

Becoming a Counselor: A Longitudinal Study of Student Cognitive Development

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Abstract:

Presents a study which investigated the cognitive development of counseling students during their training program. Approaches in examining counselor cognitive functioning; Least examined dimension of counselor cognitive functioning; How the study was conducted; Examining the changes in cognitive self-appraisal.

Keywords: Training Counselors | Cognitive Learning | Education

Article:

This study investigated the cognitive development of counseling students during their training program. Results suggest a need to emphasize student cognitive development as strongly as skills development in graduate programs.

Recent advances in the study of cognitive science seem to have had little impact on training in counselor education. The curriculum within which students are to develop as counselors is typically a sequence from initial counseling skills, through didactic courses on different aspects of counseling (such as career counseling), to practice, and finally, internship, and is largely a function of tradition rather than empirically based pedagogy. Although extensive literature has developed around components of the counselor training program, particularly counseling skills training (see mayor review by Baker, Daniels, & Greeley, 1990) and clinical supervision (reviewed in Bernard & Goodyear, 1992), research is lacking on the cognitive development of counselors as they progress through the program. Likewise, little is understood about the relationship of any changes in counselor cognitive development to actual counseling performance.

To date, the focus of the research on counselor cognitive functioning has been on exploring the role of some aspect of counselor cognition in relation to effective counseling. One early thrust of this research was to develop ways to identify and classify counselor thoughts, such as forms of self-talk (Morran, Kurpius, & Brack, 1989), or counselor intentions (Hill & O'Grady, 1985). Research by Martin, Martin, Meyer, and Slemon (1986) and Hill and O'Grady (1985) attempted to link specific counselor thoughts or intentions with sequences of client and counselor responses, and found that types of counselor intentions could be linked to counseling behaviors

in predictable sequences, suggesting a direct cognition-behavior link. In the most specific application to counselor training, Kivlighan (1989) compared 13 students after a counseling methods course with 13 students who had not received training. The trained counselors had a significantly different pattern of intentions, suggesting that the course did result in a change in cognition.

Another approach to examining counselor cognitive functioning has been to consider the conceptual level or cognitive complexity of the counselor and potential effects on the counseling process. Stoltenberg (1981) and other developmental theorists of supervision (e.g., Loganbill, Hardy, & Delworth, 1982; Stoltenberg & Delworth, 1987) hold as a basic tenet that counseling students or supervisees progress through sequential, hierarchical stages as they gain more advanced conceptual and behavioral counseling skills and become more insightful about themselves and their clients. Researchers have attempted to operationalize conceptual development as level of cognitive complexity (Holloway & Wampold, 1986) or ego development (Borders, 1989; Borders, Fong & Neimeyer, 1986), and as experienced counselors versus novice counselors (Martin, Slemon, Hiebert, Hallberg, & Cummings, 1989). In general, these studies have found that higher levels of cognitive development relate to more effective clinical hypotheses (Holloway & Wampold, 1986), more sophisticated, interactive descriptions of clients (Borders, 1989; Borders et al., 1986), and more parsimonious conceptualizations of specific counseling situations (Martin et al., 1989). All of these studies have been cross-sectional in design, taking students at one point in time and for one counseling performance.

The least examined dimension of counselor cognitive functioning has been cognitive processes. In a case study, Borders, Fong, and Cron (1988) used an open-ended recall procedure to obtain a full, entire-session account of a first practicum student's in-session cognitions. Relevant to cognitive processing were the student's focus on self (self-scrutiny and self-doubt) and frequent recall of supervisors' suggestions or a resource book to determine the "right" response. Focusing on the cognitive process of hypothesis formulation, Morran, Kurpius, Brack, and Rozecki (1994) examined the relationship of level of hypothesis formulation skill to the client's rating of counselor effectiveness of 27 prepracticum counseling students. They found that higher ratings of hypothesis-formation skills were associated with higher client ratings of effectiveness.

Although the preceding studies form an initial base for considering the cognitive development of counseling students, all share a limited focus on one aspect of cognition and use only one measure of counseling performance (though summing across studies, different forms of cognition have been examined with a variety of measures of counseling performance). Meichenbaum and Cameron (1981) asserted that efforts to understand cognitive functioning must consider all three levels of cognition: (a) discrete thoughts, which are directly accessible to the individual; (b) cognitive processes, such as appraisal, encoding, and problem solving, which are only partially in the individual's awareness; and (c) cognitive structures or schema, which are broad systems of organizing perceptions, thoughts, feelings, and behavior. Cognitive structures are not within general awareness and must be assessed by inventory or test.

Because relevant knowledge and skill bases in counseling are multifaceted, highly variable, and loosely structured (Martin et al., 1989), it seems essential to take a comprehensive view of counselor cognition. Yet, no studies to date have included all three levels of cognition in examining counselor cognitive functioning and actual counseling behaviors during training, and none include more than one point in time. A first step in considering a curriculum to prepare counselors that would incorporate knowledge of cognitive functioning would be to determine if and when cognitive changes occur across the training program. The purposes of this study were (a) to investigate the cognitive development of a group of counselor education students during their entire training program and (b) to assess the relationship of cognitive development to actual counseling behavior. Research questions posed were the following:

Do counselor cognitions change during the counseling program?

Do counselor response behaviors change over the course of skills training?

What is the relationship between change in cognition and change in counselor effectiveness over the course of skills training?

At what points in the counseling program do cognitive changes occur (skills training, practicum, internship)?

METHOD

This descriptive study was designed to assess counseling students' cognitive development over an entire, entry-level training program. The students were enrolled in a 72-semester-hour, CACREP-accredited program at a large southeastern state university. Students were assessed at the start of the program; at the completion of the first semester, 3-semester-hour counseling-skills training course; at the end of practicum; and at the end of their second (final) internship. The design and measures collected at each point are outlined in Table 1. Counseling audiotapes and the measures derived from the tapes were obtained only at the start and the end of the counseling skills training course because students in some practice and internships do not tape counseling sessions. The paper-and pencil measures were obtained across all times. Entering students in three consecutive semesters were included and data collection extended from 1989 through 1994 until all students completed their degree program.

Participants

The total sample consisted of 48 students who volunteered for the study at the start of their first semester in the program. Five participants were dropped from the study when they withdrew from the counseling program. The final participants were 43 students, 33 women and 10 men, who successfully completed the program. Participants' ages ranged from 21 to 50 ($M = 30.80$, $SD = 8.76$); 35 were White, 4 were African American, and 4 indicated Other. Of the 43 students, 15 (34.1%) went directly from the skills training course into practicum and on to internships. The

remaining 29 students had less direct paths from the first-semester skills course to program completion.

VARIABLES AND PROCEDURE

The researchers selected variables to reflect aspects of counseling student cognitive development from two perspectives: indicators of cognitive functioning and indicators of actual counseling performance (performance considered to be directed by the student cognitions). Three indicators of cognitive functioning represented each of the three levels of cognition proposed for assessment by Meichenbaum and Cameron (1981): discrete thoughts about the client (cognitive events), cognitive appraisal of counseling (cognitive processes), and ego development level (cognitive schema). Student counseling audiotapes formed the basis for measurement of actual counseling performance as indicated by types of counseling responses used and the overall effectiveness in responding. Each participant conducted an audiotaped counseling session at the beginning of the program (Week 2) and at the end of the counseling skills course (Week 15). For each audiotape, students chose whomever they wanted as "clients," to counsel them for at least 10 minutes, with a minimum of 10 counselor responses. Students provided a verbatim tape script of each interaction.

Thoughts about client. Each student listed five adjectives describing the client on the submitted audiotape. All adjectives were coded based on existing coding systems for cognitions about interpersonal situations (Dole et al., 1982). To classify the type of thoughts the students had about their clients, each adjective was placed in one of four categories: (a) factual (describing some concrete aspect of the client, e.g., attractive), (b) behavioral (descriptive of client behavior, e.g., aggressive), (c) psychological (inferring some psychological state or concept, e.g., guilty, and (d) interpersonal (describing some interpersonal concept, e.g., engaging). Two doctoral-level counselor educators, who had previously used this method, independently classified each word according to category with an initial agreement of 90%. Disagreements were resolved by discussion and consensus on the category assignment.

Counselor self-appraisal. Counselor self-appraisal was assessed using the Stress Appraisal Scale (SAS; Carpenter & Suhr, 1988). The SAS consists of 36 items covering six domains thought to be part of the cognitive self-appraisal process for any activity that involves performance which could be potentially stressful. The instrument is designed so that it can be tailored to the specific task by the introductory directions. For this study, the directions were "Answer the following questions according to how you feel about providing counseling." A 4-point Likert scale (1, not true of me to 4, very true of me) is used to respond to the items (e.g., "This sounds very demanding"; "I'll handle this just fine"). Item responses are then summed to obtain three subscale (factor) scores. Carpenter and Suhr reported internal consistency estimates ranging from .77 to .90 coefficient alphas. They also examined concurrent validity between the SAS subscales and measures of interpersonal competence, emotional reactions, and stress reactions. Correlations between these measures and the SAS subscales ranged from .38 to .66 for Self-Appraisal, .37 to

.66 for Difficulty, and .02 to .52 for Task Saliency. In this study, the two factors with reported higher validity (appraisal of Difficulty and Self-appraisal) seemed most relevant to cognitive appraisal of counseling and thus were selected as the measure of cognitive appraisal of counseling.

Ego development. Level of ego development was assessed by the Sentence Completion Test of Ego Development-Form 81 (SCT; Loevinger & Wessler, 1970). This is a semiprojective measurement comprising 36 sentence stems (e.g., "When I am criticized," "Being with other people") with comparable forms for women and men. On the basis of evidence for reliability and validity, the SCT is adequate for research purposes (Hauser, 1976; Holt, 1980; Loevinger, 1985; Loevinger & Wessler, 1970). Following the scoring procedures of Loevinger and Wessler (1970), responses for each item were removed from individual protocols and pooled for rating stem by stem. Two doctoral-level, trained raters scored each item using the original scoring manual (Loevinger, Wessler, & Redmore, 1970) and the supplementary manual (Redmore, Loevinger, & Tamashiro, 1978). Disagreements were resolved by consensus. After rating the items, the researchers reassembled the protocols and determined the total number of item ratings per ego level. A specific ego level was assigned using the "automatic rules" (Loevinger & Wessler, 1970, p. 129). Students' ego levels in this study included conformist (views persons in stereotypical and conventional terms), self-aware (more self-aware, acknowledges individual differences within conventional categories), conscientious (understands psychological causality, fudges events in context, self-critical), and individualistic (distinguishes between process and outcome, inner and outer life). To obtain a continuous score, a scale score was assigned for each ego level (see Hoppe & Loevinger, 1977). The scale scores for individual protocols were added, yielding an item-sum score for each protocol.

Counseling response modes. The Hill Counselor Verbal Response Category System (HCVRCS; Hill, 1985), revised from Hill (1978), was used to classify counselor responses. This system focuses on "the grammatical structure of the therapist's verbal response independent of the topic or content of the speech" (Hill, 1989, p. 14). There are nine nominal, mutually exclusive response modes (approval, information, direct guidance, closed question, open question, paraphrase, interpretation, confrontation, and self-disclosure). Using the counseling audiotape tape-scripts, six doctoral students who were trained using the HCVRCS manual (Hill, 1985) categorized each counselor response. Each response was rated independently by two raters, with interrater reliability ranging from $r = .82$ to $r = .93$. Disagreements were resolved by discussion and consensus on category. Because of the low frequency in some modes, the modes were collapsed, as suggested by Hill (1985), into four clusters: (a) minimal, supportive (approval), (b) directives (direct advice and information), (c) questions (open and closed questions), and (d) complex counselor responses (paraphrase, interpretation, confrontation, and self-disclosure).

Counseling response effectiveness. The Global Rating Scale (Gazda, Asbury, Balzer, Childers, & Walters (1988) was used to evaluate the effectiveness of counselor responses. The researchers modified the 4-point scale to include 1/2-point intervals as suggested by the authors. It therefore

functioned as an 8-point continuum of response effectiveness, ranging from 1 (damaging communication, e.g., ridiculing feelings, dominating conversation) to 4 (accurate and facilitative responding, e.g., responding to underlying feelings, moving from vagueness to clarity). Two doctoral students who had previously used the Gazda global rating scale independently rated each counseling response on the counseling tape-scripts (previously described). Each rater totaled the ratings and computed a mean response effectiveness score for each tape-script (the mean was used to control for variation in the number of responses). Interrater reliability was high, $r = .88$. The average of the two mean effectiveness scores for each tape-script was used as the measure of response effectiveness.

RESULTS Counselor Cognitive Functioning

A series of nonparametric and parametric analyses were computed to assess change in counselor cognitive functioning during the counseling program. To determine if changes in types of thought about the client occurred, the researchers computed a chi-square analysis of the proportions of words at each content level (factual, behavioral, psychological, interpersonal) at the start of the program and at the end of the skills training.

Specifically, the chi-square determined if the proportion of the words used to describe the clients were the same across content levels at the two times (see Table 2). The proportions of words at each content level at the beginning of the program served as the expected proportion in the chi-square to be compared with the obtained proportions after training. There were significant changes in the proportions of words at each content level at the end of training, $\text{Chi}^2(3, N = 216 \text{ words}) = 19.1666, p < .05$. Comparison of the proportions of words at the end of the course and at the start of the program (the expected) indicates a greater focus on psychological traits and decreased use of adjectives describing physical characteristics and interactions. Almost all of the thoughts focused on psychological characteristics.

Changes in cognitive self-appraisal were examined by two repeated measures ANOVAs, one for each subscale. This procedure compared means across the four time periods: start of program, completion of skills training, practicum, and second internship. Time was a significant factor for both appraisal of difficulty, $F(3, 39) = 5.34, p < .01$, and self-appraisal (confidence), $F(3, 39) = 5.20, p < .01$. The means and standard deviations for each time period are provided in Table 3. Post hoc examination of the mean levels of appraisal were conducted using the Tukey studentized range test. The counseling students viewed providing counseling as difficult, and this appraisal did not change significantly until after the completion of the second internship, at which time the ratings were lower in difficulty. Overall self-appraisal (confidence) was moderate. Significant change in self-appraisal in providing counseling (the lower the score, the more confident) occurred after the practicum and continued through the completion of the internship. The lowest level of confidence (highest score) occurred at the end of skills training.

Ego development level was used as an indicator of cognitive structure. For this variable, 10 participants did not fully complete the SCT and could not be classified. At the start of the counseling program, ego levels ranged from conformist stage to conscientious stage (considered by Loevinger, 1976, to be consecutive stages separated by a transitional self-aware level). Both the median and the modal stages were the conscientious stage. At the completion of the program, ego levels ranged from conformist to individualistic, with the median and mode at the conscientious stage. Because ego level is thought to progress developmentally in stages, the levels were considered ordinal data. A Friedman two-way analysis of variance by ranks was used to test for change in ego development level over time. There was no significant change, $\chi^2(3, N = 33) = 1.3154, p = > .05$.

In summary, considering indicators of student counselor cognitive functioning, moving from cognitive events (thoughts) to cognitive processes (self appraisal) to cognitive schema (ego development), it is interesting that thoughts changed first, then, after students' involvement with fieldwork, cognitive appraisal of counseling changed. However, throughout the entire training program, the ego development level did not change.

Counseling Performance

To examine changes in the counselor response modes, the percentages of responses for each response mode (minimal response, directives, questioning, and complex responses) were examined at the start of the program and after the counseling skills course. A chi-square analysis was computed treating the percentage distribution at the start of the program as the expected and the percentage distribution after the skills course as the observed. A significant association to time was present, $\chi^2(3, N = 43) = 11.731, p < .05$. The percentages are in Table 4. Inspection of the percentages indicates a greater percentage of complex counseling responses after skills training (61.15% vs. 44.15%), with corresponding lower percentages in the first three modes of response. A t test for paired samples was computed to compare the counselor response effectiveness scores at the start of the program and at the end of the skills training course. There was a significant increase in effectiveness at the end of the skills training, $t(42) = 12.48, p < .001$. The students moved from a mean effectiveness rating of 2.27, $SD = .276$, (ineffective), to a mean rating of 3.01, $SD = .201$ (effective). Both of these gains at the end of the skills training are not surprising because the emphasis of the skills course is developing effective counseling responses.

Change scores for each of the four Hill counselor response modes and for the Gazda counseling response effectiveness rating between the start of the program and the end of the skills course were computed and then correlated. Correlations between the change in response effectiveness and change in proportion of responses in response mode were very low ($r = -.128$ to $.0192$), suggesting little relationship between the measures of counseling response effectiveness and response type.

Changes in Counselor Cognitive Functioning and Counseling Responses

To determine the relationship between changes in counselor cognitive functioning and counselor response effectiveness, change scores were computed for the program start and the end of the counseling skills course measures of cognitive appraisal (difficulty and self-appraisal), the continuous score of ego development, and the Gazda effectiveness score. Counseling effectiveness was moderately negatively correlated with change in ego development, $r = -.205$, and self-confidence, $r = -.222$. An increase in counseling effectiveness was associated with less change in ego development level and self-confidence. It can be speculated that those students who arrived with higher self-confidence and greater cognitive complexity (ego development level) would develop better skills in counseling responses but would not show much change in cognitions due to a ceiling effect.

DISCUSSION

This study provides initial empirical evidence that small incremental gains in counselor cognitive functioning occur over the course of a master's counselor training program. However, different aspects of cognition changes occurred at different times in the training. After completing an initial counseling skills course, the counseling students in this study had significant changes in the level of thoughts about the client, becoming more narrowly focused on psychological characteristics of the client. This finding is similar to previous studies reporting changes in counselor self-talk (Morran et al., 1989) and intentions (Hill et al., 1988) after skills training.

In addition, at completion of the skills training course, there were changes in both measures of counseling performance: a greater proportion of more complex counselor responses were used by the students and counseling response effectiveness had significantly changed from a mean ineffective rating to effective. However, at this point in the training program, there were no demonstrated changes in cognitive appraisal or in conceptual level. These results have some basis in developmental models of supervision in that beginning students focus on skill development (what to do) rather than on conceptualization (how to think about a client) (Loganbill et al., 1982; Stoltenberg, 1981).

In this study, the students did not have significant changes in cognitive appraisal until after fieldwork. An increase in self-appraisal (confidence) occurred after the supervised practicum experience, and finally, counseling was appraised as being less difficult at the end of the second internship (completion of the program). This finding may suggest that counseling with actual clients, as occurs in fieldwork, was needed to alter student self-appraisal. It also raises the question of how the low self-appraisal and the appraisal of counseling as difficult, which occurs for a substantial portion of this counseling program, may affect learning about counseling. From a self-efficacy perspective, such appraisals of self and task would tend to hinder initiation and maintenance of new counseling behaviors, particularly in the face of obstacles, and could create psychological stress (Carpenter & Suhr, 1988).

Contrary to expectations from the developmental supervision literature for counselor growth in cognitive complexity (e.g., Stoltenberg, & Delworth, 1987) students in this study did not have a significant change in ego development level. It is unknown if this lack of a change is due to the inadequacies of the measure selected or if there really were no changes in conceptual structures. Loevinger (1976) emphasized the stability of ego development levels in adults. In this study, ego development was selected as the measure of cognitive complexity because by definition it addresses an overall schema of self-perception, cognitions, and behavior similar to those posited in the developmental supervision literature. However, ego development may be too global a schema or the SCT too general a measure to capture the changes in schema that may be occurring in training. Rather than using an instrument that assesses general conceptual level, future researchers may want more content-specific measures, such as the cognitive mapping procedures piloted by Martin et al. (1989), or measures of integrative complexity that have been used to study the development of business management graduate students (Fetlock, Peterson, & Berry, 1993).

If indeed there were no changes in cognitive structure as measured by ego development, then this is a troubling finding for training programs. Higher levels of conceptual development have been both theoretically (e.g., Stoltenberg & Delworth, 1987) and empirically (Holloway & Wampold, 1986) linked to more effective counseling. It could be speculated that this lack of change implies that current training approaches do not provide the experiences and training to assist cognitive development.

No previous study has attempted to look at the relationship of cognitive functioning and counseling effectiveness over time. This study found that over a skills training course, changes in counseling response effectiveness were negatively correlated with change in appraisal and ego development level. This result is puzzling and must await further study for clarification.

Limitations

The limitations of this study must be considered in interpreting the findings. Although the sample size is small for a descriptive study (43 participants), it is actually larger than the sample for the studies of counselor cognitions previously cited whose number of participants ranged from 1 to 38. Participants were from one training program, which was similar to all CACREP programs except that it was considerably longer than most.

The attempt to measure all three aspects of cognitive functioning (thoughts, processes, and structures) was important. In general, instruments that assess cognitive functioning are quite varied, often requiring extensive coding and rating that can add error. One strategy to help manage source of error would be to use more than one measure of a specific aspect of cognition. However, in this study of all three aspects of cognition, there was a need to limit the total measure package to a manageable size for the participants, resulting in selection of only one instrument for each level. Both the SCT and the SAS represent only one cognitive schema and

cognitive process, respectively. Thus, results cannot be generalized to cognitive processes and schema in general.

Implications for Research and Training

This study should be viewed as an initial step in examining the cognitive development of counselors during graduate training. Clearly, more longitudinal rather than cross-sectional studies are needed to consider the elements of the training program and effective sequencing of curriculum. This study did not examine cognitive changes during the 30+ hours of required didactic course work. These didactic learning experiences, such a large (and largely ignored) component of the curriculum, should be included in future studies.

The results of this study support the importance of assessing all three levels of cognition for studies that attempt to examine counselor cognitive development. Previous research has measured only one level of cognition such as cognitive events, and then only one component of that level (e.g., counselor intentions). Additional studies are needed that more comprehensively examine counselor cognitive processing and counselor conceptual structures, particularly as they are specific to cognitive processes during actual counseling.

The small and late gains in cognitive appraisal and lack of change in ego development level imply that important elements of counselor cognitive functioning are not being developed and fostered in our training programs. In a sense, we leave students to develop their own cognitive processes and schema for conducting counseling in a catch-as-catch-can mode, a little from one professor or none from a poorly supervised practicum. There is need to structure our training curriculum to be as systematic in developing how our students think about, process, and conceptualize counseling as it currently is in developing counseling skills. Morran, Kurpius, Brack, and Brack (1995) reported that "a review of the counselor training literature indicates no models currently exist that focus specifically on methods of facilitating trainee acquisition of cognitive skills" (p. 384). They proposed a systematic model for such a curriculum. In addition to an overall model, methods to improve cognitive processes and conceptualizations need to be developed and then implemented in the curriculum. Two methods that have been reported recently are methods to teach encoding skills (how to recognize and attend to different kinds of client data) and forming hypotheses about clients (Morran et al., 1994). Future research on these and other training methods will provide critical information concerning the cognitive development of counseling students.

TABLE 1 Longitudinal Data Collection for Study of Student Cognitive Development

Legend for Table:

A - Pretraining

B - Posttraining

C - Practicum

D - Internship

Collection Times

Measure	A	B	C	D	
Cognitive change					
Adjectives	X	X			
Self-appraisal	X	X	X	X	
Ego Development		X	X	X	X

Response change

Gazda Ratings	X	X
Hill Categories	X	X

TABLE 2 Chi-Square Analysis of the Proportions of Words at Each Contact Level Before and After Skills Training

Level	Start of Program		End of Skills Course		
	Number (n = 210)	%	Observed (n = 216)	Expected	%
Factual	3	.0143	2	3.0888	.0090
Behavioral	11	.0524	7	11.3184	.0324
Psychological	158	.7524	190	162.5184	.8796

Interpersonal 38 .1810 17 39.0960 .0787

Note. Chi2 (3, N = 216 words) = 19.1666, p <= .05.

TABLE 3 Means and Standard Deviations of Cognitive Appraisal Scores by Time

Time in Program	Cognitive Appraisal			
	Task Difficulty		Self-Appraisal	
	M	SD	M	SD
Begin program	34.538a	4.824	20.786	4.902
After skills program	35.231a	4.935	25.571	a 4.910
After practicum	33.000	3.162	18.214	b 4.228
After internship	30.769b	4.343	17.214	b 4.758

Note. Means with different subscripts differ significantly at p <= .05. (Tukey studentized range test). Scores on the two Stress Appraisal Scalek subscales are opposite; the higher the score, the greater the perceived difficulty and the less confident the self-appraisal.

TABLE 4 Chi-Square Analysis of the Distribution of Counseling Response Modes Before and After Skills

	Start of Program	End of Skills Course
Response	% of Responses	% of Responses
Minimal responses	21.842	14.621
Directives	13.747	10.819
Questions	20.051	13.444
Complex counselor responses	44.151	61.147

Note: Chi2 (3, N = 43) = 11.731, p = </= .05.

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