

# exploring the relationship between intrapersonal intelligence and university students' career confusion: implications for counseling, academic success, and school-to-career transition

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The author describes the relationship between self-knowledge and career confusion among university students and discusses strategies to enhance career and academic planning. The multiple intelligences profiles of typical university students are compared with those of 82 students enrolled in 3 sequential semesters of a Career Exploration course at a large midwestern U.S. university. Low Intrapersonal intelligence scores were found to be a significant characteristic of undergraduates with moderate and high levels of career confusion. Implications for counseling to promote successful school-to-career transitions are discussed.

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Today's youth are strongly encouraged to obtain a university degree so that they can embark on a career that will lead to greater economic success and (hopefully) fulfillment of their intellectual potential. A high school education is no longer viewed as sufficient in an increasingly technologically dependent world. The U.S. Bureau of Labor (1999—2000) predicted that by the year 2008, 12 of the 20 fastest growing occupations would require a minimum of an associate's degree or higher. However, successfully completing a university degree and making a satisfying transition into one's chosen career is problematic for many youth.

Student attrition and failure to enter a career path are complex phenomena that have many causes and affect different types of students who experience career development problems. As one researcher stated it, there may be as many reasons for leaving school as there are people who leave: "Academic integration refers to the extent of congruence between the students' intellectual ability, involvement, and performance on the one hand and a school's intellectual expectations on the other" (Hermanowicz, 2003, p. 8). In a study conducted by Yorke (1999), three of the top four most influential reasons for leaving school cited by more than 2,000 students pertained to the students' difficulty in choosing an educational program or field.

A high student attrition rate, which often influences one's ability to successfully navigate the transition to work, has prompted many universities to implement broad-



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[AU1]

based retention programs that emphasize providing academic support and social integration for 1st year students (Noel, 1985; U.S. Department of Education, 2000). Universities have also raised their entrance requirements and applied pressure to high schools to better prepare students in reading, writing, and mathematics.

Less attention is given to exploring the relationship between students' reenrollment and their career goals (Hull-Banks et al., 2005) and personal growth/lifestyle development during the college years (Gordon, 1985; Noel, 1985). Career indecision and not having decided on a major are known to be significant factors in a student's decision to withdraw from college (Hull-Blanks et al., 2005; Noel, 1985; Nutt, 2003). Increasing the focus on career transition issues serves to promote not only academic success but also (perhaps more importantly) students' school-to-career planning and decision making.

## MULTIPLE INTELLIGENCES (MI) THEORY

MI (Gardner, 1993) theory has expanded the concept of intelligence to include academic abilities (linguistic and logical-mathematical) as well as aptitudes/talents (kinesthetic, musical, spatial, naturalist) and the personal intelligences (Interpersonal and Intrapersonal). Gardner used an inclusive definition of *intelligence*: "an ability or set of abilities that allows a person to solve a problem or fashion a product that is valued in one or more cultures" (1993, preface) that has direct applications to instruction, curriculum design, and career counseling at all age levels (Armstrong, 2006; Campbell & Campbell, 1999; Gardner, 1993b; Shearer & Luzzo, in press).

A unique and often neglected element of MI theory is the concept of Intrapersonal intelligence. *Intrapersonal intelligence* is comprised of a complex set of knowledge and abilities pertaining to one's self. At its core, Intrapersonal intelligence involves an accurate self-representation (including both strengths and limitations) that allows a person to effectively manage his or her life. Gardner's (1993a) definition emphasizes the cognitive, metacognitive, and behavioral aspects of self-understanding. The idea of emotional intelligence (Goleman, 1995; Salovey & Mayer, 1990) builds on MI theory but places the emphasis on the affective components of self-knowledge and their importance to life satisfaction and vocational success.

In the literature on career development and school-to-career transition, the idea and importance of Intrapersonal intelligence shows up by a number of different names, including accuracy of self-knowledge (Watkins & Savickas, 1990), self-identify issues (Chickering, 1969; Erikson, 1968; Gordon, 1985), talent identification (Noel, 1985), self-understanding (Parsons, 1909), and self-concept (Holland, 1996; Super, 1954). Each researcher focuses on a particular subset of Intrapersonal functioning that pertains to his or her theoretical orientation. The connection between Gardner's and Goleman's (1995) conception of Intrapersonal intelligence and academic/career success is the emphasis on broadly defined *abilities* as opposed to interests, for example, preferences, propensities, values, personality characteristics, and motivations.

Three aspects of Intrapersonal intelligence pertain directly to career development: First, a realistic appreciation of one's multiple intelligences abilities and limitations; second, an understanding of how different combinations of MI strengths are required

for success in various careers (Shearer & Luzzo, in press); third, the ability to use good judgment to manage one's decision making, skills training, and education to prepare for and succeed in one's chosen career.

## RESEARCH QUESTIONS

1. Do university students enrolled in a Career Exploration (CE) course (designed for undecided students) display lower levels of Intrapersonal intelligence and higher levels of career confusion as compared with a normative sample of students?
2. Do Career Exploration students with higher levels of career confusion display lower Intrapersonal intelligence and differences in their MI skills as compared with CE students with greater clarity?

## METHOD

### Participants and Procedure

This study was focused on understanding the multiple intelligences profiles of 82 students enrolled in three consecutive semesters of a Career Exploration course at a large midwestern state university. Participants were 47 women and 35 men; 41 of these students were freshmen, 35 were sophomores, 3 were juniors, and 3 were seniors. Approximately 10% of the students were African American and the remainder were Caucasian; however, exact figures were not obtained. At least half of all students at this university are reported to be first generation college attendees. Approximately 5% of the participants were nontraditional, older students.

The Career Exploration course is intended primarily for 1st- and 2nd-year students who have not selected a major course of study. It is a three-credit, semester-long class that provides students with many self-assessment opportunities along with experience in researching various career options. A core learning objective of the course is to build a student's self-understanding through metacognitive assignments and discussions following completion of assessments and career research. Students are usually referred to the CE course by professors and academic advisors after expressing frustration with regard to selecting a major or demonstrating significant career confusion.

### Instruments

The *Multiple Intelligences Developmental Assessment Scales (MIDAS; Shearer, 2007)*. MIDAS, a standardized self-assessment for multiple intelligences, consists of 119 questions that result in a quantitative and qualitative profile of a student's strengths and limitations in eight areas: linguistic, logical-mathematical, spatial, musical, kinesthetic, naturalist, interpersonal, and intrapersonal (Gardner, 1993a; Shearer & Luzzo, in press).

The MIDAS profile (for a sample profile, see Shearer, 2007) consists of eight main scales along with 26 subscales that describe specific skill domains within each main area. For example, the Intrapersonal main scale includes four subscales: Personal Knowledge, Calculations, Spatial Problem Solving, and Effectiveness. Scale scores range from 0% to 100%. *The MIDAS: Professional Manual* (Shearer, 2007) provides the following guidelines for interpreting scores: 80–100 = very high, 60–79 = high, 40–59 = moderate, 20–39 = low, and 0–19 = very low.

Numerous studies have investigated the reliability and validity of the MIDAS and many research results are summarized in detail in the *Professional Manual* (Shearer, 2007). The MIDAS provides a profile of the respondent's "intellectual disposition," which has been favorably evaluated in the *Buros Mental Measurements Yearbook* (Hiltonsmith & Schneider, 2007; Prackard & Trevisan, 1999), suggesting support for use of the instrument within educational contexts.

As reported in the *Professional Manual* (Shearer, 2007) for four diverse samples, mean internal consistencies of each MIDAS scale fall in the high-moderate to high range, with alpha coefficients ranging from .78 to .89 (median = .86). The test–retest reliability of the MIDAS was assessed in two separate investigations ( $n = 25$ ;  $n = 98$ ), revealing 1-month stability coefficients ranging from .76 to .92 (mean = .84) and 2-month stability coefficients ranging from .69 to .86 (mean = .81) across the various intelligence scales (Shearer, 2007).

The validity of the MIDAS has been examined through a series of investigations evaluating its concurrent, predictive, and construct validity. The results of a concurrent and predictive validity study concluded that "accumulated evidence supports its validity as a tool to gather useful and meaningful data regarding an individual's profile in seven areas of everyday intellectual functioning" (Shearer & Jones, 1994). Studies of MIDAS scale correlations with Holland interest codes revealed a logical pattern ranging from .36 to .52 (Shearer, 2007). For example, the Spatial scale correlates at .51 with Realistic Interests, Musical at .52 with Artistic, Logical-Mathematical at .39 with Investigative, and Interpersonal at .52 with Social interest.

The MIDAS has been the subject of several international factor analytic studies and a cross-cultural investigation that included 12 different countries (Jones, 2003). A recent series of exploratory and confirmatory factor analytic studies of more than 10,000 participants concluded that the MIDAS factor structure is consistent with the designated scales and subscales (Shearer, 2005).

*My Vocational Situation (MVS; Holland, Daiger, & Power, 1980)*. This is a 20-item self-report measure that describes the subjective degree of career confusion experienced by a student. Its 18 questions are rated "true" or "false" and describe a range of thoughts, feelings, and behaviors pertaining to one's career planning. Validity data on the MVS is limited but deemed adequate to support its essential face validity. Students who score in the very confused level indicate a "poor sense of identity who need experience, career seminars, personal counseling," whereas those who are less confused "need only information and reassurance" (Holland et al., 1980, p. 7).

Students also completed a customized Student Opinion Survey (SOS), which elicited background information (e.g., age, sex, year). along with information about students'

[AU15] degree of career confidence. This instrument has been used for many years to provide  
 [AU16] instructors with a qualitative understanding of each student's personal situation and  
 [AU17] attitudes. (The instrument is available from the author upon request).

**Procedure**

[AU18] At the beginning of the course, students complete the MI assessment, MVS, and S OS. Students then participate in a 90-minute class session wherein their MI profiles are interpreted and they are given extensive information relating the MI scales to pertinent career paths, college majors, and study skills (see Table 1).

CE students were compared with archival university data obtained during MIDAS normative studies. The mean scores for CE students were markedly lower than the mean scores for university students, in general, as reported in the MIDAS *Professional Manual* (Shearer, 2007). Analysis of variance (ANOVA) revealed that all *F* values were significantly different at the .01 level except for Musical scale, which approached significance at the .09 level (*F* values ranged from 2.79 [Musical] to 65.69 [Intrapersonal]). The largest scale differences were for the Intrapersonal and Math/Logic scales, which are both 12% points lower for the career exploration group. These results suggest a generalized skill deficit as compared to typical university students with an emphasis on lower self-knowledge and math skills. The lower academic skills scales (Linguistic, -7%; Logical-math, -12%)<sup>3</sup> correspond with the low-average (approximate *M* = 2.5) grade point average typically reported by most students enrolled in the CE course every semester.

The MVS is scored from 0 to 18, with lower scores indicating a greater degree of career confusion. The mean score for participants was 6.5, with a standard deviation of 3.1, indicating that the group as a whole was moderately confused. Using data published in the MVS user's manual (Holland et al., 1980) for university students, the students' scores were categorized into three groups: very confused (scores between

**TABLE 1**  
**Student Scores on the Multiple Intelligences Developmental Assessment Scale**

Scale	Student Groups		<i>F</i>	Partial $\eta^2$	Power
	Career <i>M</i>	University <i>M</i>			
Musical	44	47	2.75	.002	0.38
Kinesthetic	42	49	12.12**	.008	0.94
Math/Logic	40	52	42.46**	.029	1.00
Spatial	43	52	18.53**	.013	0.99
Linguistic	48	55	15.56**	.011	0.98
Interpersonal	55	60	10.16**	.007	0.89
Intrapersonal	45	57	65.69**	.044	1.00
Naturalistic	39	45	8.51**	.006	0.83

Note. Career = career exploration students (*n* = 82); University = university students in general (*n* = 1,347); Power = xxxxxxxxxxxxxxxxxxxx.

\*\**p* < .01.

1 and 4), moderately confused (scores between 5 and 9), and mild to no confusion (scores between 10 and 15).

On the basis of the aforementioned guidelines, 21 students were classified as very confused (26% with a mean score of 3.3), 52 students as moderately confused (63% with a mean score of 6.7), and 9 students were classified as mild to not confused (11% with a mean of 12). According to published data, the mean MVS score for university students is between 10 and 11.

Only two of the MI scales were found to be significantly ( $p < .01$ ) correlated with the MVS score: Intrapersonal ( $r = .26$ ) and Interpersonal ( $r = .23$ ). The Personal Knowledge subscale of the Intrapersonal main scale had the highest correlation of all subscales with the MVS scores ( $r = .49$ ). This indicates that there was a moderately strong relationship between a participant's self-knowledge and degree of career clarity. This correlation is supported by the significant differences in Personal Knowledge mean scores found among the three levels of career confusion (see Table 2).

The mean Personal Knowledge subscale score for each group was significantly ( $p < .00$ ,  $F = 8.90$ ,  $p = .000$ ,  $\eta^2 = .184$ , Power = .968) lower than the other two groups. A score of 40% or below is usually interpreted as indicating low self-knowledge and scores between 40% and 60% indicate moderate self-knowledge. Scores above 60% are in the high range. What makes these data even more meaningful is that university students generally have a mean Personal Knowledge score of 61% with a main scale Intrapersonal mean of 56%.

It has been theorized that Intrapersonal intelligence is related to a person's self-confidence. This hypothesis was examined by comparing students' Intrapersonal score to their responses to the SOS. Students' Intrapersonal scores had the strongest negative correlation of all scales ( $r = -.28$ ) in response to the statement, "I am confident that I will find a career that suits me." The Personal Knowledge subscale was the strongest of all MIDAS scale correlations at  $r = -.39$ , suggesting a significant relationship between self-knowledge and career self-confidence.

**TABLE 2**  
**Mean and Standard Deviation Scale Scores by Level of Students' Career Confusion**

MVS Category	Scale							
	Personal Knowledge		Intrapersonal		Reading/Writing		School Math	
	M	SD	M	SD	M	SD	M	SD
Very confused ( $n = 21$ )	35.52	16.80	41.03	12.22	47.05	23.60	47.61	32.80
Moderately confused ( $n = 52$ )	49.63	15.20	46.20	11.78	59.03	19.63	45.03	26.67
Mild-not confused ( $n = 9$ )	59.06	16.60	45.01	14.68	50.24	23.46	32.41	25.47
University students ( $n = 1,347$ )	61.39	17.30	56.63	12.61	61.94	20.76	56.57	27.60

Note. MVS = My Vocational Situation report.

## DISCUSSION

*Research Question 1:* Do students enrolled in a CE course (designed for undecided students) display lower levels of Intrapersonal intelligence and higher levels of career confusion as compared to a normative sample of university students?

[AU19] The research results of this study provide empirical support for the theory that self-knowledge is more closely related to career planning than to other multiple intelligences, including academic abilities (Linguistic and Logical-mathematical). Having a clear career goal that is reasonably aligned with one's intellectual strengths, described by Parson (1909) as "true reasoning", enhances the process of selecting an academic major, which in turn increases the odds of a successful graduation and then transition into one's chosen career. This metacognitive process of carefully describing one's unique intellectual strengths and creatively relating them to careers/majors would fulfill the mission of a quality institution that retains students as advocated by Noel (1985) to "help students find their talents and help those talents grow."

[AU20] It is worth noting that students with lower Intrapersonal scores also tended to have lower and flatter MI profiles than did students with greater self-knowledge. In other words, they did not have at least one distinct area of intellectual strength to use as a focus for their studies and career decision making. The challenge in helping these students is to increase awareness of and appreciation for their unique strengths, regardless of their standing in comparison to others.

[AU21] Students' low Intrapersonal scores may also indicate their inefficient use of metacognitive strategies, which have been noted to be associated with academic achievement. This is reflected in the students' lower than average grade point average.

[AU22] *Research Question 2:* Do CE students with higher levels of career confusion display lower Intrapersonal intelligence and differences in their MI profiles as compared with CE students who experience lower confusion?

[AU23] To answer these more specific questions several main and subscales for each level of career confusion were compared.

Scores on the Intrapersonal subscale Personal Knowledge (see Table 2) were notably lower for both the very confused and the moderately confused students (35% and 49%, respectively) as compared with the mildly confused and typical university students (59% and 61%, respectively). The academic subscale comparisons (Reading/Writing and School Math) among the three levels of career development were also of interest because of their great variability. There was also large variability within groups, as evidenced by standard deviations that were larger than either the Intrapersonal or Personal Knowledge scales.

[AU24] The Very Confused group shared some of its highest subscale scores with nonconfused and typical students: Musical Appreciation, Writing/Reading, Persuasiveness, Sensitivity to People, and Social Leadership. The mean scores, however, were generally lower, indicating that they were different in some ways from the "typical" university student, but not all that different in many other ways (see Table 3).

**TABLE 3**

**Subscale Means of Very Confused Group on Highest Multiple Intelligences Developmental Assessment Scale**

<b>Subscale</b>	<b><i>M</i></b>
<b>Music Appreciation</b>	<b>59.60</b>
<b>Self-Effectiveness</b>	<b>53.28</b>
Athletics	51.79
Animal Care	47.93
School Math	47.61
Rhetorical Language	47.61
<b>Writing/Reading</b>	<b>47.05</b>
<b>Persuasion</b>	<b>47.03</b>
<b>Sensitivity to People</b>	<b>46.90</b>
<b>Social Management</b>	<b>46.61</b>

*Note.*  $n = 21$ . Boldface indicates subscales that very confused group had in common with other groups of university students.

[AU26] The very confused group had moderately developed School Math and Writing skills, which are required for successful university academic performance; but, these means were lower than those obtained by typical university students. Their unique strengths, as evidenced by scores on the Athletics, Animal Care, and Rhetorical Speaking scales, suggest that these areas would be better modalities for active, engaged learning and also keys to career choices. These subscales provide an indication of why these students were uncomfortable and marginally successful in the university environment. Students with these strengths will often perform at a higher level and with greater satisfaction with active learning (e.g., hands-on projects, task-group problem solving) in the classroom and with practical-social careers that are generally associated with vocationally oriented programs rather than theoretical-academic degree programs.

[AU27]

[AU28]

**CONCLUSION**

These results provide support for two propositions. First, Intrapersonal intelligence is substantially related to clarity of career planning and decision making. Second, career confused students who are at risk for dropping out of school have unique multiple intelligences profiles that have implications for academic/career counseling to guide their transition into an appropriate career path and subsequently into work.

This research also indicates that a process approach to MI-inspired career assessment can be implemented effectively with undecided students as well as with those who are indecisive and require more intensive, personalized assistance (Wu, 2004). The undecided student can benefit from the objective matching of multiple intelligences strengths with the requirements of careers of interest to him or her. The more profoundly confused student can be given strength-based personal attention from both counselors and instructors that emphasizes the creative use of the

student's multiple intelligences strengths to improve academic performance and to select a major course of study that will lead to successful transition into a career of one's choosing (Watkins & Savickas, 1990).

The integration of learning about multiple intelligences coupled with actively reflecting on their own MI profiles can provide students who are struggling academically with a sense of hope and self-efficacy that they can work to achieve success. The career counselor can use the MI profile as a framework for guiding the student's practical understanding for how his or her unique combination strengths are used in particular careers, university majors, and entry-level career choices.

Future research should build on these results and investigate how universities can develop intrapersonal understanding, thereby enabling students to select a major course of study that leads naturally into a career that is well matched to students' unique strengths. Such research will need to have immediate/practical as well as longitudinal implications so that patterns in the transition from college to work can be identified over time. Students with a wide variety of MI strengths from various institutions should be studied to determine the full range of ability profiles and cultural differences.

## LIMITATIONS

These results are supported by data previously obtained from several samples of high school dropouts and at-risk, low achieving high school students (Shearer, 2006). However, the current findings are limited because of the relatively small sample size that came from a single, large state university whose population is primarily Caucasian. It is recommended that it be replicated with a larger number of participants who attend a wider variety of universities and community colleges and represent more diverse nationalities and racial/ ethnic groups.

These data do not clarify any potential differences between CE students and typical students at their particular university because the norm group comparisons were obtained from multiple institutions. It is also unknown if very confused students enrolled in the CE course differed in any way from very confused students who were not enrolled in such a class.

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[AU2: IF THIS IS THE FORMAL NAME OF THE COURSE, WE WILL RETAIN THE CAPITALIZATION. OTHERWISE, PER APA, IT SHOULD BE LOWERCASE. PLEASE ADVISE.]

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[AU5: OK TO SAY “the individual” OR “the individual self?” PLEASE ADVISE.]

[AU6: is conveyed by?]

[AU7: 1993a? 1993b?]

[AU8: reported by whom? PLEASE SPECIFY.]

[AU9: OK AS ADDED?]

[AU10: THESE ITEMS HAVE BEEN LOWERCASED ON THE BASIS OF THE DESCRIPTION (I.E., “AREAS”) GIVEN FOR THEM. IF, HOWEVER, THEY ARE THE NAMES OF MIDAS SUBSCALES/SCALES, THEY SHOULD BE CAPITALIZED, PER APA. IT IS GENERALLY BEST TO BE CONSISTENT IN HOW TERMS ARE PRESENT. LOGICAL-MATHEMATICAL, LOGICAL-MATH, AND MATH-LOGIC ARE ALL USED FOR PRESUMABLY THE SAME CONCEPT. FOR CONSISTENCY, WHICH TERM SHOULD BE USED THROUGHOUT THE ARTICLE, INCLUDING TABLE 1? PLEASE ADVISE.]

[AU11: OK TO ADD?]

[AU12: PLEASE PROVIDE A CITATION FOR THIS WORK.]

[AU13: THE FIRST SENTENCE OF THIS PARAGRAPH INDICATES THAT THE SCALE CONTAINS 20 ITEMS. PLEASE RECONCILE THIS APPARENT DISCREPANCY.]

[AU14: DO YOU MEAN “year of school?” PLEASE ADVISE.]

[AU15: level?]

[AU16: USED WHERE? PLEASE CLARIFY.]

[AU17: OK AS EDITED? IF NOT, PLEASE INDICATE WHERE READERS CAN OBTAIN THE INSTRUMENT.]

[AU18: Callout OK as inserted? Also, please define Power in table 1 note.]

[AU19: OK AS EDITED?]

[AU20: THE UNDERLINED CLAUSE IS NOT CLEAR. WILL YOU REVISE IT FOR GREATER CLARITY?]

[AU21: OK?]

[AU22: “noted” BY WHOM? PLEASE PROVIDE A CITATION FOR THIS INFORMATION.]

[AU23: HOW ABOUT, “To address this question, students’ performance was compared on several main scales and subscales for each level of career confusion?” PLEASE ADVISE.]

[AU24: not significantly different? IF NOT, WILL YOU PROVIDE A LESS COLLOQUIAL TERM OR EXPRESSION?]

[AU25: TABLE CALLOUT PLACEMENT OK:

[AU26: the very confused group?]

[AU27: Rhetorical Language subscale IN TABLE 3. FOR CONSISTENCY, WHICH ONE SHOULD BE USED? PLEASE ADVISE.]

[AU28: OK AS EDITED? ACCEPT?/RETAIN ORIGINAL?]

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