs may also help junior doctoral students, their workload may still be high, further resulting in the need for work/life balance. Mentors may model behaviors in working with junior scholars such as scheduling meetings when requested and introducing resources and opportunities.

CEITs at this level will have incorporated their *research identity* into a counselor educator identity. They understand the importance of conducting research and how they need to approach it as their duty. Counselor educators may facilitate their further development by providing suggestions for CEITs to increase their capabilities on different types of projects for their growth.

In addition, faculty may encourage Level 3 CEITs to pay attention to training future CEITs as they also need to know how to educate them as counselor educators. Overall, CEITs may continue developing themselves to a higher extent with the support of counselor educators in the preparation program.

Table 3

Comprehensive Framework for CEIT Researcher Development- Level 3 (CFCRD-3)

Level	Theme	CEIT Characteristics	Guidelines
3	Task to achieve	- Seek external and internal grants - Work with scholars in interdisciplinary research collaboration - Work with junior doctoral students to practice their future roles as counselor educators	- Work with CEITs as independent researchers while assisting them when needed as a consultant - Provide challenging work to facilitate learning - Encourage CEITs to lead research teams and collaborate with others for interdisciplinary agendas
	Self-efficacy	- Exhibit more confidence based on their experiences - Willing to share their weaknesses to discuss strategies for better approaches - Understand the process of editorial work	- Remind CEITs of the importance of wellness - Be a role model in working with junior scholars - Schedule a meeting when requested - Introduce new resources and opportunities
	Identity	- Integrated as they stabilize their workload for research and other responsibilities - Have a balanced motivation both extrinsically and intrinsically - Show a solid identity as researcher in counselor education	- Provide suggestions for CEITs to increase their capabilities in different types of projects - Encourage CEITs to pay attention to training junior doctoral students

Discussion

Based on the need for a comprehensive framework addressing research competence development, the authors identified three relevant components including tasks to achieve, self-

efficacy, and research identity, and provided a guideline to understand the developmental stages of counselor educators-in-training and ways to assist counselor educators in better mentoring CEITs for research and scholarship. It is important to note that students may show overlapping needs dependent on their growth in different aspects despite the distinct stages presented in this article. For instance, a CEIT may already have more knowledge in research methodology and need to work on different research projects right away at the beginning level. Taking this into account, counselor educators are encouraged to be cognizant of CEITs' different developmental needs and provide appropriate support. For CEITs, they may use the information outlined in this article to actively monitor and engage in research-related activities in a way that can contribute to their development as well as greater marketability in their future. Moreover, the information in the current article may help CEITs understand the importance of taking ownership of their learning and taking proactive actions with intentionality.

This article is based on the previous literature with the hope of practically guiding counselor educators. Further research is warranted to examine CEITs' perceptions of their experience as they develop themselves as researchers in order to more fully understand what they are going through. Therefore, future researchers may investigate this population to provide empirical evidence for the framework that was introduced in the current manuscript. It should be noted that this article is the first guideline that collectively shows what CEITs are likely to experience in their development as researchers and provides guidance for counselor educators' to appropriately support them.

Further Suggestions for Counselor Educators and Counselor Education Programs

The current article presented a framework that current and aspiring counselor educators may use in understanding CEITs' research competence development and support what CEITs

would need based on their distinctive developmental stages. As Brown and colleagues (2009) noted, counselor educators have multiple responsibilities such as teaching, supervision, service, and research. Due to the substantial time commitment in planning and managing mentoring relationships, it can sometimes be challenging for counselor educators to provide their mentees with appropriate guidance in research and scholarship. Therefore, detailed guidelines will be beneficial for counselor educators to refer to and consider in their mentorship. In addition to the comprehensive framework that counselor educators may individually look into, the current section discusses further suggestions regarding: (a) multicultural considerations for counselor educators in building research mentorship, and (b) potential curriculum that can be included in counselor education programs.

Counselor Educators

Although the proposed guideline provided multiple factors to take into consideration in establishing a research training mentorship, counselor educators should account for diversity issues in building relationships and promoting CEITs' research exploration. Researchers suggest that multicultural differences may influence the relationship between faculty and CEITs including microaggressions and misunderstandings (Henfield et al., 2013; Shen-Miller et al., 2012). Furthermore, students' identity such as gender, sexual orientation, and disabilities may affect the dynamics of communication (Scholosser et al., 2011). As such, insensitivity to varying characteristics and identities of CEITs may be detrimental to effective mentorship. In order to avoid relevant conflicts, counselor educators should take proactive actions to handle issues including exploring cultural differences and privileges (Scholosser et al., 2011). In addition, counselor educators may facilitate CEITs' research interest development by encouraging their own identity exploration when they struggle with finding their own research topics. This approach may

help them develop intrinsic motivation toward research. In this way, counselor educators can provide CEITs with the support and encouragement needed to facilitate their success.

Counselor Education Programs

The provided research mentoring guideline in this article cannot be accomplished without environmental support. Generating an environment that boosts CEITs' development in research is of critical importance. As Lamar and Helm (2017) suggested, a research training environment consisting of mentoring and research experiences is imperative to facilitate researcher development among CEITs. Specifically, providing research opportunities in a minimally threatening way to CEITs in their early career path is essential. Based on Gelso's (1979) pivotal work on research training environment, several researchers noted the importance of the organizational approach, which is not limited to individual mentorship (Lamar et al., 2019; Lambie & Vaccaro, 2011; Love et al., 2007). Efforts toward strong research mentorship should be designed and supported at the institutional level. Counselor education programs can match CEITs with faculty members to collaboratively work at submitting conference proposals and manuscripts. Lambie and Vaccaro (2011) underscored that the purposeful mentoring process in early stages would elevate doctoral students' self-efficacy in research. As CEITs develop into the later stage, educators have a responsibility to promote a research facilitative environment with their colleagues.

Furthermore, counselor education programs need to be mindful of different needs that CEITs may have and use the information to mentor doctoral students properly, as well as modify their curriculum to best assist CEITs in their transitions. Based on the framework of the current article, counselor education programs can ensure consistent assistance for CEITs' success as well as intentional approaches for their growth in their research abilities. The curriculum can help counselor educators hold themselves accountable in supporting student success and eventually

benefit CEITs. Specifically, curriculum may refer to a developmental perspective so that doctoral students can learn necessary research content such as quantitative and qualitative research methods and gain practical experience based on their developmental stage. For example, CEITs at different levels may work together during the degree program to facilitate their growth. In fact, CEITs in Level 1 research competence need to learn basic skills and may benefit from having a mentor who just went through the same phase, while Level 2/3 CEITs can have an opportunity to gradually transition into future research mentors and work with colleagues. Therefore, a curriculum can be designed including research mentorship into two parts and award credits for research internships. The curriculum that is organized based on this developmental approach will decrease the substantial time commitment of counselor educators in maintaining the mentoring relationship and still contribute to the establishment of a strong research community in counselor education programs.

In conclusion, CEITs are likely to successfully finish their degrees and show higher research productivity when they have increased support and a positive research environment. Most CEITs may experience transformational changes in their transition from students or professionals to counselor educators; research is typically an uncharted territory for many of them. Thus, counselor educators and counselor education programs need to help their students develop research competence and a strong research identity by being aware of developmental considerations. An environment that systematically supports both educators and students would help counselor educators reduce the amount of time that they need to spend planning and allow for balance among their multiple responsibilities. Consequently, counselor educators-in-training would benefit from the systematic approach in their learning and growth.

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