Perceptions of Critical Thinking: Seeking Instructional Strategies in the Development of Critical Thinking Skills

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Abstract

Critical thinking is the goal of post secondary and graduate education with the focus on producing independent professionals. However, research has indicated that while critical thinking is the goal, pedagogy has not adjusted to meet the objective. There has been very little research done exploring pedagogy in relation to critical thought with graduate students, and more specifically, counseling students. In this study, six faculty members and thirty-six students provided written interview responses regarding personal definitions of critical thought, and instructional methods that would teach critical thinking. These responses were examined for themes. Both faculty and students believed critical thinking to be essential to professional counseling practice and felt that students needed to be supported and challenged to develop as critical thinkers. Themes and subthemes are discussed in detail in this article.

Keywords: counselor education, critical thinking, pedagogy, qualitative, instructional design
Faculty and Students’ Perceptions of Critical Thinking:

Seeking Instructional Strategies in the Development of Critical Thinking Skills

Agreement exists that students’ ability to think critically is a fundamental objective of higher education; however, students’ perceptions reveal that the instructional formats used in higher education often do not reach these objectives (Birgegard & Lindquist, 1998; Elder, 2004; Halpern, 1999; Paul & Elder, 2003). This information begs the question, how does counselor education pedagogy affect students’ development of critical thinking skills? While it is true that counselor education research has explored the connection between critical thinking and counselor development, training, and supervision (Griffith & Frieden, 2000; Marshall & Fitch, 2001; Robinson, 2001; Holtz-Deal, 2003), little attention has been focused on the perceptions and effects of graduate instruction on the development of critical thinking skills (Hilenberg & Tolone, 2000). The purpose of this study was to fill this perceived void in the literature and examine the differences between faculty and student perceptions of what constituted critical thinking and the effect of instructional strategies on the development of those skills.

Review of the Literature

The literature related to counselor training clearly supports the importance of counselors in training developing competent critical thinking skills (Fitch, 2001; Gervey, Drout, & Wang, 2009; Robinson, 2001; Yalisove, 2010). For example, Fitch (2001) argues for the importance of counselors developing proficiency in critical thinking as a key component to influencing the counseling process and client change effectively. Likewise, Yalisove (2001) emphasizes the importance of counselors being able to demonstrate effective counseling and critical thinking skills in practice. Both Fitch and Yalisove indicate that the use of critical thinking skills
facilitates therapeutic relationship and growth, while allowing for the inclusion of best practice methodology.

Whereas researchers have investigated the use of specific methods of improving critical thinking at the graduate level, the literature appears to lack student and faculty perceptions regarding critical thinking and ways that foster its development. Researchers have suggested that particular methods of instruction (i.e., debates and discussions) have been useful in advancing the development of critical thinking skills (Gervey, Drout, & Wang, 2009). These researchers were interested in investigating faculty and student differences directly to gain a richer sense of the experience of learning (e.g., development of forward thinking and continued development of the “life-long learner” attitude). Ikiugu and Rosso explored the use of theory-based discussions to cultivate an environment that would foster critical thinking, and they found that not only did the students develop learning skills and want to learn more, but they also made learning a part of their identity.

Critical thinking and life long learning within a counselor education training program is beyond simply attempting to achieve a grade or standing in a program. These goals are in some ways lofty, in that they look towards a student moving beyond the role of a student, and seeing themselves instead as professionals in practice who must know and understand, or have a mastery orientation, to be successful in their work with clients and students. As Lewis, King, Pitt, Getachew, & Shamburger (2010) noted, we are asking students to look beyond themselves to see what is best for others and the community overall. More exploration into how to facilitate an environment for faculty and students to adopt these higher level goals is needed. This understanding would then inform counselor education pedagogy in order to enhance the
development of critical thinking skills in counselor development, and ultimately create stronger professionals.

Research by others has indicated that creating a classroom that encourages critical thinking and fosters long learning goes beyond pedagogy. A facilitative environment also involves the personal dispositions of the students and faculty and the relationships developed in the classroom. Bartels, Magun-Jackson, and Ryan (2010) studied 146 undergraduate students and found that their personal dispositions affected how they learn. Those students with mastery orientation, or a life long learning attitude, were able to move beyond tendencies towards procrastination and fears of failure because they wanted to learn in addition to showing what they know. These authors noted that, at times, it is partly the responsibility of the faculty to intervene without enabling, especially, when students’ dispositions are getting in the way of their learning. Connection is necessary for some students to learn.

Schraw and Aplin (1998) found that students with life long learning attitudes, or mastery orientations in their learning, are more likely to receive higher ratings from instructors. This would suggest a stronger professional relationship between students and instructors. Additionally, Ikiugu and Rosso (2003) noted that the students they studied were challenged by discussion assignments, faculty prompting, and, at times, the personal connections the material made with students. However, it was those challenging moments that the students noted as their favorite times in class. The relationships between the faculty and students allow for these deeper more meaningful discussions. Students need more than pedagogy to develop critical thinking skills. The research suggests that they need connection with each other, the faculty, and an environment that encourages supportive and challenging dialogue.
As illustrated by the literature review, there is a distinct lack of research exploring faculty and student experiences in classroom instruction and critical thinking. Because of the lack of research, this study starts from an open, qualitative perspective designed to begin to fill the gaps in this area and create a baseline for future research. Specifically, this study will explore the differences between faculty and students on the definition of critical thinking and beliefs about how to best cultivate critical thinking in the classroom. A discussion of the study and findings follows.

**Participants and Methodology**

All graduate students currently enrolled on a full- or part-time basis and five full-time tenure-track instructors and one full-time, non-tenure track instructor within an accredited Council for the Accreditation of Counseling and Related Educational Programs (CACREP) MSE graduate program in a of Professional Counseling Department at a mid-sized, state public university were solicited to participate in this study. A qualitative, phenomenological approach was used in order to gain a “deeper and fuller meaning of the participants’ experiences” of critical thinking and the development of critical thinking skills (Morse & Field, 1995, p. 151). Participants responded to open-ended qualitative questions (Meyer, Shanahan, & Laugksch, 2005) that solicited their perceptions of critical thinking and the instructional strategies that effect the development of critical thinking skills. In text form, questions such as these generate themes that can clarify the ways in which participants account for their experiences and help guide researchers to understand what those experiences mean from the participants’ unique perspectives (Ladyshewsky, 2006).

The student version of the questionnaire gathered demographic information, as well as courses completed, credits earned, GPA, admission to candidacy, and level of clinical program
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(e.g., Practicum, Internship I, or Internship II). Faculty questionnaires also gathered demographic information and included questions on degrees earned, faculty status, and the number of years teaching at the graduate level.

**Population**

The population for this study included six faculty members at various levels (one Academic Staff Instructor, one Assistant Professor, three Associate Professors, and one at Full Professor). The faculty members’ ages ranged from 38 to 60, with an average age of 50.5 years of age. There were three females and three males, and all self-identified as White. All faculty members held doctorates (four Ph.D. and two Ed.D) at the time of the study. Years of teaching experience ranged from 2 to 21.5, with an average of 9.9 years of experience.

All student participants were completing masters-level coursework in a CACREP accredited program. Of the 36 students participating, there were 28 females and 3 males (five participants did not provide gender information when completing the questionnaire). There were 25 participants that identified themselves as White; three as Asian American; and, one as Mexican American, (seven participants did not provide race or ethnicity information when completing the questionnaire). Students ranged in age from 21 to 45, with an average age of 22.5. The total credits earned ranged from 4 to 48, with an average earned credit standing at 17.97 (one participant did not provide this information when completing the questionnaire). The students GPA ranged from 2.9 to 3.986, with an average GPA of 3.4. Three participants did not provide this information when completing the questionnaire.

**Instrument**

For the purposes of this initial exploratory study, the authors solicited qualitative feedback regarding the perceptions of critical thinking and the effects of instructional strategies
on the development of critical thinking skills from a four-item questionnaire. All participants provided written responses to the following open-ended questions: (1) How would you explain critical thinking to a person you do not know well? (2) How would you explain critical thinking as it relates to counselors and counseling professionals to a person you do not know well? (3) How would you describe the instructional strategies that effect your development of critical thinking skills to a person you do not know? and (4) What has been your experience of instructional strategies related to or affecting the development of your critical thinking skills?

Four individual raters, who included two doctoral level and two master’s level individuals who were trained in counseling and interviewing and qualitative analysis skills, noted emerging themes from their independent review of all participant responses. A multirater card sort system (see Analysis) was employed to achieve inter-rater reliability (Gall, Gall, & Borg, 2005) among individual, independent raters and to identify emergent patterns and themes for each question. For the purposes of establishing interrater reliability it was determined, a priori, that in order to classify an item as a theme, it had to appear a minimum of three times in the responses to questions. Thus, raters reviewed aggregated content in the form of questionnaire responses and determined through their independent analysis patterns (i.e., themes) that emerged (Boyatzis, as cited in Patton, 2002). When all raters completed their independent evaluation and distillation of patterns into themes, each rater shared those themes that emerged from their reduction of the data, which was provided via written responses. A minimum of three of the four raters would be required to agree upon any one item for it to be classified as a theme (i.e., .75% interrater agreement). All four raters completed a pilot theme distillation on a similar set of responses to determine that instructions, questions, and procedures were clear and explicit as well as to correct any obvious flaws (Gall, Gall & Borg, 2005).
Procedure

All students currently enrolled for the 2007 spring semester ($N = 90$) and current teaching faculty ($N = 6$) were provided with an explanation of the study, questionnaire and cover letter, in which they were offered the opportunity to participate. All instructors for courses currently being taught were provided with appropriate numbers of questionnaire packets to be distributed to interested students. Participation was voluntary and each individual indicated his or her willingness to participate by signing an accompanying informed consent form of which he or she received a copy. The procedures and methods of the study were evaluated by the Institutional Review Board of the authors’ university to ensure the ethical treatment of participants and adherence to research procedures as they relate to the American Counseling Association (ACA) Code of Ethics (ACA, 2005).

Analysis

Four open-ended questions were analyzed using a qualitative methodology to isolate patterns and themes in perceptions of students and faculty (Meyer, Shanahan, & Laugksch, 2005). Analysis of the data required an initial evaluation of all written responses by each rater independently in order to form an overall inductive analysis of responses. The raters then began the process of theme distillation (i.e. noting phenomena that emerges from the written text Miles & Huberman, 1994).

In order to list all the responses to the first, second, third and fourth questions in separate response sets, the researchers disaggregated the responses to each question. The researchers kept the student and faculty responses separate for comparison purposes. Four individual raters noted emergent themes from their independent review of the questions (36 currently enrolled students and six faculty members both responding to four questions [for 144 student responses and 24
The first step in this process is to recognize that at which you are looking. There are 42 separate respondents (36 currently enrolled students and six faculty) who volunteered to participate in the study. There were four questions asked of each group. The four independent raters disaggregated each specific response and placed into numbered sets corresponding to question 1 through 4 for student and faculty responses. For each set of responses, you are to note, through your independent judgment, any emerging themes. Beginning with the first set of responses under question 1, review the responses to the question: "How would you explain critical thinking to a person you do not know well?"

After reading through the list of responses once in their entirety and becoming familiar with the responses, start reducing the information by combining similar items. This process will continue until all the similar items are combined. The number of themes may vary depending on the quantity of similar or dissimilar responses. Once you have combined similar items, transfer identified themes onto 3x5 note cards and label each note card as to the question number and respondent group (student or faculty) being reviewed. This process will be repeated for the remaining three sets of questions. For an item to constitute a theme, it must appear no fewer than three times in the response sets when you are independently reducing the data.

**Results**

Data was gathered through a questionnaire format, using qualitative questions to determine student and faculty perceptions of critical thinking and the effects of instructional
strategies on the development of critical thinking skills. From the content analysis, four independent raters established themes that emerged from the data.

**Faculty Themes**

The first question, “How would you explain critical thinking to a person you do not know well?” generated one emergent theme: *Critical thinking promotes integration.* This theme emerged quite readily from the individual narratives of the faculty and highlights the developmental nature of how one moves in gradations toward a greater knowledge, more somber thought process and synthesis of learning material. One faculty member noted, “Critical thinking is the ability to utilize and involve complex and abstract cognitive domains. It involves movement from lower order mental function such as memorization and recall to more advanced order mental function such as application, comparing/contrasting, integration, and appraisal.” Thus, integration requires the individual to take what they presently know and then couple it with new information to develop a new set of ideas and meanings.

Similarly, in the second question, “How would you explain critical thinking as it relates to counselors and counseling professionals to a person you do not know well?” a fairly straightforward theme emerged: *Critical thinking is vital to working effectively with clients.* The main thrust of this theme is the notion that one’s efficacy needs to develop beyond a surface level conceptualization of change towards a more ecological or systemic perspective in order to assist clients appropriately with problem solving. As one faculty member offered, “. . . our world culturally, socially, experientially, politically, economically, occupationally, morally, is related to other human characteristics, conditions, and roles.” In essence, each person’s experience is unique, valuable, and holistically contributes to the creation of meaningful solutions to the problems they bring to us.
The third question “How would you describe the instructional strategies that effect your development of critical thinking skills to a person you do not know?” had one major theme and several sub-themes: Students need to be “pushed” to think more critically. A primary aim of instructional strategies is to intentionally coach and motivate students to think more critically about course content and to assist them in developing their respective cognitive complexity. This requires an instructor to also engage also in critical thought about the purpose/intention of his or her instructional strategies and their effectiveness. An emergent theme among faculty entailed providing small group discussion along with questioning and challenging beliefs of their students while also providing evaluation and analysis of the topical issues being discussed.

“Faculty/instructors need to consider: ‘Challenging myself to think critically through challenging others.’”

Again, as was the case with question three, question four, “What has been your experience of instructional strategies related to or affecting the development of your critical thinking skills?” had one major theme and several sub-themes. There is a range of “instructional” strategies for developing, expanding, and embracing critical thinking skills. For this question, the ability to challenge oneself to think critically included the sub-themes of having stimulating, challenging, frank and open discussions, while helping students synthesize information. Challenging and stimulating conversations with students that are mutual, non-hierarchical, and reciprocal seem to foster flexibility of thought and enhance the development of critical thinking skills for both the instructor and student.

**Student Themes**

*Critical thinking means “thinking outside the box.”* Considering terms and concepts at deeper levels and looking at problems or issues from multiple perspectives became strong and
evident sub-themes regarding critical thinking. Themes leading to greater problem-solving skill, analyzing, digesting, breaking down, or looking at information from different viewpoints also emerged. One student noted, “Looking at concepts from multiple perspectives allows one to consider techniques and communication styles that best facilitate action in a specific area and allows one to better understand the depth of the concept beyond the surface level only.” The strongest sub-themes to emerge were those of questioning beliefs, questioning what you hear, evaluating information or facts, and questioning absolutes, which from the students’ perspectives appeared foundational to the development of critical thinking skills. Thus, being able to digest intelligently and analytically various forms of communication (verbal, written, visual), while making rational assessments of information, formulating answers to questions, and coherently forming and expressing opinions seemed focal to what it meant to develop critical thinking skills.

As with the previous question, several sub-themes emerged in addition to one major theme from the students’ responses to the question, “How would you explain critical thinking as it relates to counselors and counseling professionals to a person you do not know well?” One sub-theme suggests a focus on a broader context: Critical thinking is vital to understanding the worldviews of clients. Critical thinking in the field of human services is an exceptionally important skill that allows counselors to remain open to the many explanations, perceptions or beliefs that contextualize a given situation. Students felt that critical thinking involved both analyzing the client’s presentation for useful information to assist that client, as well as analyzing their own thinking and behavior as it relates to counseling outcomes. Since clients’ represent such diverse backgrounds and presenting difficulties are varied, counselors constantly have to use critical thinking skills to find the most effective way to help clients, as well as monitor their
own working relationships and professional issues. In addition, a sub-theme of noting and analyzing the multiple-contexts within which clients and professionals function also emerged.

When addressing, “How would you describe the instructional strategies that effect your development of critical thinking skills to a person you do not know?” the emergent theme centered on purposeful feedback and understanding others: Encourage feedback of diverse and divergent opinions. Instructional strategies that assisted students in developing critical thinking skills were those that helped them form their own opinions and beliefs through challenging discourse. Challenging thoughts through spirited discussion became the central theme, as this context pushed students to think beyond what they presently know toward a reevaluation of their own thinking about any given topic. Personal reflection from these passionate and open debates moved the students toward more knowledgeable and informed opinions. A sub-theme that appeared strongly connected to this spirited discourse was the need for students to apply this knowledge through “hands on” or practical experiences.

The fourth and final question, “What has been your experience of instructional strategies related to or affecting the development of your critical thinking skills?” produced robust responses, and yielded several compelling sub-themes including the following: Critical reasoning is best fostered by applied in-class and out-of-class activities. Such activities included reading and researching journal articles, listening to speakers, and working constructively with peers. Participating in group projects was another compelling theme and activity that provided students with multiple opportunities to work collaboratively and cooperatively in the exchange of ideas and beliefs. By processing their thoughts, feelings, experiences and perspectives with peers and receiving immediate feedback on their belief systems, students were able to explore more of the issues before them at greater depth. As one student so aptly stated, “... being
challenged by other developing professionals in the classroom, I am able to ‘take in’ more and look at the ‘bigger picture’.” Still, other themes emerged with regard to reading journal articles and taking various positions based on stimulus questions or synthesizing the information in the form of written essays. Challenging personal beliefs and thoughts through essays, assigned readings, in-class activities, and case conceptualizations all became overriding themes that help students integrate more deeply and think more critically. Self-reflection and journaling helped bring more realistic viewpoints and new awareness to the students’ understanding. Again, as in the previous question the provision of “hands-on” activities and practical application of what was being learned emerged as a central theme.

A final analysis collapsed and synthesized the students’ and faculty themes resulting in three final themes: Critical thinking promotes greater personal and professional integration; critical thinking enhances therapeutic alliance; and critical thinking requires moving to think beyond what is believed or known. Question 4, which specifically addressed the instructional strategies relating to or affecting the development of critical thinking skills, produced the greatest differentiation in faculty and student themes. Faculty believed that stimulating, challenging, frank, and open discussions lead to greater levels of critical thinking. Students, on the other hand, while agreeing that challenging beliefs and thoughts were important, believed wholeheartedly that completing case conceptualizations and applying what they learned through practical application were essential functions to developing critical thinking skills and professional behaviors.

Discussion

This exploratory study investigated student and faculty perceptions of critical thinking skill development with the intent of informing counselor education pedagogy by identifying
instructional methods that promote the development of these critical thinking skills. The methods found to be most useful to students were those that challenged their current beliefs and thinking. This was true for both in-class activities (e.g., role-play, small group discussion) and out-of-class assignments (e.g., case conceptualization, essays). Although students initially balked at some of these course activities and requirements, it was clear from the student responses that being pushed to think with more depth and to become more integrative was most beneficial and rewarding when the course was completed. Faculty saw the need to immerse students fully in stimulating conversations, while joining them in the spirit of ongoing learning. It also became clear from the data analysis that students indicated that they gained motivation through challenging activities that mirrored that of their future career, indicating growth toward a “life long learning” perspective.

Interestingly, the idea of providing challenging learning activities was also noted in Gervey, Drout, and Wang’s (2009) research, supporting debates as a means of fostering the development of critical thinking skills. Whereas, students might find challenging classroom activities uncomfortable or taxing, it appears that more demanding learning activities could cultivate critical thinking more effectively. Pedagogically, this may indicate that faculty needs to provide the connection between content, application, and action in the field, or guide the students toward making their own connections through challenge, feedback, and engaging discussions. Consequently, the process of making higher order connections within the process of learning to think critically is often met with a myriad of feelings and emotions. Remarkably, embracing emotions within the development of critical thinking could be a worthwhile consideration (Gratton, 2001).
Future research should focus on the various curricular experiences (role-play, service learning, small cooperative group, point/counterpoint debate, stimulus questions, etc.) to ascertain, singularly or in combination, the empirical validity in the promotion and development of critical thinking skills. However, it seems that a non-hierarchical position in the classroom where there is mutuality between students and faculty creates an educational context for reciprocal learning and the development of critical thing skills. For students to engage in critical thinking, they must trust their faculty, their faculty’s skill/knowledge base, and the process of learning within the program. These findings support the work done by Schraw and Aplin (1998), Ikuigu and Rosso (2003), and Bartels, Magun, and Ryan (2010). What remains is the continued search for more innovative methods, curricular experiences, and extracurricular activities that will enhance the understanding of graduate students’ experiences of learning, and continued development of the life-long learner perspective and philosophy.
References


