

Effectiveness of a Career Time Perspective Intervention

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The present study tested the effects of a time perspective intervention designed to increase an individual's orientation to the future. Because a future orientation constitutes a fundamental dimension in career choice attitudes and competencies, the intervention should, in addition to increasing future orientation, foster career development. Accordingly, the outcome measures addressed both future orientation (i.e., temporal continuity and optimism about the achievability of future goals) and career planning (i.e., planful attitudes and planning outcomes). The intervention was administered, separately, to two groups of tenth-grade students and two groups of college freshmen. The experimental groups, when compared to control groups, exhibited statistically significant increases in future orientation as they improved their sense of continuity between the past, present, and future and enhanced their optimism about the future. The intervention produced its largest effect size (.77) for more highly developed attitudes toward career planning among the experimental group. The intervention, however, did not immediately affect the quality of the students' planning outcomes.

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A hallmark characteristic of human thought and action is an orientation toward the future. Comprehensive review articles by Nurmi (1991) and by Wallace and Rabin (1960) aptly integrate empirical findings from dozens of studies that have examined how time perspective relates to social class, achievement motivation, school and job performance, mental health, juvenile delinquency, delay of gratification, and goal setting and planning. A few investigators have examined time perspective in relation to psychotherapy

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(Brack, Brack, & Zucker, 1992; Lager & Zwerling, 1980) and career counseling (Matulef, Warman, & Brock, 1964).

Recently, optimism or a positive affective evaluation of the future has been the subject of substantial empirical investigation, probably prompted by the new construct of "learned optimism" (Seligman, 1991) and the availability of measures such as the Hope Scale, also called the Future Scale (Snyder et al., 1991; Snyder, 1995), and the Life Orientation Test (Scheier & Carver, 1985; Scheier, Carver, & Bridges, 1994). These studies indicate that optimism about the achievability of future goals relates to better coping skills, adaptation to developmental and traumatic tasks, and goal formation and attainment. Although most of the empirical literature on time perspective originates in personality and social psychology, career development theory and research have also identified time perspective as an important determinant of behavior, particularly individual variation in adolescent vocational maturity and career decision making (Savickas, Silling, & Schwartz, 1984). For example, the structural model of adolescent career maturity devised by Super (1974) emphasizes the critical role that time perspective plays in the development of realistic career choices. This model proposes future orientation or career planfulness (subsuming the variables of distant future, intermediate future, and present) as the basic dimension in career maturity. In fact, the ability to conceive of oneself as having a career requires a time perspective that links the remembered past and experienced present to an anticipated future. Following initial self-awareness of the continuity in one's vocational past, present, and future, the individual can develop career involvement (Super, 1983; Crites, 1978) in the form of planful attitudes toward the future.

Contemporary career interventions are designed for and work well with future-oriented clients, that is, with clients who display career awareness and involvement (Meara, 1996; Savickas, 1991). Unfortunately, many individuals in our diverse society do not orient themselves to the future and seldom, if ever, think about how their careers might unfold (e.g., deVolder & Lens, 1982; Feather & Bond, 1983; Fitzgerald & Betz, 1994; Nisan, 1972). These individuals generally will not seek nor benefit from the intervention models, methods, and materials offered by career counselors (Meara, 1996; Savickas, 1986). For career intervention to be meaningful to individuals mired in the present, counselors must first prepare them by increasing both their awareness of the future and their optimism about planning careers.

The development of a future-oriented time perspective involves a learning process that starts during childhood. Parents are instrumental in developing this orientation as they teach their children about life, set normative standards, serve as role models, and provide emotional support. Learning to adopt a future-oriented time perspective accelerates during adolescence and peaks at about age 15 or 16 (Nurmi, 1991; Wallace & Rabin, 1960), yet continues until the early twenties (Dreher & Gerter, 1987).

Although increasing cognitive abilities may facilitate learning a future ori-

entation, the primary stimuli for developing a future orientation seems to be contextual demands to form life goals and educational plans. A future orientation becomes increasingly important as teachers and parents encourage adolescents to chart their futures. Most studies indicate that adolescents with higher socioeconomic status become more future oriented and involved in planning (Wallace & Rabin, 1960; Nurmi, 1991), probably because they experience more cues from family discussions and academic experiences. Individuals who do not experience significant encouragement and reinforcement for goal setting and planning appear to be less inclined to learn a future orientation. Nevertheless, changes in educational and vocational opportunities can result in a relatively rapid learning of a future orientation (Nurmi, 1991).

A review of the literature clearly indicates that a future orientation is a critical dimension in career development and that this time perspective can be learned through experience. Accordingly, counselors could benefit from the availability of methods to induce their clients to adopt and use a future orientation when thinking about the work role.

Given the fundamental importance of a future orientation to career intervention, researchers have paid surprisingly little attention to investigating how counselors can prompt individuals to adopt the forward-looking time perspective that fosters career development. Although numerous studies document the relationships between future orientation and career development, a search of the career literature yielded only one career intervention experiment that dealt with time perspective. In his dissertation, Anuszkiewicz (1983) assessed the influence of a career intervention on clients' future orientation. His intervention, administered to 40 adolescent felons who attended an alternative school, consisted of three units from the Adkins Life Skills Curriculum: "Who I Am and Where I Want To Go," "Planning for Personal Goals," and "Developing a Vocational Plan." Compared to the control group, students who received the intervention increased their future orientation as indicated by measures of hope, continuity, and optimism. Anuszkiewicz (1983) showed that future orientation can be increased by a career intervention. However, the intervention took 37.5 h, used expensive materials, and altered time perspective indirectly. If counselors are going to adopt time perspective interventions, then the methods must be more efficient and less expensive.

The present study investigated whether a shorter intervention, directly targeted at modifying time perspective, could increase the future orientation and career planning of high school and college students. The intervention aims to make the future personally meaningful and "real" by teaching and encouraging individuals to construct a representation of their future lives, recognize the importance of planning for the future, anticipate events they can expect to experience, engage in the process of goal setting, and evaluate the possibilities of achieving their goals. Because a future orientation constitutes a fundamental dimension in career choice attitudes and competencies, the intervention should foster career development for individuals who increase their orientation

to the future. The intervention examined in the present study took $2\frac{1}{2}$ h and required only paper and pencils. The study used an experimental design to test two hypotheses: the time perspective intervention increases (a) future orientation and (b) career planning.

METHODS

Participants

Two groups of students were used in the study because future orientation is particularly important for young people as they make plans for the future and form an identity (Nurmi, 1991). Students in the tenth grade were recruited for the study because they are at the normative age (15–16) for learning a future orientation (Nurmi, 1991; Wallace & Rabin, 1960). A second group of participants was recruited from a community college because learning a future orientation typically continues into the early twenties (Dreher & Gerter, 1987).

The study was conducted at a high school and community college in Northeastern Ohio, both of which are located in middle-class, predominantly white, suburbs. The high school serves approximately 2400 students in grades 9–12. To recruit participants for the study, the Guidance Department first identified students who had a second-period study hall. Individuals thus identified (190 students) were recruited to participate in the study through a direct mailing to their parents/guardians that included a letter signed by the high school Principal and the Coordinator of Guidance, two consent forms (parental and student), and a stamped return envelope addressed to the Guidance Department. The response to this recruitment effort was small, resulting in only 30 student volunteers willing to participate in the study. This low response rate has been typical for researchers in our region, and appears to be related to unwillingness of students and parents to cooperate with individuals who have not worked in their schools. The 30 high school students who participated in the study, 15 experimental and 15 control participants, consisted of 13 male (43%) and 17 female (57%) tenth-graders, who ranged in age from 15 to 17 (mean, 15.4; mode, 15).

The community college Career Services Department recruited first-year college students to participate in the study by asking professors to inform students about the group and announcing it at freshmen orientation and registration. These procedures yielded 25 community college students who participated in the study. Again, we believe that the researchers' lack of prior experience in the college and familiarity with the students accounted for the small response from students. The 25 students who participated in the study, 12 experimental and 13 control participants, consisted of 11 males (44%) and 14 females (56%), who ranged in age from 18 to 53 (mean, 28.9; mode, 19).

Participants were randomly assigned to the experimental (treatment) or control condition using a random numbers table separately for the high school

and the college students. The treatment was administered to two approximately equal groups of high school students and to two approximately equal groups of college students.

Measures

The variables in this study, future orientation and career planfulness, were each multiply operationally defined (Cook & Campbell, 1979) using two psychometric instruments. The Long-Term Personal Direction scale (LTPD) (Wessman, 1973) and the Achievability of Future Goals scale (AFG) (Heimberg, 1961) measured future orientation. A factor-analytic study of 31 time perspective measures (Madison, 1984) showed that the LTPD and AFG had the highest loadings on the future orientation factor. Based on this finding, the two measures have been used and have performed well in about dozen studies dealing with career development.

The LTPD and AFG measure different aspects of future orientation. The LTPD measures continuity, or the tendency to structure or map the future with events and the AFG measures optimistic, or positive affective, evaluation of the anticipated future (Savickas et al., 1984). Continuity appears to be a more cognitive aspect of future orientation, whereas optimism seems to be more affective. In the present study, the LTPD correlated .69 to the AFG, consistent with the expectation that they measure different aspects of a common trait.

The Long-Term Personal Direction Scale. The LTPD (Wessman, 1973) consists of 20 factor-analytically derived bipolar items. Positive items reflect direction and purpose in life as well as a sense of continuity between past, present, and future aims. Negative items reflect a fragmented sense of time, absence of future goals, and a lack of commitment, along with a sense of discouragement and futility regarding one's personal future. In 1979, Savickas adapted items from this subscale to high school students' reading level. Wessman approved the revision and this revised form was the one used in career development studies. Sample LTPD items are "I move in an orderly way towards goals set long ahead of time," "I am aware of a sense of continuity in my life" (both positive), "I feel my life is a series of starts and stops—stuck, moving, then stuck again," and "I shy away from long term responsibilities" (both negative). Respondents rate the LTPD items on a 7-point Likert-type scale ranging from "not at all" (0) to "perfectly" (6). The scores on the 10 negatively loaded items are subtracted from the scores on the 10 positively loaded items yielding scores anywhere from -60 to +60. To avoid negative numbers a constant of 60 is added to each combined factor score to produce a score range from 0 to 120 (Wessman, 1973). Wessman (1973) reported a positive relationship between continuity and personality traits related to identity and personality integration. The LTPD has been used in career research where its coefficient alpha has ranged from .80 (Wolf & Savickas, 1985) to .87 (Savickas et al., 1984). Several studies, using similar

groups of participants, have shown that the LTPD correlates positively with optimism and career choice attitudes (Lopez-Baez, 1980; Ickes, 1981), vocational adjustment (Tout, 1980), effort attributions (Wolf & Savickas, 1985), and attitudes toward career planning and exploration, and vocational identity (Savickas et al., 1984).

Achievability of Future Goals Scale. The AFG (Heimberg, 1961) measures an individual's affective evaluation of the future (optimism). The AFG scale consists of eight items rated on a 7-point Likert-type scale identical to the one used for the LTPD. Total AFG scores range from 0 to 48. The items assess achievability of goals and control over one's personal future. Individuals who ascribe to items such as "I look forward to the future with hope and enthusiasm" imply that they are confident about the attainment of future goals and believe that their present behavior can be organized to attain desired future outcomes. Consequently, they will be optimistic about their future. In contrast, individuals who ascribe to items such as "It is foolish to be ambitious" and "I am afraid of getting older" imply that they view their future with uncertainty and a lack of efficacy. Consequently, they are likely to be pessimistic about their future. Heimberg (1961) reported a coefficient alpha of .76 for the AFG. Career research has reported coefficient alphas ranging from .69 (Wolf & Savickas, 1985) to .73 (Savickas et al., 1984). Studies using similar groups of participants have shown that the AFG correlates positively with continuity and career choice attitudes (Lopez-Baez, 1980; Ickes, 1981), vocational adjustment (Tout, 1980), attitudes toward career planning and exploration and vocational identity (Savickas et al., 1984), effort attributions (Wolf & Savickas, 1985), and intrinsic work values (Waechter, 1980).

Career planfulness was operationally defined with the Career Maturity Inventory Attitude Scale Form B-1 (CMI) (Crites, 1978) and the Occupational Plans Questionnaire (OPQ) (Hershenson, 1967). The CMI measures attitudes toward career planning and the OPQ measures the quality of current career plans. Thus, the measures differ in that the CMI measures planfulness as an attitudinal disposition and the OPQ measures quality of plans.

Career Maturity Inventory—Attitude Scale. Crites (1978) designed the CMI Attitude Scale Form B-1 (Crites, 1978) to "elicit the attitudinal or dispositional response tendencies in vocational maturity which are nonintellective in nature, but which may mediate both choice behaviors and choice aptitudes" (Crites, 1965, p. 7). The scale consists of 75 true/false items that measure five facets of career planfulness and choice readiness: orientation, involvement, independence, decisiveness, and compromise. The CMI was the first paper-and-pencil measure of career maturity. Results from over 400 studies of career development have clearly established the CMI's reliability, validity, and nomological network (Savickas, 1990).

The Occupational Plans Questionnaire. The OPQ (Hershenson, 1967) assesses how well the respondent's chosen occupation fits with her or his (a) abilities, interests, and values and (b) past, present, and future lifestyles

(Hershenson, 1967). Subcategories within these two areas measure (1) commitment to the stated occupational choice, (2) knowledge about and experience relevant to the chosen occupation, (3) consistency of the occupation chosen with one's abilities, values, and interests, (4) anticipated potential in the occupation, (5) alternative choices, and (6) the significance of the occupational role in the life of the respondent. The OPQ yields a composite score ranging from 14 to 113. Hershenson (1967) reported an internal consistency of .83 for the OPQ as measured by the Hoyt analysis of variance approach. Several studies, using similar groups of participants, have demonstrated the OPQ's reliability and validity. For example, Savickas, Carden, Toman, and Jarjoura (1992) reported a coefficient alpha of .68 and correlations to career choice certainty ($r = .42$), career indecision ($r = -.45$), and satisfaction with career choice ($r = .50$). In the present study, the CMI correlated .43 to the OPQ, consistent with the expected relationship between two distinct variables (i.e., planning attitudes and quality of plans) in the career decision-making domain.

Time Perspective Intervention

The Time Perspective Modification Intervention (TPMI) (Savickas, 1991) has detailed lesson plans divided into three phases: orientation, differentiation, and integration. Each phase corresponds to a different aspect of the personal experience of time. Temporal orientation refers to which time zone (i.e., past, present, or future) frames an individual's thinking about major life choices.

The *orientation phase* in this intervention attempts to induce or increase future orientation and foster optimism about the future by administering the Circles Test (Cottle, 1967) and then discussing the results. The Circles Test directions read, "Think of the past, present, and future as being in the shape of circles. Now arrange these circles in any way that best shows how you feel about the relationship of your past, present, and the future. You may use different size circles. When you have finished, label each circle to show which one is the past, which one is the present and which one is the future" (Cottle, 1967, p. 60). Six prompts guide the discussion of the resulting drawings. (a) What were you thinking about as you drew the circles? (b) What do their relative sizes mean to you? (c) Describe a recent choice you have made and identify the time zone you focused on while making that decision. (d) Use three words to describe how you feel about your past, your present, and your future. (e) Define work and play. Compare and contrast them. (f) How will your future adult life be different from that of your parents? How will the world be different than it is now?

A differentiated future (i.e., one that is densely populated with events that extend far into the horizon) provides a meaningful context for personal goal setting, alleviates anxiety about the future, and enhances an individual's adaptability. Thus, in this intervention, the *differentiation phase* attempts to make the future feel real, reinforce positive attitudes toward planning, and prompt

goal setting. The differentiation phase consists of eight procedures in which students (a) respond to two questions: "Who will you be?" and "What will you do?" (Kastenbaum, 1961); (b) list 10 events that might happen to them in the future (Wallace, 1956); (c) indicate the age when each event in the above list might occur and place a mark next to the events over which they have some control; (d) assess the density and extension of their personal futures; (e) consider why differentiation is important in career and life planning; (f) complete their life lines from "birth" to "death"; (g) discuss their life lines; and (h) draw brackets on their life lines to demarcate the life stages of growth (birth–14), exploration (15–24), early adulthood (25–45), middle adulthood (46–64), and late adulthood (65–death), and then examine the implications and importance of life stages and developmental tasks.

Individuals who can conceptualize relations among the past, present, and future possess a cognitive schema that enables them to form goals and make plans to achieve their goals. Individuals with an integrated time perspective realize that they can control their futures by forming plans that build on their past experiences and guide their present behavior. Thus, the intervention's *integration phase* attempts to link present behavior to future outcomes, provide practice with planning skills, and heighten career awareness. The integration phase consists of eight procedures in which students (a) use their Circles Test data to understand the concept of time relatedness and determine which of four types of time relatedness (i.e., isolation, connection, association, or integration, as in Cottle, 1967) their circles represent; (b) gain knowledge about the importance of planning; (c) understand what constitutes a good plan; (d) learn about contingent plans (contingent means that success at one step in the plan is needed to guarantee the opportunity to engage in the next step); (e) devise their own contingent career path to a goal (cf. Pearlson & Raynor, 1982); (f) discuss and revise the above plans (paths) as needed; (g) discuss and identify achievement standards for each step in the path; and (h) generalize newly gained planning skills to other goals and realize the importance of having a plan for every important goal they set for themselves. A more specific description of the TPMI appears in Savickas (1991) and detailed lesson plans are available from the authors.

Experimental Procedures

During the treatment process (beginning in the middle of October) the high school students met with the first author once a week for 5 weeks rather than going to their second-period study hall. The college students met with the first author once a week for 5 weeks beginning at the end of September. The first author presented the TPMI to each treatment group, closely following the detailed lesson plans, over a 4-week period. Treatment sessions lasted approximately 40 min to coincide with the high school periods. The first treatment session presented the intervention's orientation materials; the second and third sessions presented the differentiation materials; and the fourth

TABLE 1
Means and Standard Deviations for Experimental and Control Participants
on the Four Dependent Measures

	Experimental (<i>N</i> = 27)	Control (<i>N</i> = 28)
Long-term Personal Direction Scale		
Mean	80.48	69.00
Standard deviation	14.95	16.37
Achievability of Future Goals Scale		
Mean	37.89	34.29
Standard deviation	4.35	7.75
Career Maturity Inventory		
Mean	55.52	50.71
Standard deviation	5.99	6.55
Occupational Plans Questionnaire		
Mean	71.19	68.14
Standard deviation	5.15	10.88

Note. *N* = 26 for experimental group on the Occupational Plans Questionnaire because one student completed it incorrectly.

session presented the integration materials. During Week 5, the four outcome measures were administered. Both the treatment and the control participants completed the measures at this time, in accord with our use of a post-test-only control group design to evaluate the effects of the intervention on future orientation and career planfulness. The control participants received no treatment during the experiment. They did receive (optional) the TPMI during the 4 weeks following the conclusion of the experiment.

During the following semester, each experimental and control participant received a feedback packet that contained a letter explaining the purposes and results of the study, the student's individual results for the CMI items, and a copy of the CMI rationales that explained the more mature response for each item missed (Crites & Savickas, 1990). The CMI rationales were distributed with the expectation that reading the rationales would foster the students' career development and increase the realism and consistency of their career choices.

RESULTS

Table 1 reports the mean scores and standard deviations obtained by the experimental and control participants on the two future orientation and two career planfulness measures.

The two hypotheses were tested by two-way factorial analysis of variance with treatment condition (experimental or control) as one factor and educational level (high school or college) as the other. Four ANOVAs were performed, two for each hypothesis.

Hypothesis one. The results of the ANOVA conducted on LTPD scores indicated a significant main effect for treatment condition [$F(1, 51), 6.99; p < .05$]. No significant educational level difference was found on the LTPD [$F(1, 51), 2.83$], nor was there a significant interaction effect [$F(1, 51), .309$]. The effect size was .73 and power was .84. The results of the ANOVA conducted on AFG scores indicated a significant main effect for treatment condition [$F(1, 51), 3.96, p = .053$]. No significant educational level difference was found on the AFG [$F(1, 51), .22$], nor was there a significant interaction effect [$F(1, 51), 2.81$]. The effect size was .57 and power was .66.

Hypothesis two. The results of the ANOVA conducted on the CMI scores indicated a significant main effect for the treatment condition [$F(1, 51), 7.81, p < .05$]. No significant educational level difference was found [$F(1, 51), 3.87$], nor was there a significant interaction effect [$F(1, 51), .23$]. The effect size was .77 and power was .88. The results of the ANOVA conducted on OPQ scores indicated no significant main effect for treatment condition [$F(1, 50), 1.53$], nor for educational level [$F(1, 50), .08$], nor was a significant interaction effect found [$F(1, 50), .03$]. The effect size was .36 and power was .37.

DISCUSSION

This study investigated the hypotheses that a time perspective intervention increases future orientation and career planfulness. The results of the first two ANOVAs support the hypothesis that the time perspective intervention increases future orientation. The ANOVA based on the LTPD Scale, which measured future orientation in terms of purpose, direction, and continuity, yielded a large effect size (.73) favoring the experimental group students who had received the time perspective intervention. We interpreted the ANOVA based on the AFG scale, which measured the affective component of future orientation—optimism—as practically significant at the .05 level although the probability was actually .053. These results yielded an effect size of .57 favoring the experimental group.

These results suggest that the experimental participants were more likely than the control participants to link the time zones (past, present, and future), thereby indicating a greater appreciation of the future's importance. They also increased in optimism, or the affective pull of the future. We speculate that the larger effect size for continuity (.73) than optimism (.57) might have occurred because the intervention focused on more conceptual aspects of a future orientation and was delivered in a somewhat didactic manner. Furthermore, the instructor had minimal success in eliciting students' active participation. More experimental activities and greater student involvement in the lessons may be required to prompt greater affective change such as increased optimism, especially activities that clarify foresight about possible selves.

Nevertheless, the results of the present study in modifying time perspective

compare favorably to those obtained in Anuszkiewicz's (1983) study. His intervention also produced significant differences between the experimental and the control groups on continuity and on optimism. However, Anuszkiewicz's intervention used 37.5 h to accomplish these results, making it approximately 14 times longer than the TPML.

The results of the two ANOVAs performed to test Hypothesis 2 provided partial support for the contention that the relatively brief time perspective intervention fosters career planfulness. The ANOVA for career planfulness yielded a significant difference, and the largest effect size (.77), favoring the students who had received the time perspective intervention. No significant difference was found, however, between the experimental and the control students on the Occupational Plans Questionnaire, which measured quality of career plans. The low power for this statistical test (.37) indicates that if the higher OPQ scores (+3) for experimental participants represent a real difference, we had only about a one in three chance of detecting it. The results for Hypothesis 2 suggest that the intervention helped students develop more mature career planning attitudes but did not significantly improve the quality of the students' career plans.

However, before concluding that the time perspective intervention improves planning attitudes but not planning outcomes, one should consider limitations in the OPQ. We selected the OPQ because it measures time-related, planning variables (e.g., assessment of past experiences, anticipation of future potential, and planning a future lifestyle) that should improve with an increase in future orientation. In hindsight, we should have recognized that the OPQ lacks sufficient sensitivity to adequately perform as a career development measure in the present study. Many OPQ questions tapped information unlikely to change in one month (e.g., how many courses have you taken in school related to the occupation you currently plan to enter?). The intervention may improve the quality of plans over a longer period of time, as the increase in orientation makes planning more important to the experimental group. Unfortunately, we did not include in the design of the present study a follow-up that would show whether the experimental group significantly improved the quality of their occupational plans in the months following their participation in the study. Such a follow-up would also have been useful in testing for a "rebound effect" postintervention. Although the intervention produced significant change, there is no evidence that the changes remained stable in the months following the study. Further studies of the intervention will include follow-up mechanisms that assess its efficacy over time. Future studies should also include a measure of planning competence, such the *Career Maturity Inventory—Planning Test* (Crites, 1978). A measure of planning competence may well have detected a difference in career planning skill between the experimental and the control participants at the post-test.

The lack of significant differences based on educational level suggests that the learning processes involved in this time perspective intervention

are applicable and relevant both to high school students who are formulating and adult time perspective (Wallace & Rabin, 1960) and to college students who are extending their time perspective further into the future (Dreher & Gerter, 1987).

Limitations of the study include an apparent self-selection bias at the high school level. The high school students used in the study may be unrepresentative of a general sophomore population because the vast majority of these participants indicated that they were currently considering occupations that required four years of college, if not more (OPQ Item 1). Consequently, generalizations of the results to high school students other than those in college preparatory curricula are unwarranted. Another limitation of the study concerns the possibility of demand characteristics playing a role in the results because the first researcher provided the intervention and administered the postintervention measures. Some students may have tacitly tried to please the researcher in responding to the postintervention measures.

In conclusion, the results of the present study indicated that a relatively brief, inexpensive intervention can be effective in modifying clients' career time perspective. Specifically, such an intervention can increase students' future orientation by developing their sense of a unified, continuous flow of past, present, and future and increasing their optimism about the achievability of future goals. It can also foster development of more mature career planning attitudes. Thus, the TPMI represents a simple, inexpensive, easy to administer intervention that produces meaningful changes in time perspective. This intervention now needs to be field-tested with populations of at-risk students such as the economically disadvantaged juvenile delinquents who typically lack a future orientation. Part of the field testing should investigate the usefulness of adding more emotionally oriented activities to this cognitively oriented intervention, especially as they effect optimism and hope. The TPMI may, in due course, prove to be quite useful in increasing individuals' readiness to benefit from the future-oriented interventions currently offered by career planning services.

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Received: March 11, 1996