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## Counseling Students' Cognitive Complexity in a Group Dynamics Course: A Thematic Analysis

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## Counseling Students' Cognitive Complexity in a Group Dynamics Course: A Thematic Analysis

### Abstract

Counselor education researchers maintain that cognitive complexity is an important ability for counselors-in-training (CIT) and professional counselors providing individual and group counseling (Duys & Hedstom, 2000; Granello, 2010; Welfare & Borders, 2010; Wilkinson, 2011). Cognitive complexity, simply defined as it relates to counseling, represents how CIT or professional counselors assemble multiple facets of a client's situation for use in counseling (Granello, 2010). Research has linked the ability to construct a more or less complete picture from a client's present circumstances to counseling effectiveness (Welfare & Borders, 2010). According to Bernard and Goodyear (2019) and Granello and Underfer-Babalis (2004), cognitive complexity is linked to a number of counseling competencies such as more detailed descriptions of clients, clearer conceptualizations of client problems, and higher levels of empathy. Moreover, research has demonstrated that higher levels of counselor cognitive complexity correlate to multicultural counseling competencies (Martinez & Dong, 2020) and improved counseling and therapeutic outcomes (Welfare & Borders, 2010). This research underscores the importance of enhancing cognitive complexity for CIT.

### Keywords

cognitive complexity, Bloom's Revised Cognitive Taxonomy, group work, counselors-in-training

Counselor education researchers maintain that cognitive complexity is an important ability for counselors-in-training (CIT) and professional counselors providing individual and group counseling (Duys & Hedstom, 2000; Granello, 2010; Welfare & Borders, 2010; Wilkinson, 2011). Cognitive complexity, simply defined as it relates to counseling, represents how CIT or professional counselors assemble multiple facets of a client's situation for use in counseling (Granello, 2010). Research has linked the ability to construct a more or less complete picture from a client's present circumstances to counseling effectiveness (Welfare & Borders, 2010). According to Bernard and Goodyear (2019) and Granello and Underfer-Babalis (2004), cognitive complexity is linked to a number of counseling competencies such as more detailed descriptions of clients, clearer conceptualizations of client problems, and higher levels of empathy. Moreover, research has demonstrated that higher levels of counselor cognitive complexity correlate to multicultural counseling competencies (Martinez & Dong, 2020) and improved counseling and therapeutic outcomes (Welfare & Borders, 2010). This research underscores the importance of enhancing cognitive complexity for CIT.

### **Bloom's Cognitive Taxonomy as a Framework**

Bloom's (1956) Cognitive Taxonomy offers researchers a framework to understand and classify varying levels of cognitive complexity. Bloom posited that levels of cognitive ability range from simple to complex, outlined in six progressive levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. Because of the widespread acceptance and utility of Bloom's Cognitive Taxonomy in categorizing levels of cognitive ability, we used a revised version of Bloom's original taxonomy to describe the experiences of CIT learning group work outlining the following six levels: remembering, understanding, applying, analyzing, evaluating, and creating (Krathwohl, 2002).

Multiple studies have established that cognitive complexity correlates to a number of therapeutic outcomes in counseling (Bernard & Goodyear, 2019; Granello & Underfer-Babalis, 2004; Welfare & Borders, 2010). Fong et al. (1997) explored the cognitive complexity of master's level CIT over the duration of a counseling program. While their research discovered an increase in some measures of counseling performance, they did not find an increase in levels of cognitive complexity. The researchers suggest the need for the creation of curriculum and training opportunities that foster increasingly greater levels of cognitive complexity in CIT.

Surveying master's level CIT, Granello used Perry's (1999) Theory of Intellectual and Ethical Development to develop a general understanding of counselor-in-training cognitive development. The study found that CIT entering their graduate programs were frustrated that there was not a "right" way to counsel and finished their graduate programs in the relativistic stage. Granello concluded that knowledge and awareness of cognitive development could assist counselor educators in creating curricula that encourage development in this area.

Spurgeon et al. (2012) measured the cognitive complexity of masters-level CIT enrolled in a semester-long professional orientation and ethics course. Following Bloom's Cognitive Taxonomy, these researchers found a relationship between course content and cognitive complexity. They concluded that counselor educators must implement a variety of critical thinking strategies (e.g., using current events, prompting issues of diversity and multiculturalism) to promote cognitive complexity in CIT. Additionally, Duys and Hedstrom (2000) measured and compared the cognitive complexity of CITs who received systematic micro-skills training to those who had not yet taken a skills course. They discovered that participants in the experimental group demonstrated higher levels of cognitive complexity than did those participants in the control group and suggested that supervised skills training leads to higher levels of cognitive complexity.

Welfare and Borders (2010) asserted that cognitive complexity is domain-specific: One can have high cognitive complexity in clinical skills but low cognitive complexity in other disciplines (e.g., engineering). They suggested measuring cognitive complexity in a certain domain would allow counselor educators to intervene in a more effective manner. Additionally, they discovered that counseling-related experiences (e.g., counseling experience, supervisory experience, counselor education experience, highest degree earned) all correlated positively to advanced cognitive complexity.

Granello and Underfer-Babalis (2004) proposed a model of supervision using Bloom's Cognitive Taxonomy to facilitate further levels of cognitive complexity in CIT learning group work. While their model offers supervisors a straightforward series of interventions to promote cognitive complexity in CIT learning group work, Granello and Underfer-Babalis recommended further research to validate this model's efficacy. Our study sought to answer the following question: What levels of cognitive complexity do CIT enrolled in a group dynamics and methods course demonstrate in written reflection assignments as measured by Bloom's Cognitive Taxonomy?

### **Method**

The first author used a qualitative deductive content analysis approach (Hsieh & Shannon, 2005) to describe the cognitive complexity of CIT studying group work. His interest in this subject developed from 10 years of experience facilitating task/work and counseling groups with adolescents, adults, and college students, and leading groups in community mental health and school settings. His research interest further developed when he taught group counseling courses at the university level. Creswell and Poth (2016) maintained that qualitative research strives to empower individuals by listening to their stories. This study seeks to empower counselors-in-training learning group work by listening to them through their written reflections over a semester's time. According

to Creswell and Poth (2016), researchers use qualitative research to develop theory. By exploring the cognitive complexity of counselors-in-training learning group work using Bloom's Cognitive Taxonomy as a framework, findings provided unique insight into counselor-in-training growth and development. Two student cohorts completed a required 15-week group dynamics and methods course in the fall semester one year apart. During the course, we required students to write five written reflections evenly dispersed across the semester (i.e., weeks 2, 5, 8, 11, 14). The first author analyzed these written reflections using the six levels of Bloom's Cognitive Complexity taxonomy.

### **Data Collection Procedures**

After receiving Institutional Review Board (IRB) approval, we contacted participants. We contacted former students by email and sought written permission from all 28 clinical mental health and school counseling master's students from two previous cohorts to analyze archival written class assignments. Ten of the 28 agreed to participate and the first author analyzed all five written reflection assignments from these students. Using qualitative content analysis procedures allowed for rich examples of the cognitive complexity CIT demonstrated during this learning experience.

### **Participants**

Participants for this study included 10 CIT from a master's in counseling program in school counseling and mental health counseling concentrations. These participants had enrolled in and completed one of two group dynamics and methods courses offered two consecutive fall semesters at a large, public southeastern United States university. Six participants were enrolled in clinical mental health and four in school counseling. Three of the 10 participants were male, and seven were female with a mean age of 28.6 years. All seven female participants and two male participants identified as Caucasian, and one male participant identified as African American.

### **Data Analysis**

Participants self-selected a pseudonym to protect their identity and ensure autonomy. The first author followed Marshall and Rossman's (2014) seven-step data analysis procedure to analyze the data. In the first step, he organized the data into 10 sets of written reflections (10 counselors-in-training each wrote five written reflections). In the second step, he read each written reflection multiple times while taking notes about ideas, questions, insights, and observations in each "read through." In the third step, he engaged with the data to "generate categories and themes." According to Marshall and Rossman (2014), this step involves "Identifying salient themes, recurring ideas or language, and patterns of belief..." (p. 214). He then searched for and identified categories and themes in the written reflection assignments. In the fourth step, he coded the data. To code the data, he read and coded each sentence of every set of written reflection assignments using Bloom's Cognitive Taxonomy. To code each sentence into one of Bloom's Cognitive Taxonomy six levels (knowledge, comprehension, application, analysis, synthesis, evaluation), he used keywords at every level of Bloom's Cognitive Taxonomy. To assist in coding each sentence, he created a table (refer to Table 1) that described and provided keywords from each level of Bloom's Cognitive Taxonomy. The second and third authors cross-checked his analysis and provided feedback ensuring clarity and agreement. We did not code introductory, transition, concluding, and other sentences that participants used for the purpose of prose.

### **Across-Participant Analysis of Cognitive Complexity**

The goal of our analysis was to explore cognitive complexity among CIT. To do this, the first author reviewed findings by analyzing levels of cognitive complexity across participants and compared trends in the frequency of analysis, creation, and evaluation-level statements from the first written reflection to subsequent ones while assessing findings across participants. Table 3 provides a composite chart of this analysis.

## **Findings**

### **Occurrence Findings - Bloom's Cognitive Complexity Levels**

The remembering level of Bloom's Revised Cognitive Taxonomy represented the highest frequency of coded statements. Across participants, most remembering-level statements came from the "content summary" section of the written reflections that prompted participants to summarize lessons learned from the didactic component of the class. The frequency of remembering-level statements across participants directly reflects the reflective assignment instructions.

The understanding level represented the second-highest frequency of coded statements. Participants consistently demonstrated the ability to explain, interpret, and understand group work concepts. Participants showed an understanding of these concepts by identifying them in their own small group experiences.

The application level of Bloom's Revised Cognitive Taxonomy accounted for the third-highest frequency of coded statements. Participants routinely took an understanding of group concepts and offered applications of these concepts. As stated above, the instructions prompted participants to apply lessons learned from the small- and large groups. Many times, these application-level statements related directly to participants' areas or populations of interest, such as working with children or adolescents (Sarah, David, Brian, Lauren), or with groups on fitness and nutrition (Jennifer).

The analysis level of Bloom's Revised Cognitive Taxonomy represented the fourth highest frequency of coded statements across participants. Sarah and David offered the most analysis-level statements, 16 and 14 statements respectively; they took situations and problems in their small groups and "dissected" aspects of these situations/problems. Other participants also demonstrated

the ability to analyze a problem or situation by identifying multiple group work concepts within that problem/situation.

The creation level of Bloom's Cognitive Taxonomy comprised the least number of statements. While participants routinely identified aspects of a situation or problem, they rarely took these disparate parts to form a new plan or idea. Jennifer and Matthew each offered a single creation-level statement in their respective written reflection assignments.

Participants rarely demonstrated evaluation-level statements in their written reflection. In critiquing a decision of their small group facilitator, some participants showed an ability to evaluate an experience using some set of criteria. Matthew alone accounted for 10 of the 14 total evaluation-level statements in the entire data set.

### **Cognitive Complexity: Analysis Level Development across Written Reflections**

As shown in Table 3, participants demonstrated the greatest number of analysis-level statements (25 of 60) in the second written reflection. In this reflection, some participants offered analysis-level statements when discussing the approach of their facilitators. Sarah stated in her second written reflection "It seemed to me that the group just went along with her comments the majority of the time and didn't generate much discussion on its own." David also analyzed his leader's approach stating, "I like that our leader doesn't put pressure on us to start because I think that it would inhibit the effectiveness of small group." Other participants focused on analyzing group dynamics. Brian stated, "Using [an] activity like this early in the group's formation breaks down uncomfortable barriers and provides cohesion for the members of the group."

### **Cognitive Complexity: Creation Level Development across Written Reflections**

Across participants and written reflections, the creation level of Bloom's Revised Cognitive Taxonomy contained the lowest frequency of statements (2). While participants demonstrated the

ability to break down a situation (analysis) into separate parts, in only two instances did they demonstrate the ability to use these parts to form a new solution or a whole. Both statements involved taking various aspects of a group leader's facilitation and forming a new aspect of facilitation. Matthew stated, "The lesson that I drew from that experience was to be authentic with my groups, not to look greater than them, but instead to allow them to experience and model vulnerability within the group." Similarly, Jennifer noted how her group leader's approach from an "alternative perspective" helped add depth to the therapeutic experience for all.

### **Cognitive Complexity: Evaluation Development across Written Reflections**

As shown in Table 3, four participants (Jennifer, Sarah, Megan, Matthew) demonstrated 13 total evaluation-level statements or approximately 1% of all coded statements. Evaluation-level statements occurred when these participants offered critiques of their respective group leaders' decisions. For example, in her only evaluation-level statement, Megan stated in her fifth written reflection, "When the facilitator first did this it made sense since a majority of the people in the class are in theories, but when I thought about it more I realized that this facilitator failed to take into account that not everyone is in the counseling program..."

### **Summary of Cognitive Complexity from Across-Participant Analysis**

The remembering, understanding, and application levels of Bloom's Revised Cognitive Taxonomy accounted for 93% of all participants' coded statements. Beyond these expected levels of cognitive complexity—those levels prompted by the written reflection instructions—participants demonstrated cognitive complexity at the analysis, creation, and evaluation levels in approximately 7% of all coded statements. An exploration of cognitive complexity development examined the frequency of analysis, creation, and evaluation-level statements from the first written reflection to

subsequent reflections. This exploration revealed two-and-a-half times as many analysis-level statements in the second written reflection (25) than the first (10).

### **Discussion**

The main finding related to cognitive complexity specifically addressed the research question: Participants overwhelmingly demonstrated cognitive levels of remembering through the application of Bloom's Revised Cognitive Taxonomy. 93% of participants' statements (1057 of 1132) met the criteria for remembering through application levels (refer to Table 3). In the remembering level, Jennifer stated, "Leaders strive to motivate group members and achieve a workable unit." In the understanding level, Megan expressed "I know I am not the only person that experiences these feelings when talking in front of groups so this kind of activity can be very beneficial." At the application level, David wrote, "This is a great tool in group, and whenever I'm conducting group and I hear silence, no matter how long, I will not be the first one to speak."

Alternatively, only 7% of participants' statements (75 of 1132) met the criteria for the analysis, creation, and evaluation levels of Bloom's Cognitive Taxonomy. At the analysis level, Brian expressed, "The role of the facilitator made the group experience therapeutic factors such as universality, imitative behavior, and cohesiveness." At the creation level, Matthew stated: "The lesson that I drew from that experience was to be authentic with my groups, not to look greater than them, but instead to allow them to experience and model vulnerability within the group." At the highest level of cognitive complexity, evaluation, less than 1% of statements met evaluation-level criteria; evaluation level statements were concentrated in only four participants' written reflections. Sarah demonstrated evaluation-level cognitive complexity when she wrote, "By establishing a new temporary group norm that you must hold a talking stick in order to speak ensured that we would

not be shouting over each other... A process that could [have] turned loud and unruly was rendered orderly and efficient.”

Overall, the lack of evidence at analysis, creation, and evaluation levels suggests that most participants did not conceptualize group dynamics and methods at the highest levels of cognitive complexity. This supports Granello and Underfer-Babalis’ (2004) contention, “Although the specifics of the journey vary by theorist researcher, generally it is believed that beginning level therapists...are more dichotomous in their thinking” (p. 160). Similarly, Stoltenberg et al. (1998) maintained that CIT exhibit “categorical thinking.” Evidence from this study supports the models proposed by Granello and Underfer-Babalis (2004) and Stoltenberg et al. (1998). Lauren, for example, demonstrated categorical thinking when she offered a blanket approach to leading group, “As a facilitator, I will give the group members the chance to decide the direction of the session.” Furthermore, when discussing the therapeutic effects of group work, Lauren reflected in a general, linear fashion, “Therapy is not designed to be easy and painless, and when facing issues, it is almost expected that things will get worse before they get better.”

### **Analysis-Level Responses and the Role of Theory**

Most participants (80%) wrote at least three analysis-level statements (i.e., statements that identified and differentiated aspects of group dynamics or methods). These eight participants responded beyond the expected levels of cognitive complexity (i.e., remembering, understanding, and application) and in a few instances responded at the analysis level. When writing analysis-level responses, these eight participants selected and discussed various skills of their group work leaders. Brian (34-yr old, school counseling) identified the effects of his small-group leader’s use of open-ended prompts versus closed-ended prompts. Mary (24-yr old, school counseling) stated “[Classmate 1] and [Classmate 2] managed to put a humorous twist on the presentation, while still

giving the different dimensions the weight they deserved.” Jennifer (25-year-old, mental health counseling) identified several elements of her group leader’s methods: “Consistently encouraging the class to take chances and express here-and-now feeling... extends an invitation to be open.”

Across the CIT participants, eight addressed distinct group work concepts, especially those concepts related to group leadership. David demonstrated his ability to respond with analysis by attending to his group leader’s overall behavior then differentiating those specific techniques salient to him (confidentiality, autonomy/choice, rules/norms). As these eight participants distinguished group work concepts they demonstrated analysis-level cognitive complexity.

Karen (26-year-old, white female) and Lauren (25-year-old, white female), both in school counseling, represented the only participants who did not write any analysis statements. For example, Karen stated in the “Most Significant Group Lesson” section of the written reflection, “I believe the most significant group lesson from the party was: to involve the birthday person—me—in the party plans so he [or she] feels special.” Similarly, Lauren responded to the “Most Significant Group Lesson” prompt by stating, “There were so many factors that connected me to this person.” These statements reflect a focus on the group experience rather than analyzing the methods of group work.

### **Possible Explanations for Lack of Analytic Response**

Wenger and Vallacher (1977) described implicit theory in terms of the influence of expectations on the assessment of interpersonal behavior. According to the researchers, an individual forms their assessment from his or her expectations and beliefs about behavior in particular situations. For example, an individual would assess interactions between two friends differently than interactions between two colleagues. These beliefs underlie individuals’ assessment (i.e., implicit beliefs) and are not readily known to the individual assessing the situation. These

authors noted that an implicit theory informs an individual's interpretation in interpersonal situations.

Relevant to this study, participants' underlying theories may have directed their attention to certain interpersonal aspects of the group. Jennifer stated, "Consistently encouraging the class to take chances and express here-and-now feeling... extends and an invitation to be open." Her implicit theory may rest on expectations and beliefs about facilitating change, such as immediacy and genuineness. These underlying assumptions might have led her to focus on those aspects of group leadership that facilitate change between the group leader and group members. Similarly, Brian's statement, "This continued to give the group a new dynamic as time transpired and the group began to take a new look," may also reflect an implicit theory that directed his focus and subsequent response to the larger dynamics of the group. The eight participants who demonstrated analysis-level responses addressed group work concepts related to group leader behaviors and techniques. This attention, directed by their beliefs and expectations about group leader/member behavior (i.e., implicit theories) led them to analyze salient aspects of group leadership. Conversely, it is possible that Karen and Lauren hold an experiential-centered implicit theory, leading them to summarize and explain their group experiences, rather than analyze them.

Participants' self-efficacy provides an alternative theory to understanding this aspect of the findings. Bandura (1997) said this of self-efficacy:

Those who persist in subjectively threatening activities that are in fact relatively safe will gain corrective experiences that reinforce their sense of efficacy. Those who cease their coping efforts prematurely will retain their self-debilitating expectations and fears for a long time. (p.194)

It is possible the eight participants who demonstrated analysis-level cognitive complexity possessed greater levels of self-efficacy in group work. Jennifer's analysis of her group leader's techniques ("Consistently encouraging the class to take chances and express here-and-now feeling... extends and an invitation to be open") may have reflected her assessment of her own ability (i.e., self-efficacy) to understand group dynamics and methods. Consequently, the effort she put forth in conceptualizing and reflecting on her group experiences may have directly reflected her self-efficacy related to these experiences. The case for "perceived self-efficacy" and commensurate effort reflecting on experiences could be made across all eight participants: These eight participants' greater sense of self-efficacy may have influenced them to respond more intently and "actively" beyond the assignment's expected levels (remembering, understanding, and application). One must also consider the possibility that Karen and Lauren's self-efficacy in group work remained lower than their eight counterparts. Karen and Lauren's reflections consistently demonstrated understanding-level cognitive complexity but did not pursue this understanding to analysis-level cognitive complexity. The possibility exists that both Lauren and Karen's lack of analysis-level responses reflected perceived self-efficacy and subsequent effort.

### **Understanding-Level Cognitive Complexity and Group Activities**

Throughout the written reflection assignments, all 10 participants consistently demonstrated understanding of group work concepts—they responded with understanding-level cognitive complexity. In fact, participants responded at the understanding level in 39% of statements (Table 3), which accounted for the second-highest percentage of responses (comprehending-level responses represented 40% of statements). In responding with understanding-level statements, participants regularly explained group work concepts related to group activities. For example, Matthew differentiated the "forming stage" when discussing a group activity: "Initially, as we were

still in the forming stage, there were many one-sided conversations about topics.” Similarly, Sarah described the norming stage: “The norming stage occurred as we each figured out what our role in the group would be and how we would go about completing the items on the list.”

Responses to group activities followed two major trends. Five of 10 participants (Megan, David, Brian, Matthew, Lauren) connected group work concepts to specific group activities. These five participants demonstrated the ability to clearly explain group work concepts related to a specific group activity. Megan said, “I was the last person to share my decorated bag with the group...I saw how it [decorated-bag activity] served as a guide for the sessions and promoted self-disclosure by group members.” Matthew explained “This week, I observed the power of sub-grouping for group activity. The class participated in a trust walk activity in which groups of three set out to perform three roles...” These five participants’ responses, illustrated by the examples previously provided, demonstrated understanding-level cognitive complexity.

The five participants who did not identify specific activities (Mary, Jennifer, Sarah, Susan, Karen) discussed activities in general terms and explained the activity’s effect on group dynamics. Mary stated, “In one activity, we were asked to reminisce about something...I noticed that several classmates whose memories had tied them to older adults, even though they weren’t instructed to do so.” Jennifer reflected “Usually, group members bond by realizing they have all had a similar feeling or situation in the past, but this group activity allowed members to have a unique experience together.” These reflections represent understanding-level cognitive complexity.

### **Group Activities and Understanding-Level Responses**

Whether participants referred to activities by name or by general reference, these activities facilitated understanding of group work concepts. Kolb’s (2014) Theory of Experiential Learning posits that learning occurs in a four-stage cycle of concrete experience, reflective observation,

abstract conceptualization, and active experimentation. The structure of this Group Dynamics and Methods course followed this cycle outlined in the following example. First, participants learned concepts, theory, and research from the didactic portion of class (abstract conceptualization). For example, Brian learned about cohesion from lectures and class discussions. Then, participants “tried out” certain methods and approaches through in-class experiential activities as well as the stand-alone small-group experience (active experimentation). Brian “sampled” cohesion by participating in the “whatcha thinking, whatcha feeling” activity. Third, participants interacted with group work concepts in their small-group and in-class experiences (concrete experience). In the “whatcha thinking, whatcha feeling” activity, Brian and his group members felt cohesion through direct experience with the activity. Finally, participants wrote about their experiences in their written reflection assignments (reflective observation). Brian demonstrated reflective observation when he wrote, “I would definitely use this icebreaker or a group activity to build cohesion and have my group share a similar experience.” Invariably, understanding-level responses involved discussion related to group activities. In short, the experience of these group activities “transformed” participants’ learning and comprehension of group work concepts.

In addition to Kolb’s (2014) Theory of Experiential Learning, Lave and Wenger’s (1991) Situational Learning Theory may also explain these understanding-level responses. According to Lave and Wenger (1991), learning is not merely receiving knowledge; it is “situated” in a social context. They referred to this process as “legitimate peripheral participation”:

Legitimate peripheral participation provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts, and communities of knowledge and practice. A person’s intentions to learn are engaged and the meaning of

practice. This social process includes, indeed it subsumes, the learning of knowledgeable skills. (p. 29)

Seen through this theory, group activities provided participants with a meaningful social context to “situate” learning of certain group work concepts. For example, the “whatcha thinking, whatcha feeling activity” provided a social context for Brian to situate his understanding of group cohesion. Similarly, the “trust walk” activity provided a context for Matthew to situate his learning of sub-grouping. Finally, the written reflection assignment framed these responses and provided a context for the participants to situate their understanding of group activities. All 10 participants, whether identifying group activities by name or by general reference, demonstrated an understanding of group work concepts. Group activities facilitated this comprehension by providing a meaningful social context for participants to situate their understanding of group work concepts.

### **Application-Level Cognitive Complexity and Written Reflection Instruction Prompts**

The consideration of this key finding relates to situated learning proposed by Lave and Wenger (1991) and described in Key Finding 2. The written reflection instructions prompted students to apply lessons learned from their small- and large-group experiences. Specifically, the instructions read, “...lessons you learned about the facilitator’s role and application of how you will use this as a facilitator in the future and .... the most significant group lesson (i.e., either experiential or didactic) you learned that week and application of how you will use this as a facilitator in the future.” I suggest that the written reflection assignment framed responses, and, therefore, provided a context to situate their understanding. This section describes the range of responses related to this instruction prompt and speculates on explanations for these varied responses.

Participants demonstrated application level in 14% of statements (162 of 1132). These statements included such responses as “I will lead this activity by sharing some of my past personal

experiences and hope to gain universality and group cohesiveness” (Brian). Similarly, Mary reflected “I will utilize the method of recapping the last session, in anyone’s absence, and as a warm-up exercise.” In these and other application-level statements, participants predicted ways to use group work concepts.

Participants responded to the application prompt in one of three unique ways. First, some participants, including Susan, offered a general application, “I would try to lessen the group’s anxiety about disclosing and create an atmosphere of trust by modeling courage, openness, and honesty....” Second, other participants, including David, identified a real-life situation to apply a particular group work concept: “I would use this in the future by breaking into small groups with the same personnel, and having them complete activities to promote group cohesion between specific people.” Third, other participants (Sarah, David, Brian, and Lauren) applied group work concepts and procedures to specific areas of interest like working with adolescents. Lauren stated, “If I’m running a group of five adolescent girls who are not taking therapy very seriously or engaged, I could facilitate an activity where each member would have an allotted time as a group leader.” These three types of responses can be interpreted using two theories: Bloom’s Cognitive Taxonomy and Constructivism.

Participants may have responded with application-level statements in one of three ways because they possessed different aspects of knowledge (remembering-level) for a given group work concept. In the above paragraph, Brian demonstrated “knowledge of specific skills...” when he stated “I would use this in the future *by breaking into small groups...* [italics added]” Susan displayed “knowledge of specific methods...” when she remarked, “I would try to lessen the group’s anxiety about disclosing *and create an atmosphere of trust by modeling courage, openness, and honesty...* [italics added]” Lastly, Lauren demonstrated “knowledge of criteria...” when she

reflected, “If I’m running a group of five adolescent girls *who are not taking therapy very seriously or engaged* [italics added] I could facilitate an activity where each member would have an allotted time as a group leader. Overall, all 10 participants responded to the application prompt in ways that reflected their knowledge of that concept.

### **Limitations**

As is all research, this study has limitations. Limitations include a relatively small and homogenous sample size which lacked racial and identity diversity, the fact that data were collected from one instructor’s group course, the constraints of the assignment instructions and prompts, and the brief time over which data were collected. Additionally, while assignment instructions prompted students to provide critical feedback, many reflections were positive. Participants may have been reluctant to share critical feedback knowing that the course instructor would review and evaluate these reflections. These limitations may prevent generalization; however, the qualitative nature of the research still provides rich and meaningful information for counselor educators and future researchers.

### **Implications for Counselor Educators**

Findings from this study revealed implications for promoting and assessing cognitive complexity in CIT learning group work. These implications inform counselor education group work curricula and supervision of CIT learning group work. As Lloyd-Hazlet and Foster (2013) demonstrated, counselor educators can address cognitive complexity with purposeful activities and assignments. Bloom’s Cognitive Taxonomy equips counselor educators with a useful tool to assess and facilitate growth in cognitive complexity (Granello & Underfer-Babalis, 2004). Counselor educators can design activities in small- and large-group work that challenge students’ thinking to move to higher orders of Bloom’s Taxonomy such as *analysis* and *creation*.

Assignments' written instructions bear implications for promoting cognitive complexity in CIT. MacPherson and Stanovich (2007) found that "decontextualizing instructions" (i.e., instructions prompting participants to set aside prior knowledge and beliefs about topics) significantly reduced undergraduates' biases on certain topics. In the context of group work training, counselor educators could incorporate instructions that prompt students to list preconceived notions about a particular theory, practice, or intervention to encourage less bias (e.g., list several strengths and limitations you perceive in using Acceptance and Commitment Therapy in group work). This practice may help expand their consideration of the material and concepts.

Ericksen and McAuliffe (2011) suggested involving students in meta-cognitive understanding of their learning may increase cognitive complexity. Counselor educators can incorporate Bloom's Taxonomy, as it relates to the coursework, into their class discussion by writing instructions to intentionally and explicitly prompt CIT to respond at higher levels of Bloom's Cognitive Taxonomy. For example, "compare and contrast the differences and similarities of two of Yalom's group therapeutic factors" (analysis); "Defend or argue against the 'no cross talk' rule adopted in some group" (evaluation); or "Construct a group activity that encourages each group member to identify a strongly held bias and then engages the group in interpersonal dialogue" (create). In addition to assignments and the written instructions therein, this study's findings related to the experiential component of training represent another key implication for counselor educators. Bore et al. (2010) discovered that school counselors trained with experiential methods were more likely to conduct psycho-educational groups in school settings. Barr described a group work program consisting of training experiences at the participant, process observer, and leadership roles (V. Barr, personal communication, September 16, 2014). In the present study, participants identified group work concepts in the experiential components; the experiential component illuminated group

work concepts acquired in the didactic component of the class. Experiential training lends counselor educators another tool to promote cognitive complexity.

### **Future Research**

Replication studies present one obvious area for future research. Because counselor educators routinely assign various forms of written work, they possess readily available data sets. This study provides counselor educator researchers with a methodology to analyze the content of written assignments prepared for a group work class. In addition, reanalyzing this study's data set presents multiple possibilities for future research. A research team interested in the topic could reanalyze the 10 sets of written reflections following this study's exact methodology. Because of the subjective nature of analysis, reanalyzing these 10 sets of written reflection assignments could yield both nuance and/or fundamental differences in categories/themes, data coding, and interpretation and findings (Creswell, 2013).

Cognitive-based theories other than Bloom's Cognitive Taxonomy, such as Perry's (1999) Scheme of Intellectual and Ethical Development, represent more opportunities to reanalyze these written reflection assignments. These written reflections contain a "feelings" component prompting participants to reflect on feelings elicited by their group experiences. Future research could use the affective domain of Bloom's Taxonomy (Bloom's Taxonomy of Learning Domains, 2013) to analyze this portion of data.

Group course teachers/researchers could implement a similar reflective course assignment but add prompts for all six of Bloom's Cognitive Taxonomy and analyze students' ability to navigate and respond to these six levels of cognitive complexity. To understand cognitive complexity in group work from new perspectives, researchers could employ other qualitative approaches such as phenomenology or case studies. A phenomenological approach could allow researchers to gain a

better understanding of the subjective experiences of CIT in group work. The case study approach would allow researchers to explore the cognitive complexity of a counselor-in-training in the context of his or her group work training (Yin, 2009).

In addition to qualitative methods, quantitative methods would allow researchers to measure quantitative changes in cognitive complexity during training, compare training programs' influence on cognitive complexity, or explore cognitive complexity in certain domains of counseling practice. For example, researchers can enter student narrative text into Bloom's Taxonomy Calculator to tally the number of times words contained in each of Bloom's original six levels occur (Axiom Mentor, 2022). Finally, future research could benefit from longitudinal studies. The present study explored CIT enrolled in a one-semester group dynamics and methods course. Longitudinal studies could identify the qualitative and quantitative changes that occur over the course of training or professional practice.

### **Future Studies with Different Populations**

Research possibilities abound with cognitive complexity and different populations of CIT. For instance, the research literature could benefit from studying CIT learning group work from specific concentrations, such as school counseling or mental health counseling. The participants for the present study included both CIT from both concentrations and did not distinguish participants by concentration in the analysis.

Future studies could build on the work of Ober et al. (2009) and focus on cognitive complexity related to multicultural understanding in CIT learning group work. In the present study, we analyzed participants' written reflections as one group and did not distinguish participants according to age, ethnicity, or gender. Future studies could focus on exploring qualitative and

quantitative distinctions and similarities in cognitive complexity related to diversity and multiculturalism.

Along with studies focused on CIT, other studies could build on the work of Mayfield et al. (1999) to identify specific aspects of cognitive complexity in professional counselors. Research with this population could reveal the specific aspects of cognitive complexity among professional counselors practicing group work. This, in turn, may assist counselor educators to identify those expert qualities they wish to promote in training (Kivlighan, et al., 2007; Rubel & Kline, 2008).

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**Table 1**

***Key Words According to Blooms' Cognitive Taxonomy***

Bloom's Cognitive Taxonomy Level	Description of Level	Key Words
Knowledge	The ability to recite facts, figures, statistics, etc.	arranges, defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states.
Comprehension	The ability to understand, interpret, compare, contrast, etc.	comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives an example, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates.
Application	The ability to use knowledge to solve problems in novel situations.	applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.
Analysis	The ability to separate a problem into parts.	analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates.
Synthesis	The ability to assemble parts of a problem or situation to form a new, unified whole.	categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes.
Evaluation	The ability to judge or evaluate a decision based on a set of criteria.	appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports.

Bloom's Taxonomy of Learning Domains (n.d.).

**Table 2***Categories and Themes*

	<b>Roles</b>	<b>Sharing/ Disclosing</b>	<b>Norms</b>	<b>Activities</b>	<b>Leader Styles/ Techniques</b>	<b>Environment</b>	<b>Preparation</b>	<b>Choice/ Autonomy</b>
<b>Mary</b>					*		*	
<b>Jennifer</b>		*			*			*
<b>Megan</b>	*			*	*	*		
<b>Sarah</b>	*	*	*		*			
<b>David</b>			*	*	*			*
<b>Susan</b>		*			*			*
<b>Brian</b>		*		*	*		*	
<b>Karen</b>		*			*			*
<b>Matthew</b>	*			*	*			
<b>Lauren</b>	*			*	*			
<b>Totals</b>	4	5	2	5	10	1	2	4

**Table 3**

***Frequency Table of Statements across levels in Bloom's Cognitive Taxonomy***

	Remembering	Understanding	Application	*Analysis WR 1, 2, 3, 4, 5	*Creation WR 1, 2, 3, 4, 5	*Evaluation WR 1, 2, 3, 4, 5	Totals
Mary	6	32	4	6	0	0	48
				-,1,3,2,-	-----	-----	
Jennifer	78	45	25	4	1	1	154
				-,0,1,3,0	-,0,0,1,0	-,0,0,1,0	
Megan	74	73	25	3	0	1	176
				0,0,0,0,3	-----	0,0,0,0,1	
Sarah	26	76	26	16	0	1	145
				2,6,2,1,5	-----	0,0,1,0,0	
David	54	23	16	15	0	0	108
				4,7,2,0,2	-----	-----	
Susan	42	24	12	8	0	0	86
				1,4,2,1,-	-----	-----	
Brian	46	65	13	3	0	0	127
				0,3,0,0,0	-----	-----	
Karen	1	39	10	0	0	0	50
				-----	-----	-----	
Matthe w	54	20	17	5	1	10	107
				2,2,0,-,1	0,1,0,0,0	0,4,3,0,3	
Lauren	77	40	14	0	0	0	131
				-----	-----	-----	
Totals	458	437	162	60	2	13	1132
				10, 25, 9, 5, 11	0,1,0,1,0	0,4,4,1,4	

\*We compared frequency of statements across written reflection assignments 1-5 in the analysis, creation, and evaluation levels only.