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## **An Exploratory Study of Counselor Education Students Moral Reasoning, Conceptual Level, and Counselor Self-efficacy**

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**ABSTRACT** - The present study was undertaken to evaluate the developmental impact of a CACREP accredited counselor education program on student's moral reasoning, conceptual level, and counselor self-efficacy as they progressed through core academic courses and the clinical components of the program. Measures were taken at three intervals: as students began the program, the start of practicum, and during first quarter of internship. Using Deliberate Psychological Education (DPE) to describe the curriculum within which cognitive and conceptual development and counselor self-efficacy were facilitated, growth during the practicum and internship experiences was significant for both conceptual development and self-efficacy. Higher scores during the third assessment of moral reasoning were found to be predictive of higher ratings of clinical skills at the end of internship.

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Counselor educator programs must produce professional counselors who are able to work successfully with clients. The literature suggests that higher levels of cognitive complexity, as well as elevated levels of self-efficacy may enhance a counselor's ability to perform competently and effectively with clients (Foster & McAdams, 1998; Rest, 1994; Sprinthall & Thies-Sprinthall, 1983).

Counselor educators, trainers, and supervisors have asserted that cognitive processes and strategies should be included as a vital part of counselor training (Hayes, Dagley, & Horne, 1996; Peace, 1995). Research comparing counselor training that focused on promoting cognitive complexity and behavioral skills training with training that emphasized only behavioral skills showed that participants demonstrated significantly greater empathy when promotion of cognitive development was infused with behavioral skills training as compared to those who received behavioral skills alone (Morran, Kurpius, Brack, & Brack, 1995).

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### ***Counselor Moral Reasoning and Conceptual Complexity***

Cognitive developmental theories describe human thought processes and how these thought processes influence human behavior. Such theories have a cardinal premise that reasoning and behavior are directly related to the level of complexity of psychological functioning (Foster & McAdams, 1998). Two of these theories, Moral Reasoning, based on the theories of Kohlberg and Rest (Kohlberg, 1977; Rest, 1986), and Conceptual Complexity by Hunt (Hunt, Butler, Noy, & Rosser, 1978), were used in the present study.

Rest's Neo-Kohlbergian approach refined Kohlberg's six-stage theory of moral judgment development into three developmental schemas: Personal Interest, Maintaining Norms, and Postconventional (Rest, Narvaez, Bebeau, & Thoma, 1999). As part of the Personal Interest schema, rules are external to the individual. The Maintaining Norms schema contains rules embodied in social groups, and compliance is the result of a desire to gain acceptance within that group. At the highest level, the Postconventional schema, rules are interpreted in terms of self-chosen principles.

Moral judgment looks at the conceptual framework used in analyzing "self-other" (moral) dilemmas and deciding the course of action (Kohlberg, 1976). Conceptual development, another cognitive development domain, looks at critical thinking and the concepts used by the individual to conceptualize and make meaning of experiences and interpersonal relationships (Morgan, 1998). Conceptual level (CL) is a cognitive variable which describes the individual on a developmental hierarchy of increasing conceptual complexity (differentiation, discrimination, and integration), self-responsibility and independence (Holloway & Wampold, 1986). High CL describes a person who has a greater understanding of self as well as a greater understanding of the inter-dependence between the self and the environment. Such a person avoids dependence and welcomes external input. The low CL person on the other hand thinks concretely and simplistically and does not tolerate ambiguity. This is a person who needs a great deal of structure. In order for growth to occur, the environment must both support and challenge the person (Hunt, 1971).

### ***Counselor Self-Efficacy***

An individual's functioning, as defined by moral and conceptual development, is further clarified by a measurement of self-efficacy. Counseling self-efficacy (CSE) describes a counselor's judgment about his or her own ability to effectively counsel a client (Daniels & Larson, 2001). Larson, Suzuki, Gillespie, Potenza, Bechtel, and Toulouse (1992) report the Counselor Self-estimate Inventory (COSE) as useful in predicting counselor performance where higher counselor self-efficacy results in a greater likelihood of a counselor approaching, expending more effort, and persisting in counseling behaviors. Lent, Hill, and Hoffman (2003) conceptualize CSE in three broad sub domains: performing basic helping skills, managing session tasks, and negotiating challenging

counseling situations and presenting issues. Descriptors of individuals with higher levels of cognitive/moral development, conceptual level, and self-efficacy are similar and include advanced empathy, better ability to deal with dichotomy, advanced ability to assess, process, and decide what therapeutic techniques to employ in counseling sessions.

### ***Deliberate Psychological Education (DPE)***

Sprinthall (1978) found that principled reasoning, as defined by moral development research, and conceptual levels were promoted using the Deliberate Psychological Education (DPE) model (Johnston, Kolbert, & Foster, 2002; Kaiser & Ancellotti, 2003). DPE is an instructional format that attempts to promote psychological growth in all students in a cognitive-developmental sense (Hatfield, 1984). Sprinthall's model delineated five conditions for growth: (a) significant role-taking experience in helping (b) guided reflection, (c) a balance between experience and reflection, (d) continuity, and (e) an adequate balance of support and challenge, with disequilibria-triggering experiences. These five conditions could be promoted in counselor training programs where the real experiences of working with clients are adequately balanced with individual and group supervision sessions that focus, not merely on the content of the session, but on the process itself. Guided self-reflective conversations provide an opportunity to examine what is changing for the counselor, as well as the client, rather than mere focusing on specific skill development. It could be reasoned that a counselor education program that provides practicum and internship experiences with sustained exposure to clients while receiving immediate support and feedback through individual and group supervision experiences, as well as continuing education training, should meet the DPE criteria. Also, self-efficacy plays an important role during the self-reflective process.

### ***Counselor Education and the DPE Model***

The University's Counselor Education Program is a three-year Masters degree program with students completing a prescribed annual course profile. Some variation occurs when students choose to proceed more slowly. During the first year, students began with introductory content courses (i.e., theories, human development, group, diagnosis and treatment planning). These classes are usually didactic in nature and thus do not meet the criteria for DPE.

During the second year of course work, the five conditions delineated in the DPE model were satisfied. The first condition is *Role-Taking* which includes experiencing a complex significant helping experience in a real world context. The students completed three quarters of Practicum during which they counseled community-based clients in the program-run clinics. They were also enrolled in an Interpersonal Relations class (i.e., counseling skill building) concurrently with the first quarter of Practicum, which allowed them to immediately practice skills with real clients and process the experience in class. Videotaping of counseling

sessions (for later self-reflection) and in vivo observation were required, followed immediately with discussion, feedback and support from intern supervisors who had recently completed their own practicum experience. Three other DPE conditions were addressed by this experience as well: (a) *Reflection*, used to examine, symbolize and extract meaning from the experiences through discussion; (b) *Balance*, where each week counseling sessions were immediately followed by reflection with supervisors; and (c) *Support and Challenge* where intern supervisors provided practicum students with Hunt's (1976) constructive mismatch or one-up relationship, shaping higher order counseling skills (Reiman, Sprinthall, and Thies-Sprinthall, 1997). Additionally, three consecutive quarters of Practicum over one year met the fifth condition, *Continuity*. Doctoral level counseling faculty supervised all aspects of the Practicum experience. Additional course work completed during the second year included multicultural counseling, ethics, and several specialization courses (i.e., couples, marriage and family counseling; career and lifestyle planning), where self-reflection by means of genograms, dilemma discussions, and Socratic ethical dialogues occurred.

Third year students entered internship experiences at community or school-based sites. All sites provided a minimum of 1 hour of individual supervision and 1½ hours of group supervision weekly. Students completed 600 hours of internship, 240 of which included direct services with clients. Students also completed the remaining specialization courses and a course in supervision, which prepared them for their role as supervisors of second year practicum students at the program's counseling clinic, a weekly responsibility extended over three academic quarters. Finally, this afforded interns the opportunity to provide supervision and reflection for practicum students, completing the cycle and reinforcing the "process over content" learning, as advocated by the DPE approach.

The purpose of this study was to investigate whether current counselor training, using a DPE framework, promoted moral development, conceptual level, and self-efficacy in counselor education Masters level students, and if these advanced characteristics contributed to their subsequent clinical skill. Two specific research questions were examined. First, does a counselor education program, employing the DPE model, facilitate growth in the areas of moral and conceptual development, as well as increase self-efficacy? A corollary interest was to identify key points when growth occurs, i.e. after the classroom didactic experience or intensive clinical experience. The second research question also sought to examine how moral development, conceptual level, and self-efficacy relate to counselor trainees' clinical skill as measured by supervisor evaluation at the beginning and end of clinical experiences.

## **Method**

### ***Participants***

Fifty counseling students in a three-year Masters degree program in a

Northwestern university were invited to participate in the study and represented a group of students who typically progress as a cohort throughout the program coursework. Participants were enrolled in four counseling specializations: Community Counseling; Rehabilitation Counseling; Couples, Marriage and Family Counseling; and School Counseling. Twenty-seven trainees completed all the instruments the first year (8 males and 19 females, age range 24 to 56 years with a mean of 36.66) Due to sample loss over the three-year period, the sample sizes for the repeated measure analyses ranged from 15 to 19 per data set (see Results section for details). An examination comparing sample characteristics on age, gender, and program-track with the original candidate pool showed essentially no differences. Participants volunteered for this study and were treated in accordance with the standard rules for research approved by university human subjects policies.

### ***Instruments***

The Defining Issues Test (DIT) is an objective measure developed by James Rest (1979) based on Kohlberg's theory of moral development. The DIT2 is a culturally updated version of the original DIT and is based on the Neo-Kohlbergian model (Rest et al., 1999). It is a measure of the development of concepts of social justice (Rest & Narvaez, 1998). The DIT2 presents five moral dilemmas for which participants are asked to rate and rank the importance of 12 different items according to the value used in making a decision about the dilemma presented. A 5-point Likert-like scale is used, ranging from "no" to "great" importance. Participants are asked to rank order four items they consider most important in making their decision and choose a final judgment decision. The aggregate scores of these stages are used in determining the P Index, which represents the individual's use of principled reasoning in his or her decision-making. P and N2 scores are highly correlated. N2 scores represent the degree to which a subject used the Personal Interest, Maintaining Norms, or Postconventional schemas and takes two types of information into account (a) the extent to which the participants rank in top place the Postconventional; and (b) the difference in the ratings of items of stages 2 and 3 from stages 5 and 6. The N2 has been shown to slightly outperform the P score (Rest et al., 1999). The N2 score is reported as a percentage from 0 to 95 (Rest et al., 1999). The DIT2 reliability is considered adequate, as test-retest reliabilities ranged from the .70s to .80s over periods ranging from a few weeks to a few months. Cronbach's alpha index of internal consistency was reported to be generally in the high .70's to the low .80's (Rest, 1986; Rest & Narvaez, 1998). There is considerable evidence of the scale's construct validity (Rest et al., 1999).

The Paragraph Completion Method (PCM) is a semi-projective measure to assess conceptual development (Hunt et al., 1978). This measure places individuals on a continuum of conceptual level (CL) ranging from zero (low CL) to three (high CL). Participants are asked to write at least three sentences

describing their ideas and opinions on each of six different, open-ended topics. Hunt's corresponding stage scores ranging from zero to three were assigned to each item response. These topics have been designed to assess how a person thinks. Attention is given to both the content of the response and the structure underlying the response, with regard to rule structure, relations to authority, and handling of conflict and uncertainty. The total CL score is found by averaging the three highest responses. The reliability of the PCM is considered adequate as the median inter-rater reliability coefficient found for 26 studies was .86 (Hunt et al., 1978). Discriminant validity was reported at the .20 to .30 range when correlated with tests of intelligence, and at .40 when correlated with the Kohlberg Moral Maturity Scale (Hunt et al., 1978).

The Counselor Self-Estimate Inventory (COSE) (Larsen et al., 1992) was based on Bandura's (1977) self-efficacy theories and created to measure the construct of counselor trainees' expectancy for success in a counseling situation or judgments of their capabilities to counsel successfully in a counseling situation. The self-report, 37-item questionnaire uses a 6-point Likert-type rating scale, ranging from strongly disagree (1) to strongly agree (6). The highest possible final score (item score sum) is 222. Higher scores indicate higher self-estimates of counseling efficacy (Larsen et al., 1992). The internal consistency value of the COSE Cronbach's alpha was reported to be  $r = .93$  while the test-retest reliability over a 3-week period was reported to be  $r = .87$  (Larsen, et al., 1992). Evidence for the COSE's convergent validity was reported in several studies (Crutchfield & Borders, 1997; Larsen et al., 1992). Preliminary evidence for the discriminant validity of the COSE was shown by the low correlation of the COSE with measures of defensiveness, aptitude, academic achievement, and personality. COSE scores also did not differ across theoretical persuasions of counseling psychologists.

The faculty supervising Practicum and Internship experience completed the authors' constructed Global Assessment of Counselor Functioning. The instrument requires assessors to rate each student on a one (1) to ten (10) scale, with 10 = Superior Performance, and 1 = Could Not Establish an Adequate Counseling Relationship. The instrument provided specific information as to what skills and behaviors were necessary at each level. Instructions indicated the assessor should choose a number that best reflected the overall rating of the students' clinical functioning as a counselor at the end of the practicum or internship experience. A sample of increments includes: 10 = Superior Performance - Successfully builds relationships and joins with client, assesses problem, develops treatment plan, implements plan, assesses effort and adjusts treatment (knows what to do, how to do it, and when to do it). Shows advanced empathy and demonstrates advanced skills (immediacy, confrontation); 6 = Average performance - Builds relationship and joins with client, uses basic counseling skills, assesses problems, *begins* to develop plans and implements them. Shows basic empathy skills, understands advanced skills, yet struggles to

bring them to bear on the counseling process; 2 = Minimal performance – Greets client, obtains information and completes paperwork, does not yet demonstrate ability to join with client or employ any skills (barely passing). A score of one (1) indicated that the student had left the program after failing the practicum or internship. Although no reliability data were available for this study, the instrument and its behaviorally-anchored ratings were developed jointly, after much deliberation, by the Counselor Education Program's seven faculty members, thereby providing preliminary conceptual support for the scale's construct validity. Also, to avoid predictor criterion contamination, raters were kept blind as to student' scores on each of the predictors. Their task was to independently review their clinical and supervisory notes and, based on that information, carefully assign a global score to each student.

### **Procedure**

A longitudinal research design was adopted for this study. Assessment packets were administered to single cohorts of students three times; during the first quarter of each of the three years they were enrolled in classes (October of 2000, 2001, and 2002). Students were informed they would be participating in a study designed to assess the impact of the counselor education training program on student development. All first year students enrolled in courses during Fall quarter 2000 were asked to participate in the study, and those who volunteered completed consent forms. The packets of assessment measures were administered to students in two sittings. The first sitting contained the PCM and the second sitting, the DIT2 and the COSE. These same students, in their second year as practicum students, were administered an identical set of assessments in two separate sessions during the Counseling Skills class (Fall of 2001). During the third year, study packets were obtained during the student's initial internship experience while providing weekly supervision sessions to practicum students. Faculty completed the Global Assessment of Counselor Functioning instrument at the end of the year for both practicum and internship student performance.

### **Results**

To examine the longitudinal changes in DIT2, PCM, and COSE scores, a one-way within subjects (i.e., repeated measures) ANOVA was employed for each instrument. An a-priori power analysis was conducted to determine the number of participants required to detect a statistically significant (operationally defined as  $\alpha < .10$  because of the exploratory nature of the study) effect size, over the three year period. To ensure adequate power ( $\beta = .60$  to  $.80$ ) and a medium sized effect ( $d = .50$ ) a sample of 35 to 45 individual is needed (Cohen, 1988; Lipsey, 1990) and accordingly solicited for this study.

### **DIT2**

Table 1 (top panel) shows that no significant changes in participants' DIT2

scores were evident. Both comparisons (Year 1 to Year 2, and Year 2 to Year 3) failed to reach statistical significance, although a trend in the anticipated direction was evident. No significant changes were evident in students' movement towards greater use of post-conventional thinking and decision-making.

### **PCM**

Table 1 (middle panel) shows that participants' PCM scores increased significantly following Year 2 [ $F(1, 16) = 7.77, p < .01$ ], but failed to reach significance from Year 1 to Year 2 [ $F(1, 16) = .47, p = ns$ ]. These data suggest that an increase in students' critical thinking skills and their ability to conceptualize and make meaning of experiences and interpersonal relationships occurred only during the second part of the program.

### **COSE**

Table 1 (bottom panel) shows that participants' scores increased significantly from Year 1 to Year 2 [ $F(1, 18) = 9.01, p < .01$ ], and again from Year 2 to Year 3 [ $F(1, 18) = 58.68, p < .001$ ]. These findings suggest an increase in students' self-efficacy (a counselor's judgment about his or her own ability to effectively counsel a client) across time.

**Table 1**  
*Mean, Standard Deviations, and Repeated Measure ANOVAs  
for DIT2 (N2), PCM, and COSE*

	N	Year 1	Year 2	Year 3
DIT2(N2)	15			
M		43.34	44.86	47.69
SD		16.69	17.24	14.18
PCM	17			
M		1.79	1.81	1.99 <sup>a</sup>
SD		.29	.27	.29
COSE	19			
M		144.42	155.05 <sup>b</sup>	179.53 <sup>c</sup>
SD		21.15	18.14	18.64

<sup>a</sup>  $p < .01$  Year 2 to Year 3

<sup>b</sup>  $p < .01$  Year 1 to Year 2

<sup>c</sup>  $p < .001$  Year 2 to Year 3

### **DIT2, PCM, and COSE as Predictors of Clinical Skill Level**

To examine the combined, and individual, contribution of DIT2, PCM, and COSE scores on supervisor evaluation of students' clinical skills, four series of regression analyses were performed. In the first series, participants' scores on the Global Assessment of Counselor Functioning: Internship were regressed on



third year DIT2, PCM, and COSE scores using a stepwise multiple regression analysis (MRA). Since no theoretical or empirical body of knowledge exists to specify order of variables entry into the equation, we resorted to stepwise MRA in which statistical criteria dictate order of entry (Tabachnick & Fidell, 2001). The  $R^2 = .41$ ,  $F(3, 21) = 4.89$ ,  $p = .01$ , indicated that the three predictor variables in combination contributed significantly to the variance of internship skill level. Of the three variables only scores on the DIT2 indicated a statistically significant contribution ( $\beta = .34$ ,  $t = 1.94$ ,  $p = .001$ ), while scores on the PCM approached statistical significance ( $\beta = .34$ ,  $t = 1.94$ ,  $p = .066$ ).

In the second MRA, participants' scores on the Global Assessment of Counselor Functioning: Practicum were regressed on the same set of three predictors. The  $R^2 = .22$ ,  $F(3, 21) = 1.98$ ,  $p = .15$  (ns), indicated that the three measures, individually and in total, failed to contribute significantly to the variance of the practicum skill level.

In the third and fourth MRAs "growth" (change) scores were used to predict the variance in internship and practicum skill level. First, a set of three growth scores (i.e., Year 3 DIT2, PCM, and COSE scores minus Year 1 DIT2, PCM, and COSE scores respectively) was examined as to its individual, and combined, variable contribution to internship skill level. The  $R^2 = .06$ ,  $F(3, 21) = .45$ ,  $p = .72$  (ns), indicated that the three growth measures, individually, or in total, failed to significantly contribute to the variance of internship skill level. Finally, the same set of three growth scores was explored as to its individual, and combined, variable contribution to practicum skill level. The  $R^2 = .14$ ,  $F(3, 21) = 1.15$ ,  $p = .35$  (ns) suggested that the three growth measures individually or in total, did not contribute significantly to the variance in practicum skill level.

As noted earlier, it was anticipated that most growth, as evidenced in increase in DIT2, PCM, and COSE scores, would occur during the program's second year when students engage in the practicum experience. We decided, therefore, to explore the influence of two additional sets of growth scores on internship and practicum skill levels. In the first MRA, internship skill level was regressed on students' growth across the measures during the second year only. The  $R^2 = .31$ ,  $F(3, 21) = 3.09$ ,  $p < .05$ , indicated that the three second year growth scores contributed significantly to the variance of internship skill level. Of the three measures only change attributed to PCM scores demonstrated a statistically significant contribution to internship skill level ( $\beta = .51$ ,  $t = 2.79$ ,  $p = .01$ ). In the second MRA, practicum skill level was regressed on the same set of three, second year growth scores. The  $R^2 = .17$ ,  $F(3, 21) = 1.40$ ,  $p = .27$  (ns) indicated that student growth during the second year failed to significantly contribute to the variance in practicum skill level.

## Discussion

The results from our longitudinal study of counselor education students' cognitive and self-efficacy growth are consistent with the DPE model's conditions

for advancing counselor development. On the cognitive dimensions of moral judgment and conceptual level our study has yielded mixed results. We found positive gains in CL from Year 2 to Year 3, but not from Year 1 to Year 2. Academic courses alone did not appear to be sufficient to produce gains in cognitive complexity, but with time and the addition of an intensive practicum clinic experience, students made gains in conceptual level. This result is consistent with the DPE assertion that significant, but not overwhelming, experiential challenge is required for growth in conceptual level (Kaiser & Ancellotti, 2003). The students' three terms of practicum fit this description as they were faced with the challenge of actual clinical work on a weekly basis but in a supportive context that included close supervision, extensive debriefing, and reflection on the process.

Our findings did not show significant longitudinal gains in moral judgment (DIT2) scores as we initially expected, although a slight trend was apparent in the direction of greater use of post-conventional moral reasoning across the three times of measurement. As existing studies have indicated (e.g., Crutchfield & Borders, 1997; Peace, 1995), even modest increases in DIT2 scores take considerable time to achieve. While it would have been desirable to see higher DIT2 scores by Year 3, it is important to note that even with the program's substantial experiential practicum training component during Year 2, we did not find such an effect. Johnston et al. (2002) found similar results at a Southeastern University in moral development and conceptual complexity after an extensive internship/field experience using DPE. Sprinthall (1978) has suggested that counselor education programs take a more deliberate and experiential approach to achieve gains in ethical reasoning. Our findings appear to support this recommendation.

Participants showed significant gains in counselor self-efficacy over the first year, consisting of only academic courses, and then more substantial gain over the second year, consisting of additional academic courses combined with an intensive year-long practicum clinic experience. This shows a substantial gain in self-efficacy during the hands-on clinical experience. The results are consistent with other research evaluating growth in counselor self-efficacy where higher scores correlate positively with higher counselor performance, developmental level, satisfaction, and lower anxiety (Larson et al., 1992; Lent et al., 2003).

We used a series of regression analyses to explore whether Year 3 DIT2, PCM, and COSE scores could predict faculty ratings of students' clinical skills (an outcome of counselor training) at completion of practicum and at completion of internship. As predictors of faculty clinical skill ratings, only the DIT2 was significant at time of initial internship experience (but not at initial practicum experience), while the PCM (CL) approached significance. Contrary to our expectations, scores on the COSE failed to contribute significantly to assessed clinical skills. Taken together, these findings suggest that the precepts of self-efficacy may be a necessary condition for counselor competence, but not

sufficient from the objective (external) perspective of observing clinical supervisors. Beginning counselors may underestimate the complexity of the process and thus overestimate their abilities (Lent et al., 2003). It would appear from our findings that trainee cognitive complexity, as assessed by higher levels of moral reasoning and conceptual level, contributes to supervisors' ratings of clinical skill competence. Given the complexity and ambiguity challenges of the clinical tasks of counseling, this finding is consistent with the DPE perspective of counselor development. It also supports the need of counselor education programs to advance students' level of functioning on the dimension of moral-cognitive development.

As a post hoc analysis, we examined growth (change) scores in the DIT2, PCM, and COSE from Year 2 to Year 3 (students' practicum year) as predictors of internship and practicum skill level. The MRAs showed that only PCM growth scores successfully predicted clinical skills level, and then only for internship, but not for practicum skills. This result further suggests that increased cognitive complexity is related to clinical competence, and that it takes time for growth in the cognitive dimension to appear and ultimately influence students' actual clinical performance.

### ***Limitations***

The findings of this study should be viewed cautiously because of several methodological and statistical limitations. First, the small number of participants and the high attrition rate (approximately 50% over the study's three-year period) greatly impact the generalizability of the findings to trainees of other counselor education programs. The small number of respondents (and consequently the reduced power) also adversely affected our ability to detect even medium level effect size. The finding that participants who completed the study did not differ from dropouts on several demographic characteristics (i.e. age, gender, counseling specialty), however, serves to attenuate some of the concerns. A second limitation relates to the uniqueness of our Counselor Education Program. The students are mostly from the Pacific Northwest, over 80% of the student population is Caucasian, and the program requires three years to complete. Again, generalizability of findings is accordingly constrained to programs with primarily Caucasian students and extended duration of training. Third, the measure of students' clinical skill level is a rather subjective and global measure of clinical performance. We attempted to mitigate the subjectivity concern by providing faculty with specific behavioral anchoring points that would facilitate the psychometric soundness of the ratings. Yet, we were unable to ascertain the scale's inter-rater reliability because of limited available data. Fourth, the results of the MRAs are based on a correlational research design and, as such, cannot support causal inferences on the relationships between predictors (i.e., DIT2, PCM, COSE scores) and outcome (i.e., assessment of counselor level of functioning). Finally, and most importantly, in the absence of a control group, any

attempt to link the reported changes in students' performance to the operation of a coherent set of program-generated clinical skills is purely speculative. Several of the factors traditionally regarded as jeopardizing internal validity (e.g., maturation effect, experimental mortality) could be conceived as operative in the context of this study.

### ***Implications and Recommendations***

The longitudinal examination of students' development over the course of the counselor education program provides preliminary evidence of the importance of attending to cognitive and self-efficacy dimensions in counselor preparation, especially as related to clinical skills outcomes at time of internship. Our data suggest that attending to counselor self-efficacy is important, but not sufficient in terms of a training outcome at the end of the program. Clinical supervisors at times may need to challenge trainees' overly optimistic self-efficacy appraisals to orient them to skills that need further development (Lent et al., 2003). Development of cognitive complexity appears to be a vital precursor to demonstrating higher levels of clinical competence and is most likely facilitated through an intensive, but supportive practicum experience. Higher levels of moral reasoning also appear to be related to later clinical effectiveness, but we were unable to document that students' moral reasoning advanced significantly during the program. Counselor education programs must recognize that students' exposure to the intellectual aspects of professional ethics (an academic course) may be insufficient to produce the level of ethical reasoning desirable in clinical contexts. Future research needs to determine how to facilitate higher, post-conventional reasoning in students as an academic/conceptual exposure to professional ethics appears to be insufficient (Johnston et al., 2002).

An important recommendation for future longitudinal studies of developmental dimensions of counselor education is to assess students at time of graduation. For practical reasons we were not able to do so, and it may be that we would have observed additional developmental outcomes in our data had we had an additional (end of program) assessment. Additional research into the connection between self-efficacy and outcome skills research would give insight into how to add this component to the support and challenge of the DPE supervision model. Further study should also attempt to determine what components, at what time, have the most impact on students' cognitive, ethical, and self-efficacy development.

Finally, the findings of this study replicated Johnston et al.'s research and suggest that further studies, with the addition of a control group and larger numbers, may yield more precise data that will inform counselor educators about the process of counselor training.

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