

A Comparison of Two Approaches for Facilitating Identity Exploration Processes in Emerging Adults

An Exploratory Study

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This article, using a controlled design, reports the results of an exploratory study to investigate the impact of two types of intervention strategies (cognitively vs. emotionally focused) on two types of identity processes (self-construction and self-discovery) in a culturally diverse sample of 90 emerging adult university students. A quasiexperimental design was used to evaluate the relative impact of the cognitively focused self-construction and emotionally focused self-discovery strategies. Quantitative and qualitative results indicated that cognitively focused intervention strategies were most efficacious in affecting self-constructive identity processes, whereas emotionally focused intervention strategies were most efficacious in affecting self-discovery identity processes. This pattern of differential effects suggests that programs intended to broadly affect identity development should include both types of intervention strategies and should target both self-constructive and self-discovery processes.

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According to Erikson (1950, 1968), an integrated and functional sense of identity helps to unify the various aspects of an individual's life and to

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provide a sense of personal meaning and direction. Forming a coherent sense of identity, a process that begins in early adolescence, helps to maintain consistency in one's sense of self across developmental transitions (Côté & Levine, 2002) and is predictive of subsequent developmental outcomes (e.g., intimacy, generativity, etc.; e.g., Whitbourne, Zuschlag, Elliot, & Waterman, 1992).

At the time of Erikson's (1950, 1968) writings, most youth entered the labor force and undertook adult commitments upon reaching the age of majority. As a result, identity issues were generally addressed during adolescence. During the latter half of the 20th century, however, changing social conditions in the United States and other Western nations resulted in an extended transition to adulthood (Côté, 2000). This transition corresponds to the university years (i.e., the late teens and the early to mid-20s), a period that Arnett (2000) has labeled emerging adulthood. To the extent that the university experience allows young people to postpone permanent employment, marriage, parenthood, and other adult roles, the task of consolidating a coherent identity is extended into the early adult years. As a consequence, for many youth, university attendance offers extended opportunities to explore various identity alternatives and to develop a coherent sense of self (Montgomery & Côté, 2003).

For emerging adults who enter university with a firm sense of direction, encountering the plethora of opportunities that characterizes the university environment is often a positive and constructive experience (Côté & Levine, 1997, 2000). However, for emerging adults with less well-developed goals, values, and beliefs, the unstructured nature of the university environment can be distressing and overwhelming. If little institutional support is available within the university setting, such individuals may encounter difficulty in navigating the identity-formation process (Côté & Allahar, 1994). Moreover, difficulties in the transition to adulthood and in identity formation may be further exacerbated for minority and immigrant individuals. These individuals must address these developmental tasks while functioning in both the mainstream host culture and in their ethnic subculture or culture of origin (Arnett, 2000; Arnett & Taber, 1994), which may adhere to differing values and gender role expectations (Baron, 1991; Phinney & Flores, 2002).

Individuals challenged by the university environment, including those who face cultural as well as developmental challenges, may thus benefit from interventions that help them identify, sort through, and select identity alternatives in the service of forming an integrated sense of self (Archer, 1994). Indeed, a literature focusing on ways to facilitate the process of identity formation in university student populations (as well as high school students) has

begun to emerge (Enright, Ganiere, Buss, Lapsley, & Olson, 1983; Ferrer-Wreder et al., 2002; Markstrom-Adams, Ascione, Braegger, & Adams, 1993). Such skills include improved decision making and problem solving (e.g., Berman, Schwartz, Kurtines, & Berman, 2001).

There is preliminary evidence that such strategies may be helpful (Ferrer-Wreder et al., 2002). However, research on the impact of intervention strategies that target specific identity processes is sparse. Consequently, little guidance is available concerning specific assistance that can be offered to students (Ferrer-Wreder, Montgomery, & Lorente, 2003). An empirical basis for a more fine-grained understanding of the processes involved in facilitating identity development would thus have considerable practical as well as theoretical value. Moreover, with the representation of immigrants and members of multiple ethnic groups increasing rapidly in the United States (Day, 1996; Schmidley, 2003), it would be useful to know the extent to which this knowledge base is applicable to culturally diverse populations. We aim to contribute to this knowledge by reporting the first exploratory, controlled study designed to investigate the impact of two specific types of intervention strategies (cognitively focused vs. emotionally focused) on two core identity processes (self-construction and self-discovery) in a diverse sample of emerging adult university students.

Developing a Sense of Identity: A Tale of Two Processes

One of the first and most enduring attempts to operationalize Erikson's (1950, 1968) understanding of identity for empirical investigation was proposed by Marcia (1966). Marcia identified exploration and commitment as two salient dimensions of the task of forming an identity. Consistent with the psychosocial developmental theoretical tradition, Marcia defined exploration as a process of examination and sorting through of who one might be. This period of exploration is assumed to culminate in commitment to a sense of identity.

Initially, empirical attention toward investigating and promoting identity exploration focused on self-construction-oriented problem-solving and decision-making processes used to make identity-related life choices (Enright et al., 1983; Markstrom-Adams et al., 1993). From this constructivist perspective, identity exploration is seen as a cognitively focused process involving rational, dispassionate consideration of externally presented alternatives (Berman et al., 2001; Berzonsky, 1990; Grotevant, 1987). More recently, an alternative conceptualization of identity exploration as an emotionally focused process has emerged. From this perspective, identity explo-

ration is viewed as involving discovery-based, intuitive, and affective examination of identity alternatives in terms of how well they resonate with one's true self (Schwartz, 2002; Waterman, 1993, 1995). However, thus far no published intervention studies have drawn on emotionally focused or self-discovery principles to facilitate identity exploration.

The constructivist and discovery perspectives on identity formation are based in distinct and differing traditions in psychological theory. Moreover, both have generated efforts to conceptualize and operationalize process-specific components of exploration, and constructs drawn from these two perspectives have been shown to be empirically related (Schwartz, Mullis, Waterman, & Dunham, 2000). The self-constructive approach is rooted in Kelly's (1955) person-as-scientist viewpoint where, through information seeking and critical problem solving, individuals are seen as formulating and testing hypotheses about the world around them (Berzonsky, 1989a; Kurtines, Berman, Ittel, & Williamson, 1995). In the self-constructive approach, effective exploration processes include both social-cognitive style and problem-solving competence (Berman et al., 2001). Style refers to the individual's typical approach to identity-related life choices, characterized by a person's relative proclivity toward exploration (a willingness to identify and sort through prospective alternatives), by closure (a tendency to select a solution or alternative as quickly as possible), or by avoidance (evading the decision-making process altogether; Berzonsky, 1989b). Competence refers to the individual's ability to generate potential alternatives, to evaluate each alternative without bias, and to select the alternative supported by the strongest argument (Ferrer-Wreder et al., 2002).

The self-discovery approach, on the other hand, is rooted in Maslow's (1968) theory of self-actualization and in Csikszentmihalyi's (1990) concept of flow. From this perspective, effective identity exploration includes three levels of affective processing, with successively more advanced levels incorporating and integrating previous ones. In order of increasing integration, the three levels of self-discovery are flow, personal expressiveness, and self-actualization (Schwartz, 2001; Waterman, 1990). The experience of flow is produced by a balance between the challenges posed by an activity or goal and the skills that one brings to it (Csikszentmihalyi, 1990), and it results in a unconstrained sense of time and intense engagement in the activity or pursuit of the goal (Waterman et al., 2003). Feelings of personal expressiveness, the deep satisfaction that accompanies engagement in activities or goals that capitalize on one's unique or innate potentials and that represent one's basic purpose in living, result from incorporating flow-producing activities, goals, and ideals into one's sense of identity. Self-actualization refers to fulfilling one's potentials and living up to one's ideals on a consistent basis (Maslow, 1968).

Although the self-construction and self-discovery perspectives were independently proposed (Berzonsky, 1986; Waterman, 1986), some degree of empirical overlap has been identified between these two hypothesized mechanisms of identity development (Schwartz et al., 2000). A conceptual analysis has suggested that self-construction and self-discovery represent independent but overlapping processes (Schwartz, 2002). Specifically, self-construction refers largely to rational consideration of externally presented alternatives, whereas self-discovery refers largely to an intuitive sense of fit between identity alternatives and one's innate, true self. Some individuals may see themselves as creating a sense of self, others may seek to find themselves, and still others may see themselves as doing both of these things simultaneously.¹

The Self-Construction and Self-Discovery Perspectives on Identity: Implications for Intervention

As might be expected, theoretical developments in the area of fostering identity exploration have advanced faster than has concomitant empirical support. However, these theoretical developments dovetail with the growing interest in developing and evaluating programs that target identity development (Ferrer-Wreder et al., 2002). For example, Josselson (1994) has called attention to the need for more detailed and specific knowledge regarding potential intervention strategies and their links to the developmental processes they are intended to affect. Indeed, such knowledge could prove useful in guiding the development of effective intervention programs by helping to ensure treatment integrity and specificity.

Both the self-construction and self-discovery approaches offer researchers, educators, and counselors possible avenues for facilitating identity exploration including (a) a cognitively focused strategy for facilitating self-construction whereby individuals are encouraged to develop the orientations (style) and abilities (competence) needed to sort through externally presented options and to select the most favorable one; and (b) an emotionally focused strategy for facilitating self discovery, whereby individuals are encouraged to identify their unique potentials and to formulate goals and ideals that correspond to those potentials. Based on self-constructive notions, identity interventions should involve cognitive strategies intended to facilitate the effective use of both cognitive style and competence in identity exploration. A cognitively focused intervention might, for example, ask participants to identify potential solutions to their identity-related life dilemmas, to critically evaluate each solution identified, and to pinpoint the alternative supported by the strongest argument (e.g., Ferrer-Wreder et al., 2002). On the other hand, identity interventions based on self-discovery notions should

involve the use of emotionally focused strategies that facilitate the three levels of affective processing in identity exploration (cf. Greenberg, Rice, & Elliott, 1993). An emotionally focused intervention might, for example, ask individuals to identify their unique potentials (perhaps by way of listing and describing flow-producing activities) and to construct goal strivings (i.e., short-term life goals; Emmons, 1989) and ideals based on those potentials. Such exercises would draw upon existing feelings of flow and would utilize those feelings to incorporate flow-producing activities into one's identity, thereby increasing personal expressiveness and self-actualization.

The use of life dilemmas is consistent with the cognitive literature (e.g., Kohlberg, 1981), whereas the use of life goals or strivings is consistent with the affective literature (e.g., Emmons & King, 1989). Cognitively focused self-constructive approaches have tended to utilize life dilemmas as a template for facilitating exploration (e.g., Ferrer-Wreder et al., 2002), whereas emotionally focused self-discovery approaches might utilize goal strivings. Life dilemmas, or specific identity-related choices (e.g., whether to finish school, what to choose for a career, whether to get married), appear most compatible with the self-constructivist approach because they lend themselves to specific decision-making skills and orientations (cf. Kohlberg, 1981). On the other hand, goal strivings (e.g., going to medical school, becoming a volunteer) appear most compatible with the self-discovery approach because the individual's unique talents and potentials can be used to shape them (cf. Emmons, 1989). Although life dilemmas and goal strivings represent only a small sampling of the possible range of identity issues, they represent mechanisms by which identity change might be promoted using cognitively focused and emotionally focused approaches, respectively.

The Current Study

The availability of two well-articulated approaches, each offering process-specific measures and implicit guidance with respect to intervention strategies, now permits an investigation as to whether a relatively brief (8 weeks) intervention can foster meaningful changes in identity processes in young people. Thus, the aim of the current study was to conduct an exploratory investigation of the impact of identity interventions on identity exploration processes in a sample of emerging adult university students from understudied ethnic groups.

The availability of two identity exploration perspectives also permits questions of equal significance about the specific intervention strategies, or ingredients, that should be included in an identity intervention and the spe-

cific results that these strategies can be expected to accomplish. For example, what is the impact of particular intervention strategies on self-constructive versus self-discovery exploration process? To address this question, we sought to evaluate the effects of cognitively focused versus emotionally focused intervention strategies, relative to each other and to a comparison control condition, on exploration processes drawn from both approaches. We hypothesized that participants exposed to the cognitively focused self-construction approach would show significantly greater increases in the use of self-constructive processes (i.e., orientation toward exploration and problem-solving competence) than would participants in either the emotionally focused, discovery-based condition or the comparison control condition. Concomitantly, we hypothesized that participants in the emotionally focused, discovery-based program would show significantly greater increases in the use of self-discovery processes (i.e., flow, personal expressiveness, and self-actualization) than would participants in either the construction-based program or the comparison control condition.

Testing these two hypotheses, based on measures and exploration processes drawn from two perspectives, also permits exploratory questions about how the specific intervention strategies might affect exploration processes across domains. For instance, do strategies drawn from the self-constructivist approach also affect self-discovery processes (and vice versa)? That is, is there a single set of intervention strategies that affect both types of identity exploration processes? Or do cognitively focused and emotionally focused strategies have a narrower and more specific impact on their associated exploration processes? Although we expected that each intervention strategy would have the greatest impact on its theoretically related outcomes, other alternatives are possible. Answers to these questions would be helpful for those who must select the particular goals and strategies to be included in an identity intervention.

Finally, while evaluating the relative impact of the intervention strategies on identity exploration, we also sought to assess their applicability to culturally diverse populations. The rate of non-White participation in higher education continues to grow (U.S. Department of Education, Office of Civil Rights, 2002), particularly in urban universities that serve primarily non-White populations. The number of university students who must navigate through multiple cultures while exploring their identity during the period of emerging adulthood thus continues to grow. Currently, there are over 640 "minority institutions" identified by the United States Department of Education. For purposes of these listings, a minority postsecondary institution is defined as an institution "whose enrollment of a single minority or a combi-

nation of minorities . . . exceeds 50 percent of total enrollment.” By conducting the current study at a minority postsecondary institution with a combined minority enrollment of 76%, we were able to add cultural diversity to a literature that has historically focused primarily on non-Hispanic Whites. Indeed, to the authors’ knowledge, this article reports the first controlled study examining the impact of intervention strategies on identity development in a largely ethnic minority sample of emerging adult university students.

METHOD

Design

A quasi-experimental outcome study was conducted evaluating the relative impact of the construction and discovery intervention strategies on exploration processes. The study used a mixed (time x condition) research design with random assignment to one of two active intervention conditions (CF and EF). A no-intervention comparison control condition was also included in the present study. For all three conditions, pretest assessments were conducted at the beginning of the semester and posttest assessments conducted at the end of the semester (approximately a 10-week interval). Posttest data were collected from control condition participants and from participants in the active conditions who completed the intervention.

Participants

Volunteer participants ($N = 114$; age: $M = 24.1$, $SD = 5.5$, 86% between 18 to 27) were recruited from undergraduate psychology courses. Of the participants, 56% were born in the United States and 44% were immigrants. The sample (98 females and 16 males) was 65.8% Hispanic American, 16.4% non-Hispanic White, 12.8% African American, and 5.3% other groups. Although the gender distribution was unbalanced, it is consistent with current university enrollment trends (Montgomery & Côté, 2003) and with disciplinary trends (Fowler, 2001) toward the increased participation of women in the social sciences. Although culturally diverse, our sample reflected the fact that it was drawn from a university designated as both a minority postsecondary institution (as noted earlier) and as a Hispanic serving institution (as defined by the U.S. Department of Education) with a total Hispanic enrollment of 58%. As a result, the sample was composed mainly of emerging adult Hispanic females, a particularly understudied population.

Of the original sample of 114 participants, 90 (79%) completed all phases of the intervention. Of these 90 participants, 13 were male and 77 were female. The ethnic breakdown was similar to that from the full sample: 70.0% Hispanic American, 12.3% non-Hispanic White, 11.1% African American, and 6.7% other ethnic groups.

Procedure

The present study was approved by the Institutional Review Board at Florida International University. All individuals who agreed to participate in the study provided informed consent and were given a pretest assessment packet to be completed at home and returned within 2 weeks. After participants to be assigned to the two active intervention conditions ($n = 85$) completed the pretest assessment, they were randomly assigned to either the CF or EF conditions. Control condition participants ($n = 29$) were recruited from separate classes, were pretested, and were told that they would be recontacted in 8 weeks. Within the CF and EF conditions, groups of 6 to 8 participants with similar schedules were formed. Each condition consisted of 6 groups, for a total of 12 workshop groups. At pretest, 45 participants were in the CF condition, 36 were in the EF condition, and 32 were in the control condition.

Participants were contacted by telephone with instructions for attending the first session. Sessions were guided by a facilitator and a co-facilitator. Participants who missed more than one session were dropped from the study, but 90 participants (79%) completed the entire study. Workshop participants met weekly for 6 to 8 weeks. All group members received the opportunity to discuss their life dilemmas (in the CF condition) or goal strivings (in the EF condition). Although all groups began the intervention with 6 to 8 participants, some groups were smaller than others by the end of the intervention because of attrition. As a result, smaller groups tended to require fewer sessions (six or seven vs. eight) to address all members' life dilemmas or goal strivings.

Posttest assessments for the CF and EF conditions were administered during the last intervention session. Posttest assessments for the control condition were distributed in class for control condition participants at the same point in the semester when participants in the active conditions received their posttest assessments. Participants in all three conditions completed their posttest assessments at home and returned them within 2 weeks. At posttest, participants were given the same assessment packets that they had completed at pretest with the life dilemmas and goal strivings rated at pretest (see below) already filled in.

Intervention Conditions

Intervention platform: Participatory learning. The theoretical platform for the intervention strategies used in both the CF and EF conditions was based on the notion of transformative pedagogy introduced by Freire (1970/1983) and refined for use in identity interventions by Ferrer-Wreder et al. (2002). Freire's (1970/1983) approach, which has proven to be useful in working with individuals from outside the dominant culture, assumes an equality of basic competence between the teacher and the learners. Learning is facilitated through problem posing, participatory learning, and transformative activities. Participatory learning experiences provide a context for individuals' participation in a conjoint learning process in which they, with the guidance of a group facilitator, provide the answers to their own questions and to those posed by other group members. Individuals learn to explore alternatives or to seek insight not only through closely examining their own life situations but also through helping their peers to do the same. Participants are also encouraged to engage in transformative activities based on the ideas and solutions proposed in group. Engaging in self-directed transformative activities allows young people to practice solving the problems, making the choices, reaching the goals, and playing the roles that affect the quality of their lives.

Freire's (1970/1983) approach is applicable to both the cognitively focused and emotionally focused intervention strategies. Problem posing and participatory learning activities were used in the CF condition to help participants identify and evaluate solutions to their life dilemmas. In the EF condition, these activities were used to help participants identify points of contrast between their stated goal strivings and the activities that they identified as generating feelings of flow. Group discussion was encouraged, with the facilitator and co-facilitator introducing each condition-specific concept, briefly explaining it, and then facilitating application of the concept through discussion among the participants. In addition, group facilitators encouraged participants to carry out transformative activities outside of group and to report the results back to the group. Such active, participatory approaches are consistent with research-based recommendations for teaching and counseling Hispanic students (e.g., peer-oriented learning, structure, and variety; Griggs & Dunn, 1996).

In both intervention conditions, the first session was dedicated to orientation and discussion of condition-specific core concepts. At the end of the first session, condition-specific worksheets and study guides were distributed to provide participants with additional opportunities to review and practice

skills outside of the group context. These materials were for the participants' own use and were not collected or examined by the group facilitator or other intervention staff. The remaining sessions were devoted to examination of participants' life dilemmas or goals.

Active intervention conditions (CF and EF). In the CF condition, each participant brought one important, identity-related life choice or dilemma to the group for discussion. Participants were instructed to use the same life choice that they had used to complete the assessment battery (see below) at pretest. During the second and subsequent workshop sessions, the group discussed one participant's life dilemma (one participant per session). Life choices were used to facilitate participatory learning experiences. Each life choice was subjected to a group analysis that consisted of steps related to both style and competence including (a) identification of potential sources of information that could be used to resolve the dilemma (i.e., to promote orientation toward exploration and to decrease orientation toward avoidance); (b) generation of possible alternative solutions; (c) suspension of judgment (i.e., identification of pros and cons related to each alternative); and (d) critical evaluation of each alternative (rating the alternatives according to their respective pros and cons; cf. Kurtines et al., 1995). The participant who had brought the choice to the session was encouraged to participate in transformative activities by trying out the alternatives that had been identified by the group.

In the EF condition, each participant brought to group the three goal strivings that he or she had rated on the assessment battery at pretest (see below). During each (second and subsequent) workshop session, the group discussed one participant's goal strivings. For each goal striving, the participant, with help from fellow group members, followed a series of steps. First, the goal striving was broken down into component activities (e.g., going to law school was broken down to reading, studying, and memorizing). Second, the participant was asked to associate each component activity with feelings and feeling words (e.g., angry, stressed, fearful) using the experiential focusing technique outlined by Greenberg, Rice, and Elliott (1993). Third, the group facilitator introduced the concept of flow. Fourth, the participant was instructed to create a list of activities that he or she associated with feelings of flow, and the facilitator wrote these on the blackboard as the participant enumerated them. Finally, the group was asked to construct goal strivings using the flow activities and to creatively integrate these flow goals into the participants' existing personal strivings. The participant was then asked to reflect on these integrated goal strivings.

Comparison control condition. Participants for the control condition were drawn from the same pool as participants in the active conditions, but they were drawn from courses that provided course credit only for brief projects. Participants in the control condition comparison completed pretest assessments at the beginning of the semester and posttest assessments after approximately 10 weeks. They had no other contact with the intervention staff.

Facilitators

The 12 groups were distributed among nine facilitators (graduate students or advanced undergraduates with at least 1 year of supervised research experience). The facilitators included one non-Hispanic White male, one Hispanic male, three non-Hispanic White females, and four Hispanic females. Two facilitators conducted workshops in both conditions; the remainder of facilitators conducted groups in only one condition. Before participant recruitment, the first author trained all facilitators according to the cognitively focused or emotionally focused intervention models. Within each condition, repeated-measures analyses of variance (ANOVAs) conducted on the outcome variables did not reveal any significant differences by facilitator.

Measures

Process-appropriate quantitative measures were used to assess the impact of the intervention on the two self-construction dimensions (style and competence) and the three self-discovery dimensions (flow, personal expressiveness, and self-actualization). In addition, after the final session, participants were asked to assign a letter grade to the intervention and to indicate whether, and to what degree, they benefited from participation.

Demographics

Participants completed a demographic form on which they indicated their age, gender, year in school, ethnicity, place of birth, and parents' places of birth.

Measures of Self-Constructive Identity Processes

The Identity Style Inventory (ISI; Berzonsky, 1997) is a 40-item measure that assesses three social-cognitive styles, including exploration-oriented (11

items), closure-oriented (9 items), and avoidance-oriented (10 items) styles, in situations (i.e., important life choices) that require identity exploration. A commitment scale (not analyzed for this study) is also included in the measure. Participants respond to items on 5-point Likert-type scales. Cronbach's alpha coefficients for scores on the ISI style scales, as calculated in the present sample, were .61 (exploration orientated), .70 (closure oriented), and .70 (avoidance orientated). These are similar to those reported by Berzonsky. Although test-retest reliabilities were not computed in the present study, Berzonsky reported high test-retest reliabilities during a 2-week interval (exploration orientation = .87; closure orientation = .87; avoidance orientation = .83).

The Critical Problem Solving Scale (CPSS; Berman et al., 2001) was used to assess participants' use of problem-solving competence in identity exploration. The CPSS is a performance-based measure in which participants' critical-thinking abilities (creativity, suspension of judgment, and critical evaluation; Kurtines et al., 1995) are assessed using two life choice dilemmas, one personal and one interpersonal, generated by the participants. Once participants have listed a personal and interpersonal dilemma, they are asked to generate a series of lists for each dilemma including (a) listing as many potential alternative solutions to the dilemma as they can; (b) identifying the best alternative from the previous list; (c) identifying the worst alternative from the previous list; (d) listing as many pros and cons as possible for the best alternative; (e) listing as many pros and cons as possible for the worst alternative; and (f) identifying the alternative that they would select following the pros and cons exercise. All lists for the personal dilemma are generated first, followed by lists for the interpersonal dilemma.

Participants' responses to the CPSS items are used to generate four scores. These four scores represent the three critical-thinking abilities proposed by Kurtines, et al. (1995). Suspension of judgment is indexed by two separate variables because this construct is composed of two components (i.e., suspending positive judgment on favorable alternatives and suspending negative judgment on unfavorable alternatives). Generation of alternatives is represented by the total number of different and distinct alternatives generated. Suspension of judgment is tapped by (a) the decentering positive alternatives score, which corresponds to the number of cons provided for the alternative initially identified as best; and (b) and the decentering negative alternatives score, which corresponds to the number of pros provided for the alternative initially identified as worst. Critical evaluation is tapped by the modification score, which corresponds to the degree to which participants change their

original best choice. For the modification variable, a score of 2 is assigned if participants identify a new best alternative at the end of the measure and provide a justification for the change based on their previous pros and cons for that alternative. A score of 1 is assigned if participants identify a new best alternative at the end of the measure but do not provide a justification for the change. A score of 0 is assigned if participants relist their original best alternative at the end of the measure. All four scores are coded and assigned by trained raters. Each of the four scores is summed across the personal and interpersonal dilemmas. Interrater agreement in the CPSS validation sample, across 10 raters, was 84% (Berman et al., 2001). In the present study, interrater agreement, across 5 raters, was 82%.

Measures of Self-Discovery Identity Processes

Personal expressiveness and flow. The Personal Strivings Inventory (PSI; Waterman, 1998) was used to assess personal expressiveness and flow. The PSI requires respondents to list 10 goal strivings that they would use to describe themselves to another person. Participants choose their top three goal strivings and rate each according to the extent to which activities that support the striving are experienced as personally expressive and as characterized by flow. At posttest, participants were given the choice of rerating the same goal strivings they had used at pretest or of rating a different set of goal strivings from their list.

The scale for personal expressiveness consists of six statements, each rated on a 7-point scale from *strongly agree* to *strongly disagree*. The six items tap the extent to which activities pursuant to the goal striving being rated involve an unusually intense involvement, feelings of a special fit or meshing, feelings of intensely being alive, feelings of completeness or fulfillment, an impression that this was what one was meant to do, and a feeling that this is who one really is. A score for the six items, summed across the three goal strivings, was used to measure the extent to which participants experienced feelings of personal expressiveness in their personal strivings. Scores for flow were obtained by summing responses for two items across the three goal strivings, tapping the challenges posed by the goal strivings and the skills brought to the pursuit of them (cf. Csikszentmihalyi, 1990). Because flow is conceptualized as the balanced presence of both challenges and skills, flow scores for a given goal striving can be high only if the challenge and skill scores are both high as well. Cronbach's alpha estimates obtained in the current study were .92 for personal expressiveness scores and .75 for flow scores.

Self-actualization. The Self-Actualization Scale (SAS; Côté, 1997) is a six-item measure of the extent to which participants feel completely fulfilled and present focused. Self-actualization was assessed because it has been posited as the pinnacle of self-discovery and of affective identity exploration, subsuming both flow and personal expressiveness (Schwartz, 2002; Waterman, 1995). The SAS items were adopted from the Personal Orientation Inventory (Shostrom, 1963). The Cronbach's alpha estimate for self-actualization scores has been reported as .66 (Côté, 1997) and was .60 in the current sample.

Participant Quantitative Evaluation

During the last intervention session, participants in both conditions were asked to evaluate their experiences in the intervention using an evaluation form created to provide a global index of the applicability and relevance of the intervention. This form asked participants to assign a letter grade (A through F) to the intervention experience and to indicate the degree of benefit they had received from the intervention (i.e., none, slight, moderate, or strong). Second, participants were asked (yes or no) whether they would participate again, whether they expected to utilize the intervention skills in the future, and whether they would recommend the intervention to a friend.

Participant Qualitative Feedback

In addition, participants were offered the opportunity to provide written feedback about their experiences in the intervention. Of the participants, 19 did so (12 in the CF condition and 7 in the EF condition). Participants' written feedback provided an open-ended and unstructured narrative account of the meaning and significance of their experiences in the intervention. The open-ended response data generated by the participants' written documents were analyzed using Relational Data Analysis (RDA; Kurtines, Montgomery, Lewis Arango, & Kortsch, in press). RDA is a multidimensional, multiphase framework designed to unify the use of data analytic strategies across multiple dimensions of analysis (quantitative and qualitative) and phases of analyses (conceptual, theoretical, and research analyses). Appendix A provides a more detailed description of RDA.

RDA was used to provide a methodological framework for generating theoretically meaningful conceptual categories for qualitative analysis. RDA was then used to formulate and test theoretical hypotheses about the narrative accounts generated by participants in the two active intervention conditions.

RESULTS

Given the exploratory nature of the present study, and given that this was the first attempt (to the authors' knowledge) to compare two methods of producing identity change in emerging adult university students, the study outcomes are reported and interpreted in the context of the overall pattern of results. This includes not only traditional statistical significance testing but also effect sizes and qualitative analyses. Such a multifaceted approach provides a means for addressing statistical power issues common to intervention studies and examining both quantitative and qualitative patterns of change.

Attrition

Of the participants, 24 began the intervention but did not complete all phases (i.e., pretest assessment, attending sessions, and posttest assessment). Of the noncompleters, 11 were in CF, 4 were in EF, and 9 were in CC. Individuals were classified as noncompleters if they (a) completed a pretest assessment but attended no workshop sessions (10 participants); (b) began workshop sessions but missed more than one session (3 participants); (c) attended sessions but did not complete the posttest assessment (3 participants); or (d) were CC participants who did not complete a posttest assessment (8 participants). Chi-square analyses indicated that attrition rates were comparable across conditions.

Analyses of the dropout group revealed that 21 (88%) were female; this percentage was comparable to the gender distribution of the total sample. Half were Hispanic (compared to 66% of the sample as a whole), and 71% were U.S. born (compared to 56% of the overall sample). None of these demographic differences between dropouts and completers approached statistical significance. One-way ANOVAs on the quantitative measures (at pretest) between dropouts and completers revealed no significant pretest differences among the three groups. The primary reason reported for discontinued participation was loss of interest in the intervention activities.

Quantitative results

Self-Construction Processes

We first tested the hypothesis that, as a result of the intervention participants in CF would show significantly greater increases in the use of self-construction exploration processes (i.e., orientation toward exploration and all four indi-

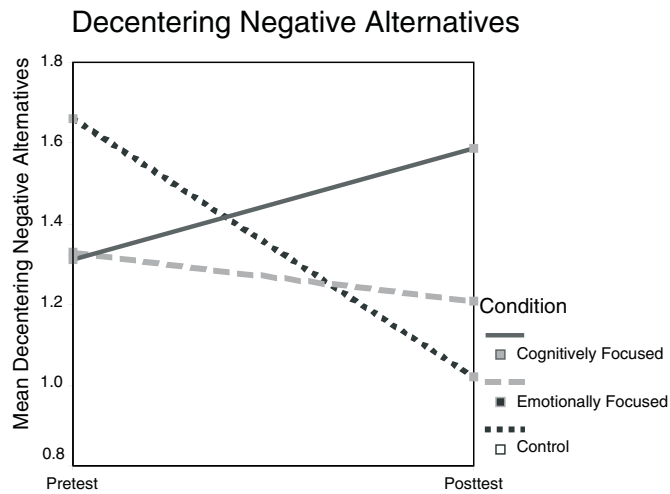
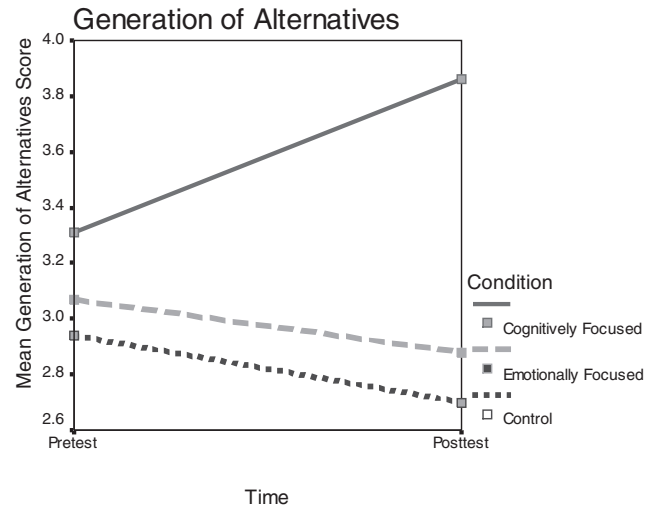


Figure 1. Pretest-posttest changes in generation of alternatives and decentering negative alternatives by Time \times Conditions.

ces of competence) and a significantly greater decrease in orientation toward closure or avoidance than would participants in either EF or CC. A repeated measures analysis of variance (RMANOVA) conducted on the self-construct-

tion (style and competence) scales yielded a significant multivariate Time x Condition interaction, Roy's $\Theta = .23$, $F(6, 746) = 2.84$, $p < .02$, $\eta^2 = .19$. Two significant effects emerged, including CPSS Generation of Alternatives, $F(2, 78) = 3.33$, $p < .05$, $\eta^2 = .08$, and CPSS Decentering Negative Alternatives, $F(2, 78) = 3.78$, $p < .03$, $\eta^2 = .09$. For generation of alternatives, an examination of simple effects revealed a marginally significant increase in generation of alternatives in CF, $t(24) = 1.89$, $p < .07$, $\eta^2 = .14$. Changes in generation of alternatives did not approach significance in EF or CC. For Decentering negative alternatives, an examination of simple effects revealed a significant decrease in decentering negative alternatives in CC, $t(23) = 2.68$, $p < .02$, $\eta^2 = .26$. Changes in decentering negative alternatives did not approach significance in CF or EF (see Figure 1).

Self-Discovery Processes

Second, we tested the hypothesis that participants in EF would evidence significantly greater increases in self-discovery exploration processes (i.e., flow, personal expressiveness, and self-actualization) than would participants in either CF or CC. The RMANOVAs conducted on the self-discovery scales yielded a significant multivariate Time x Condition interaction, Roy's $\Theta = .12$, $F(3, 76) = 3.11$, $p < .04$, $\eta^2 = .11$. A significant univariate interaction effect emerged only for personal expressiveness, $F(2, 77) = 4.24$, $p < .02$, $\eta^2 = .10$. Follow-up t tests revealed that, to a marginally significant degree, personal expressiveness increased in EF, $t(26) = 1.84$, $p < .08$, $\eta^2 = .12$, but did not change in CF or CC.

Follow-Up Analyses: Differential Impact by Participant Pretest Levels

Because the intervention programs tested in this study were designed for use as both universal and selected interventions, where the selected populations might include individuals in need of help in addressing identity issues, follow-up analyses were conducted to more fully estimate the impact of the programs on participants who entered the study functioning comparatively poorly on the target identity processes. Specifically, for all variables that yielded significant univariate Time x Condition interaction effects in the primary analyses, additional 2 (time) x 3 (condition) x 2 (pretest level, low or high) RANOVAs were conducted, with pretest level created by classifying participants into low or high groups using median splits. This step permits

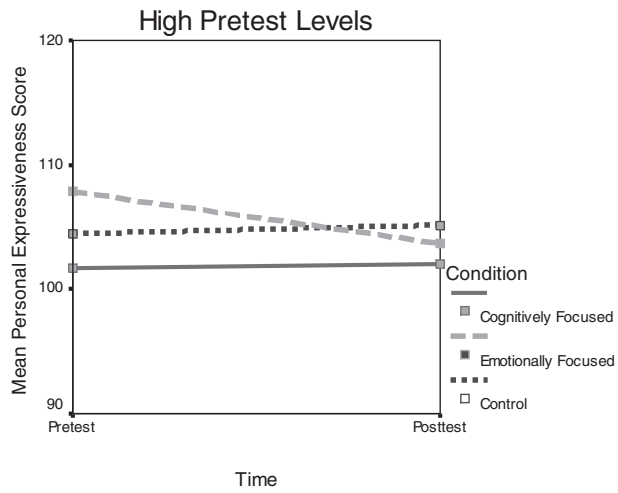
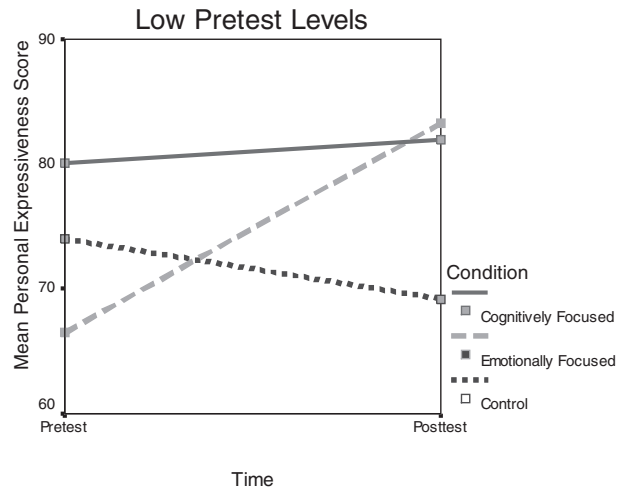


Figure 2. Pretest-posttest changes in personal expressiveness by Time × Condition × Pretest Level.

further exploration of the effects identified in the initial hypothesis tests (cf. Santisteban et al., 2003, regarding this use of follow-up analyses).

Self-Construction Processes

Two 2 (time) \times 3 (condition) \times 2 (pretest level) RANOVAs were conducted for generation of alternatives and for decentering negative alternatives. The three-way interaction (time \times condition \times pretest level) was not significant for either variable.

Self-Discovery Processes

A second follow-up 2 (time) \times 3 (condition) \times 2 (pretest level) RANOVA was conducted on the personal expressiveness scores. There was a significant three-way Time \times Condition \times Pretest Level interaction on personal expressiveness, $F(2, 78) = 5.86, p < .005, \eta^2 = .13$. To explore this interaction, we conducted Time \times Condition RANOVAs separately for individuals entering the intervention with low and high personal expressiveness scores. Only the analysis involving participants with low pretest personal expressiveness scores produced a significant Time \times Condition interaction, $F(2, 38) = 6.22, p < .01, \eta^2 = .25$. Simple effects tests revealed that, in EF, personal expressiveness scores increased significantly for participants entering the intervention with low levels, $t(14) = 3.27, p < .01, \eta^2 = .43$, but did not change significantly for participants entering the intervention with high personal expressiveness levels, $t(12) = 0.61, ns$. No significant simple effects emerged in CF or CC (see Figure 2).

Participant Quantitative Evaluation: Intervention Applicability

The final step of quantitative analysis involved comparing participant evaluations between CF and EF. Chi-square analyses were utilized to ascertain whether participants' self-reported degrees of improvement due to the intervention (none, slight, moderate, strong) differed between the intervention conditions. Chi-squares were also used to examine whether the letter grades that participants assigned differed among conditions. We also analyzed the percentages of participants who indicated that the intervention had helped them, that they would recommend the intervention to a friend, and that they would participate again if asked.

Degree of Improvement

Participants were asked to indicate whether, and to what extent, the intervention had helped them in terms of four categories—none, slight, moderate, and strong, and 55 responded. Of these, 27 participants indicated slight, 15

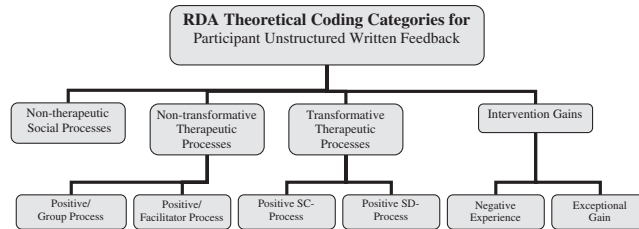


Figure 3. RDA theoretical coding categories.

indicated moderate, and 13 indicated strong improvements. Responses to this question differed significantly by condition, Likelihood Ratio $\chi^2(3, 63) = 9.14, p < .03, w = .29$.² Ratings of slight (18 CF, 9 EF) and moderate (11 CF, 4 EF) improvement were more frequently assigned by those in CF, whereas ratings for strong improvement (1 CF, 12 EF) were more frequently assigned by those in EF. No participants indicated that the intervention had not helped them at all.

Letter Grade Assigned to the Intervention

The letter grades that the participants assigned the intervention ranged from B– to A+, but because of extremely unequal distributions within both the A and B categories (i.e., 2 B– grades vs. 12 B+ grades, and 1 A– grade vs. 32 A grades), the minus and plus grades were combined with the regular grades to form an A category and a B category. The grade distribution across all groups was weighted in favor of the A grades (42 A grades, 21 B grades) but did not differ significantly by condition, $\chi^2(1, 63) = 0.82, ns$.

Participants' Overall Impressions

Responses to the yes or no items suggested that both conditions were effective in promoting identity change and development. Most participants (75%) believed that they had definitely helped the other members of their groups, and 82% believed that they would apply the strategies covered in their group to their everyday lives. All participants (100%) reported that they would recommend the workshop to a friend, although some participants (12%) qualified their responses by indicating that the friend would have to be experiencing distress. In addition, all but four participants who completed evaluation forms reported that they would participate again if they had the

opportunity, although three individuals (5%) indicated that they would participate again only if different topics were covered.

Qualitative Results

The open-ended, unstructured narratives of participants who provided written response data ($n = 19$) were analyzed using RDA. During the first phase (conceptual analysis phase), theory neutral open coding was used to identify the smallest set of qualitatively different and conceptually meaningful (but theoretically neutral) categories and the unique properties that define each category of response data. During the second phase (theoretical analysis phase), theory laden open coding was used to identify and organize the conceptual categories in ways that were theoretically meaningful using Freire's (1970/1983) transformative pedagogy as a conceptual framework. The theory neutral open-coding phase yielded four categories and associated subcategories. In the theory laden open-coding phase, the structural organization of the theoretical categories and subcategories was moderately complex. Figure 3 presents the organizational structure graphically, and a brief verbal description of each of the categories follows here.

Identified Theoretical Categories and Subcategories

From the perspective of transformative pedagogy, the unique property of responses identified as belonging to the nontherapeutic social process category was the presence of an explicit reference evaluating social processes that occurred during group sessions. These social processes were not related to the strategies implemented in either of the intervention conditions. One participant, for example, observed, "As we began talking, I found myself getting more and more comfortable with the group, as if I've known them for years. As time went on, I found myself looking forward to each meeting." The theoretical coders did not identify any subcategories for this category.

The unique property of the category of nontransformative therapeutic processes was an explicitly positive evaluation of a therapeutic process that occurred but was not targeted by either intervention condition. This category contained two nested subcategories characterized by an explicit reference to a process associated either with the group itself or with the group facilitator. For example, a response coded as a positive and nontransformative group process was, "I think we helped each other in a couple of ways even if some advice and suggestions are usually easier said than done." Another response in this category was,

This workshop was very helpful, not only with the options offered to my problems, but also seeing that others had many of the same concerns as I did. It gave us a chance to help other without telling them what to do.

In the positive and nontransformative facilitator process category, one response was, "The facilitator ran the group flawlessly." Another response from a different group was, "The lady in charge of each session was very insightful, and I feel that I learned a lot."

The unique property of the transformative therapeutic processes category was a positive evaluation of transformative process specific to a particular intervention condition. This category also had two nested subcategories, in this case characterized by the type of specific effects predicted by the respective intervention protocol (i.e., either positive self-construction experiences or positive self-discovery experiences). A participant in the CF condition, for example, observed,

Before the workshop I had some idea of where my future was headed, but nothing seemed definite. [The facilitator] taught us to really pick apart the problem, to find out what we really wanted. I had never thought about putting so much time into figuring things out. It took a little over an hour, but it was well worth it. I now feel that I know what field I want to go into, and I learned new ways to go about getting where I want.

Also, a participant in the EF condition wrote,

In regards to the workshop, I have nothing but positive comments about it. It helped me to distinguish between things that I enjoy doing and my fullest potentials. It taught us to uncover the activities that put us in flow.

The unique property of the intervention gains category was an explicit reference to gaining more (or less) than expected, again with two nested subcategories characterized as either a negative experience or an exceptional gain. An example of a negative experience statement was,

Personally, I thought the workshop was good to the extent that it helps people to find alternatives if the goals they set do not work out On the other hand, I do not think that just because our flow activities do not match up to our goals, we have to change our goals I think that tying the two together is a terrible mistake I think that they should find some other way to see if people have made the right goals.

An example of an exceptional gains statement was, "I personally gained more than I expected from the workshop."

Evaluating Concurrent Validity of the Identified Theoretical Categories

During the research analysis phase of RDA, classification coding for consensual validation is used as a method for evaluating the concurrent validity of the theoretical categories identified during the theoretical analysis phase of RDA. During this phase, the second set of neutral coders (blind with respect to all relevant design parameters; e.g., condition, theoretical perspective used to generate theoretical categories, research hypotheses to be tested, etc.) are used to confirm (or disconfirm) the conceptual validity of the qualitatively different, theoretically meaningful categories identified by the theoretical coders (see Appendix B for a more detailed description of classification coding for consensual validation).

Comparing the second set conceptual coders' category classifications with those generated by the original theoretical coders' categories indicated that the two sets of codings were highly consistent with one another. Specifically, the agreement across each of the four identified categories was 89.3% for nontherapeutic social process, 84.7% for nontransformative therapeutic processes, 92.5% for transformative therapeutic processes, and 100% for intervention gains. The overall average agreement across all the categories was 91.6%.

Qualitative Differences in Participant Transformative Experiences Among Conditions

To evaluate differences in the participants' response data by condition, chi-square tests were conducted to assess associations between condition (CF vs. EF) and each of the four categories. The results indicated no significant differences among conditions for the nontherapeutic social processes, nontransformative social therapeutic processes, or intervention gains categories. However, the subcategories of transformative therapeutic processes differed significantly among conditions at a large effect size, $\chi^2(1, 19) = 4.69, p < .03, w = .65$. Seven of the eight participants (88%) in CF who responded to the unstructured and open-ended request for feedback spontaneously generated an articulate and codable narrative account of a positive self-construction experience. Only one participant (12%) in CF referred to self-discovery experiences. Similarly, three of the four participants (75%) in EF who responded to the same unstructured and open-ended request spontaneously generated an articulate and codable narrative account of a positive self-discovery experience. Only one participant (25%) in EF referred to self-constructive experiences.

DISCUSSION

This study investigated the differential impact of a cognitively focused approach using self-construction strategies and an emotionally focused approach using self-discovery strategies on identity exploration in a culturally diverse sample of emerging adult university students. Within the framework of the theoretical perspectives (and associated measures and intervention strategies) used in the study, our findings contribute to the emergence of a knowledge base for research on the development, refinement, and implementation of identity intervention programs. Study outcomes were analyzed and interpreted using traditional statistical significance testing, effect sizes, and qualitative analyses. Such a multilevel strategy is appropriate for an exploratory study because it provides several ways to examine the patterns of results that may, in turn, facilitate the identification of useful guidelines and directions for future identity intervention research.

The Impact of the Intervention Strategies

Consistent with our outcome expectations, the overall pattern of quantitative outcome results provided support for the impact of cognitive strategies on self-construction exploration processes and of emotionally focused strategies on self-discovery exploration processes. The quantitative outcome results of the study, however, were modest. In particular, only one self-constructive process (generation of alternatives) was affected by the cognitively focused condition, and only one self-discovery process (personal expressiveness) was affected by the EF condition. Moreover, *t* tests examining the effects of each condition on the processes effected did not reach statistical significance. It should be noted, however, that in both of these cases, effect sizes for these *t* tests exceeded Cohen's cutoff for a small effect size ($\eta^2 \geq .10$).

Nevertheless, we did not find any significant results or nontrivial effect sizes that were inconsistent with our theoretical expectations. The meaningful effect sizes associated with the intervention outcome effects observed, along with the consistency between the qualitative and quantitative results and the lack of counter-theoretical outcome findings, provide support for the potential applicability of the intervention strategies to emerging adult university students from understudied ethnic groups. Moreover, the encouraging findings from the present study suggest the need for additional outcome research using larger samples to investigate the robustness of these findings and the degree to which they may be extended and refined.

The Specificity of Intervention Effects

Consistent with our expectations with respect to specificity of effects, the overall pattern of both quantitative and qualitative results served to shed light on the question of whether the cognitive strategies had a specific impact on self-construction exploration (but not self-discovery) processes and whether the EF strategies had a specific impact on self-discovery exploration (but not self-construction) processes.

The overall pattern of both the quantitative and qualitative results indicated that the intervention strategies used in each condition did not have an equal impact on all of the identity exploration processes either across domains (self-construction vs. self-discovery) or within each domain. A general conclusion that can be derived from the present results is that skills and processes that are associated with the specific activities conducted in the intervention sessions, such as generating alternatives with critical problem solving and personal expressiveness with experiential focusing, may be most amenable to change by those strategies. These results are consistent with previous observations that effects detected in intervention studies are generally limited to indices that are directly targeted in the intervention activities (e.g., Ialongo et al., 1999; Pantin et al., 2003).

The CF self-construction strategies had an impact only on problem-solving competence, specifically on the ability to generate potential solutions when faced with a life dilemma. This is not surprising because prior research has suggested that the ability to generate potential solutions can be fostered in a brief intervention setting through repeated and vicarious practice (Arrufat, 1997; Ferrer-Wreder et al., 2002). The finding that the ability to list positive aspects of undesirable alternatives decreased in the CC may have been due to a low degree of investment in the intervention among CC participants. Participants in the CC may have listed a small number of pros for undesirable alternatives in the interest of completing the posttest assessment quickly.

Changes in some, but not other, processes directly targeted by the intervention were observed in the EF condition. This condition, with its self-discovery strategies, affected personal expressiveness but not flow or self-actualization. The lack of findings with regard to flow may be due to the fact that it was measured as the balance of challenges encountered in and skills brought to the pursuit of one's personal strivings (cf. Csikszentmihalyi, 1990) rather than as a social-emotional experience similar to personal expressiveness (cf. Waterman et al., 2003). The intervention apparently was not efficacious in affecting the challenges associated with participants' per-

sonal strivings or the skills that participants brought to the pursuit of those strivings. With regard to self-actualization, it is not surprising that posttest assessments administered immediately after the intervention was completed did not reveal significant increases in self-actualization. Maslow (1968) defined self-actualization as tapping into one's unique potentials on an ongoing basis, an ability that may begin to emerge as personal expressiveness is maintained over time. Given that the EF condition was efficacious in increasing personal expressiveness (especially for those participants entering the study with low levels), changes in self-actualization might have been more likely to be observed at longer-term follow-up assessments.

These quantitative results should thus be regarded as preliminary. This study was the first empirical exploration of these questions, and the quantitative findings reported here are constrained by factors related to the size and composition of the sample, the types and quality of the measures, and the implementation of the intervention protocol. The quantitative findings, however, are complemented and strengthened by the qualitative findings. As with the quantitative results, the overall pattern of qualitative results provided support for specificity of effects, suggesting that the cognitively focused intervention strategies affected only self-constructive exploration processes, whereas the emotionally focused intervention strategies affected only self-discovery exploration processes.

The evaluation of the open-ended and unstructured narrative accounts of the participants who provided written feedback, using the RDA method and based on Freire's (1970/1983) participatory learning approach, yielded four theoretically meaningful categories and associated subcategories. The theoretical categories yielded a high degree of concurrent validity across two sets of coders. Of more practical and theoretical importance, there were no significant differences among conditions for the theoretical categories for which none would be predicted or expected (nontherapeutic social process, non-transformative therapeutic processes, and intervention gains), and there was a strong difference for the subcategories in which significant differences by condition would be predicted (positive self-construction processes and positive self-discovery processes). Moreover, this subcategory difference was in the predicted direction, with 88% of CF participants who generated open-ended written feedback spontaneously generating narrative accounts of positive self-construction experiences, and with 75% of CF participants who responded to the same open-ended request spontaneously generating narrative accounts of positive self-discovery experiences. The effect size for this difference was in the large range (Cohen, 1988) at $w = .65$.

Applicability of the Intervention Strategies to Culturally Diverse University Settings

In addition to investigating the differential impact of cognitively focused and emotionally focused strategies, our sample of university students from understudied ethnic groups made it possible to evaluate their potential applicability (and relevance) to other urban institutions characterized by cultural diversity. The analysis of the feedback data suggested that participants believed that the intervention had affected them positively and that they found the experience of participating in the intervention to be appropriate and relevant. Both the cognitively focused and emotionally focused interventions received high marks from all participants.

However, participants in the EF condition were more likely than were those in the CF condition to report that their experience was extremely beneficial. The discrepancy in perceived benefits between conditions may be due to factors related to the intervention modalities themselves (organization, structure, format, etc.), including the use of goal strivings versus life choices, the primary focus on inner versus outer experience, and the focus on emotionally focused rather than cognitively focused intervention strategies. In addition, this difference in perceived beneficiality found in the present study may also be related to the particular cultural composition (ethnic and gender) of the sample, specifically the high representation of Hispanic females. Griggs and Dunn (1996) reported that, for immigrant Hispanic youth, identity formation and individuation can be especially challenging and problematic due to discrepancies between their family of origin and mainstream U.S. culture. For example, Hispanic culture is characterized by strong family loyalty and allegiance, whereas mainstream U.S. culture is characterized by striving for self-expression and individuality (Santisteban, Muir-Malcolm, Mitrani, & Szapocznik, 2002). Moreover, there tend to be stereotyped gender-role values (e.g., machismo vs. marianismo) in the subgroups comprising the Hispanic cultural tradition (e.g., Cuban American, Mexican American, Puerto Rican; Baron, 1991). These cultural norms may have contributed to the perceived beneficiality of the experience of going within and focusing on emotions and potentials rather than considering pros and cons for our primarily Hispanic and female participants. It may also be that the encouragement of individual critical thinking in the CF condition ran counter to Hispanic values such as interpersonal cohesion and deference to authority (cf. Santisteban et al., 2002). This dissonance between intervention modality and participant culture may, in part, explain why participants in the CF condition reported somewhat less benefit than did the participants in the EF condition. Further research is needed to determine whether similar differences in

perceived beneficiality emerge for participants from other ethnic backgrounds.

Practical Implications

The results of this study suggest that both cognitively focused and emotionally focused intervention approaches have the potential to help emerging adult university students address the task of identity formation. If replicated, the pattern of differential effects obtained in the present study (i.e., cognitively focused strategies facilitating self-construction and emotionally focused strategies facilitating self-discovery) has clear implications for researchers, educators, and counselors who work with culturally diverse emerging adult university students. One implication is that those interested in fostering self-constructive processes in identity development (e.g., problem-solving skills) should use strategies that specifically target cognitively focused processes (e.g., generating alternatives). On the other hand, those interested in fostering self-discovery (e.g., self-realization) should use strategies that specifically target emotionally focused processes (e.g., experiential focusing).

In addition, and perhaps more important, the independence of the two intervention conditions' effects argues for combining the cognitively focused and emotionally focused strategies into a single intervention program. Using a combination of the two strategies may be especially beneficial given that problem-solving skills and awareness of one's unique potentials are thus both likely to be increased. Educators and counselors working with students experiencing difficulties choosing a career path, for example, could implement both of these strategies. Combined, cognitively focused and emotionally focused exploration approaches might also be viable in fostering other aspects of self-development in emerging adults, such as ethnic identity (Phinney, 1990), moral development (Lapsley & Lasky, 2001), or vocational identity development (Skorikov & Vondracek, 1998).

Limitations and Suggestions for Future Research

The findings of this study must be discussed in the context of some broad limitations. Given the fact that the literature on the efficacy of identity interventions with emerging adults from understudied ethnic groups is limited, it seemed reasonable to undertake an exploratory, small-scale, quasiexperimental study rather than conduct a full-scale randomized trial. However, such a design has clear limitations in sample size and methodology that require conclusions to be drawn with caution. Given that the study was designed to gather preliminary information regarding the efficacy of identity

interventions with understudied ethnic groups, we purposefully recruited a sample that was large enough to detect statistical significance, to reliably estimate effect sizes within conditions, and to conduct qualitative analyses. We believe that the quasiexperimental design used in the present study permitted us to draw cautious but useful conclusions about and offer guidance for future intervention research on identity interventions. In addition, the use of both quantitative and qualitative measures and data analytic strategies strengthened the credibility of the overall patterns of findings from the study.

Five specific limitations also warrant mention. First, because participants were not retested at any point following the posttest assessments, the maintainability of the intervention outcomes was not investigated and therefore is unknown. Second, lack of posttest assessments on dropouts prevented us from determining the effects of noncompletion on change in identity indices. Third, a second control group, in which participants met weekly but did not discuss identity issues, would have allowed us to control for the effects of group process. Fourth, open-ended qualitative feedback was available from only 19 of the 65 participants who completed the active conditions, thereby limiting the range of participants' experiences that we were able to analyze. Fifth, the fact that participants chose to participate in exchange for course credit may limit the degree to which the findings can be generalized to individuals who do not have such incentives. However, our results are probably informative with respect to young people who would voluntarily participate in a group-based opportunity to facilitate personal identity development. It remains for future research to determine whether the intervention strategies used in the present study would operate similarly with samples composed of different ethnic groups, with participants not attending university, or with participants who are not compensated for their participation.

The exploratory follow-up analyses highlighted an additional important issue for future research: Are some young adults more likely to benefit from an identity intervention than are others? Our findings suggest the possibility that most emerging adults could improve on problem-solving skills when offered the opportunity, but those who are finding their goal strivings and activities the least personally expressive could benefit the most from the emotionally focused identity exploration strategies. This possibility raises a related issue important for future intervention research: Are there differing individual characteristics (e.g., gender, identity distress, racial or ethnic identity salience) that affect amenability to identity interventions?

In conclusion, this study provides preliminary empirical evidence for the usefulness of both cognitively focused and emotionally focused approaches for facilitating the exploration of personal identity. The overall patterns of the

findings from this study are consistent with Grotevant's (1987) process model of exploration and with the claim that exploration is multidimensional and composed of multiple processes, including both cognitive and affectively based processes (e.g., Berman et al., 2001; Grotevant, 1987; Schwartz, 2002). Quite likely, there are other promising strategies and processes beyond those evaluated in this study that foster young adults' identity development. In this respect, we hope that this exploratory and developmental study provides an empirical springboard from which researchers, counselors, and educators can design and evaluate more sophisticated, targeted, and comprehensive intervention programs to help facilitate identity development in young people, particularly those who need support with the important developmental process of developing a sense of self.

APPENDIX A **Relational Data Analysis**

This appendix describes Relational Data Analysis (RDA), a multidimensional, multiphase framework that unifies the use of data analytic strategies across both dimensions (quantitative or qualitative, causal or structural, etc.) and phases of analyses (conceptual, theoretical, and research analyses). In developing RDA, the goal was to articulate a framework that more closely approximates the relational metatheoretical methodological framework for overcoming the splits that have historically characterized methodological metatheory (Overton, 1998). In doing so, the aim was to formulate a practical, ready-at-hand framework that could be used to unify the analysis of developmental change in real life applied settings as well as in clinic and laboratory settings.

The methodological procedures and practices used for RDA draw primarily on grounded theory (Glaser & Strauss, 1967), a well-established approach within the qualitative research tradition (Strauss & Corbin, 1998). The procedures and practices are used for (a) identifying qualitative conceptual and theoretical categories in unstructured qualitative response data, (b) generating theoretically meaningful research hypotheses, and (c) evaluating qualitative research hypotheses using both qualitative and quantitative methods. RDA draws on grounded theory data analytic strategies (Strauss & Corbin, 1998) for the qualitative methods that are used for each of RDA's three analytic phases. Specifically, conceptual coding using open coding and the method of constant comparison for similarities and differences (as adapted for RDA) are used in the conceptual analysis phase of RDA to identify all qualitatively different categories or variables in a particular data set. Theoretical coding using open coding and the method of constant comparison (as adapted for RDA) are used in the theoretical analysis phase to identify the smallest set of theoretically meaningful (and qualitatively different) categories among the identified categories or variables. Theoretical sampling and theoretical saturation (as adapted for RDA), complemented by quanti-

tative methods, are used in the research analysis phase in evaluating qualitative research hypotheses.

The conceptual and theoretical analysis phases of the RDA core cycle were designed to be conducted by two independent sets of coders representative of two levels of theoretical analysis, theory neutral (i.e., not representative of any particular theoretical perspective) and theory laden (i.e., representative of the theoretical coders' consensual understanding of the particular theoretical perspective they exemplify). The research analysis phase of RDA used an additional third set of independent coders who, like the first set, are selected to be theoretically neutral. The use of a manipulated independent variable in the qualitative analysis of data collected with a qualitative measure makes it possible to combine the use of qualitative data analytic strategies associated with grounded theory (theoretical sampling and theoretical saturation) with the use of quantitative or experimental procedures (e.g., manipulated variables, control groups, blind coding, etc.) to estimate the concurrent validity of categories identified with RDA.

APPENDIX B

Using Classification Coding for Consensual Validation for Evaluating the Concurrent Validity of Identified Theoretical Categories

This appendix describes the use of classification coding for consensual validation as a method for evaluating the concurrent validity of the theoretical categories identified during the theoretical analysis phase of RDA. The requirement that the conceptual coders who generate the initial set of content categories during the first phase of analysis (conceptual analysis phase) not be identified with a particular theoretical perspective (i.e., they were selected to maximize theoretical diversity) ensures that the unique properties of the content of the conceptual categories consensually identified in the raw data are theoretically neutral (or at least trans-theoretical) and in that sense reflective of the actual (pretheoretical) content of the categories represented in the raw data, that is that they have conceptual meaning independent of any particular theoretical perspective. The requirement that the theoretical coders who generate the theoretical categories during the second phase (theoretical analysis) be identified with (committed to, knowledgeable about, etc.) a particular theoretical perspective (i.e., are selected to maximize theoretical convergence) ensures not only that the theoretical categories (and subcategories) consensually identified in the theoretical analysis are theoretically meaningful but also that they have external validity, that is that they are theoretical categories rooted in properties and categories that actually exist in the raw data (i.e., categories and properties that have meaning independent of the theoretical meaning ascribed by the theoretical coders).

During the research analysis phase of RDA, theory-neutral classification coding for consensual validation (by a second set of theoretically neutral coders) is used as a method for evaluating the concurrent validity of the theoretical categories identified

during the theoretical analysis phase. The second set of neutral coders (blind with respect to all design parameters, including condition, theoretical perspective, research hypotheses to be tested, etc.) are used to confirm or disconfirm the conceptual validity of the qualitatively different theoretically meaningful categories identified by the theoretical coders.

Using this method, the existence of high levels of agreement between the theoretical category classifications of the theoretical coders and the theoretical category classifications of the second set of neutral conceptual coders is interpreted as providing evidence for the concurrent validity of theoretical categories identified by the theoretical coders (and their unique properties). Conversely, the existence of low levels of agreement between theoretical category classifications of the theoretical coders and the category classifications of the second set of neutral conceptual coders is interpreted as providing evidence for the lack of concurrent validity of theoretical categories identified by the theoretical coders (and their unique properties).

To estimate concurrent validity, the second set of theoretically neutral conceptual coders, working independent of each other and of the first set of coders, reclassified all of the response data. In conducting the consensual validation, the second set of neutral coders was provided with a written description of the theoretical category definitions that included the criteria (category properties) for assignment of each response to one of the identified theoretical categories, along with set of participants' written feedback sheets containing response data from participants in both intervention conditions randomly shuffled together. Working independently and blind to the condition and to the theoretical perspective used to derive the categories, the theory-neutral classification coders used the written category descriptions to sort each of the response sheets into one of the four identified theoretical categories (nontherapeutic social process, nontransformative therapeutic processes, transformative therapeutic processes, intervention gains).

NOTES

1. According to some identity theorists (e.g., Schwartz, 2001, 2002; Waterman, 1995), integrating flow-producing activities into one's set of goals may facilitate feelings of personal expressiveness. As these activities and their corresponding identity referents are further integrated into one's identity, progression toward self-actualization may result.

2. The likelihood ratio chi-square statistic was used because two cells had expected frequencies less than 5. Also, Cohen (1988) recommends *w* as the effect size statistic for use with the chi-square test.

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