

Personality Types and Final Grades in Group Organization and Leadership Development

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Abstract

The purpose of this study was to determine statistical relationships existed between final course grades and personality types for students enrolled in the College of Agriculture course, Group Organization and Leadership Development (GOaLD), during 1995 to 1999. Personality types were measured by the Myers-Briggs Type Indicator. The majority of respondents preferred the ISTJ or ESTJ type most often. Significant, positive, low associations resulted between final course grades and the judging and sensing preferences. College of Agriculture educators are encouraged to assess their own personality types to find convergence with the reported types of their students. Educators should assess how well they incorporate knowledge and understanding of personality types in the teaching and learning process, especially when using the problem solving method for small group activities. Continued study is necessary with larger and more diverse groups of students to more fully understand the role personality typology plays in the teaching and learning process. Leadership courses that focus serious study in personality typology are providing students with the requisite skills needed to succeed in agribusiness and educational settings.

Introduction

Several research studies have been completed to increase our understanding of personality types and their effect on learning styles. Personality types, as determined by the Myers-Briggs Type Indicator® (MBTI), are a manifestation of the theory for psychological types proposed by Carl G. Jung (1921/1971). Jung believed that when our minds are active, we are involved in one of two mental functions: 1) receiving (perceiving) information or 2) organizing the information so that we can reach a conclusion (judging). Jung further observed that “how we perceive information” occurs through sensation and/or intuition and most people choose to judge new information through thinking or feeling processes. Finally, Jungian theory postulates that we focus our energies either through the external world of people, experiences, and activities, or we focus internally on ideas, memories, and emotions.

Myers and McCaulley (1985) refined the MBTI to make Jung’s psychological type theory more meaningful and useful in everyday life. The MBTI consists of four items, which are the result of combining eight possible personality factors. When combined in totality, these eight factors result in 16 distinct personality types. Each self-reported type describes a likely behavior, as a result of perceiving and/or judging a given situation. Research shows the resultant behavior is orderly and consistent over time and is correlated to a person’s reactions, interests, values, motivations, and skills (Myers & McCaulley, 1985). If students perceive information, draw conclusions, and react differently while learning, then a deeper understanding of their personality types may improve teaching effectiveness, increase learning among all students, and have an effect on academic achievement as determined by final course grades. The very least

university students and educators can gain from advanced understanding of personality types is an awareness of how each personality type contributes or detracts in a cooperative learning environment.

Conceptual Framework

Jung's theory of psychological types was formally described through Myers' (1962) development of the MBTI. Prompted by the mass destruction of human potential during World War II, Myers began developing an indicator to give individuals access to the benefits she found in understanding and appreciating different psychological types (Myers, 1998). The resultant work of more than 50 years of research and development has produced the MBTI, which is the most widely used instrument for understanding normal personality differences. Jung's theory and the MBTI do not describe static categories, but rather dynamic energy systems with interacting processes (Myers, 1998).

Based on the development of the MBTI, Barrett (1985) conducted a study to determine the personality profiles of students and faculty in the college of agriculture at the University of Nebraska-Lincoln (UNL). Barrett found that agricultural students ($N = 413$) were proportionately more introverted (I-54%), sensing (S-84%), thinking (T-69%), and judging (J-57%) than extraverted (E-46%), intuitive (N-16%), feeling (F-31%), and perceptive (P-43%). Type theory indicates that ST and SF types prefer "practical application of facts" more often than do NF or NT types (Myers, 1998). Does this theory imply that agricultural students are more apt to be ST and SF types? Does it mean that the very nature of studying agricultural concepts provides an attractive learning environment for ST and SF types? Regardless of the answers to these questions, few educators would dispute the fact that an increased "teamwork, cooperative learning, leadership and communication skills" are the primary attributes agricultural students should attain prior to seeking employment in the agribusiness industry today. How well do we incorporate knowledge of typology and its affect on group dynamics in current leadership courses?

Barrett, Sorensen, and Hartung (1987) conducted a study of students enrolled in the college of agriculture at UNL. Their purpose was to describe characteristics of students and faculty in order to develop better teaching strategies. The sample included 2888 students, representing all agricultural majors, and 126 faculty members. The researchers compared the UNL student base data to data acquired from the Center for the Application of Psychological Type (CAPT). The CAPT data were a compilation of all university students who had completed the MBTI during the years 1971 to 1982 ($N = 27,156$). The researchers found that UNL agricultural students were not described as "typical" university students. CAPT data showed the typical university student was more extraverted, intuitive, feeling, and judging (ENFJ) than were UNL agricultural students who were more introverted, sensing, thinking, and perceptive (ISTP). Barrett, Sorensen, and Hartung concluded that students were "practically oriented" with preferences for information that could be applied to a present use. Again, type theory illustrates that ST type people prefer learning through a "doing, hands-on approach" rather than through abstract, theoretical, and conceptual approaches. The unfortunate circumstance is that a majority of university instructors are NF types (similar to the "typical" university student) who prefer working with abstract concepts and theories (Ditiberio & Hammer, 1993).

Raven, Cano, Garton, and Shelhamer (1993) documented that preservice agriculture teachers at Montana State University favored the ISTJ, ISTP, or ENTP personality types ($n = 18$). In the same study, preservice agriculture teachers at Ohio State University favored the ESFJ, ESTJ, or ISTJ personality types ($n = 25$). Cano and Garton (1994) found additional evidence that preservice agriculture teachers favored the ESTJ (23.2%), ISTJ (18.3%), and ESFJ (13.4%) personality types ($n = 82$). Clearly, these studies illustrate that preservice agriculture teachers have a predisposition for being ST types. How do these typology studies with agricultural respondents compare with similar studies conducted in non-agricultural settings?

Vomela (1994) studied junior and senior construction engineering students to ascertain the relationship between preferred teaching methods, personality type, and final course grades. The discussion teaching method followed by an oral report was favored by extroverts, intuitives, and by judging individuals. The discovery teaching method was favored by extroverts and by thinking individuals. Sensing individuals favored lectures more than did their intuitive classmates. The judging and thinking type students had significantly higher final course grades than did their perceptive and feeling type peers. In a study of 886 prospective K-12 educators, Sears, Kennedy, and Kaye (1997) found that sensing-feeling-judging types were significantly more inclined to complete their preservice teacher education programs, than were students from any other personality type combinations. These results support the aforementioned agricultural education studies (Raven, et al., 1993; Cano & Garton, 1994).

Personality type may have much to do with organizational and leadership skills for university students preparing for the workforce. During their academic careers, students may be exposed to a variety of teaching styles, assignments, projects, and exams, and may experience a variety of instructors' personality types as well. The interaction effects of these variables could be beneficial for some students, yet severely hamper the learning environments for others. Darst (1998) studied 149 student leaders with regard to their personality type, gender, and participation in student organizations. The findings revealed that student leaders' preferred types were thinking and judging, which was disproportionately higher than their peers' preferred types. Kretovics' (1998) study of 132 graduate business students placed particular emphasis on student learning outcomes. Results showed that extraverts had significantly higher means on selected Learning Skills Profile categories (goal setting, initiative, leadership, and relationship) than did their introverted peers. Graduate students preferring intuition scored higher on initiative and sense making than did those with a preference for sensing. The mean for sense making was significantly higher for students with a preference for perceiving rather than judging.

University students may not acquire formal decision-making and communication skills if they do not remain in school where opportunities exist for discourse among peer groups. Fremont (1998) studied the relationship between personality types and the academic persistence of college freshman. Results of the study indicated that students who make decisions by perceiving rather than by judging had a higher likelihood of becoming a college dropout. Introvert personality types who learn by sensing had higher educational stress while extravert types who made decisions by perceiving had higher predicted academic difficulty.

While literature both in and out of the agricultural domain suggests that nearly every personality type is represented among university students, scant research suggests how to use this knowledge in the classroom setting. As students prepare to enter the workforce, what strategies are being developed to incorporate personality type knowledge systems into everyday

routines? How can students benefit from knowing “who they are” and “how they will interact” in a group setting? Agricultural employers demand people skills from current and future agricultural graduates. “People skills, or the ability to understand and interact with customers, wholesalers, and retailers is the single most important attribute your students can bring to an interview in the Kroeger Company. If they can understand why people are the way they are, and use that knowledge to Kroeger’s marketing advantage, I’ll teach your students everything else about the grocers’ business world” (J. Antolini, personal communication, March 17, 1999).

Purpose and Objectives

The purpose of the study was to investigate relationships between final course grades and personality types for agriculture students enrolled in *Group Organization and Leadership Development (GOaLD)* during 1995 to 1999. The research questions that guided this study were:

1. What are the MBTI personality type profiles of students in the *GOaLD* course?
2. What relationships exist between final course grades and MBTI personality type components, gender, class status, or college major?
3. How do *GOaLD* students’ personality types compare to other students in other agricultural education studies and in national data banks?

Procedures

Descriptive survey methodology and a correlational design were used in this longitudinal study. The dependent variable was final *GOaLD* course grades. The independent variables were MBTI personality type components, gender, class status, and college major. The accessible population was all students ($N = 215$) who enrolled in the course from 1995 to 1999. Results of this study were generalized only to the convenient sample ($n = 215$).

GOaLD was an open-enrollment course for all university students. The course may be taken by any student to satisfy a university requirement for three of twelve credits needed for graduation in the social and behavioral sciences. The course meets weekly (15 weeks total) for two 90-minute sessions. The *GOaLD* course was conducted using a “group-centered, action-oriented” approach to learning. Academic performance in the *GOaLD* course consists of four small group (4 students/group) projects, two small group presentations, five research journal critiques (individual basis), five quizzes (individual basis), and “essay form” midterm and final examinations (individual basis). Assignments and assessments were consistent with understanding and applying the knowledge gained in studying concepts from *Group Organization and Leadership Development*.

Students enrolled in the *GOaLD* course agreed to have their personality profiles assessed using the MBTI Form G. The MBTI was administered to all students enrolled in the course during the fifth week of each semester from fall 1995 to spring 1999. The instrument was completed during class and all data forms were collected prior to class dismissal. Students were given as much time as needed to complete the MBTI and each student identified him/herself with a six-digit Social Security Number to provide confidentiality of the results. Other than each respective student, only the course instructor viewed, hand scored, and recorded the raw scale

scores for each MBTI instrument. Group results were discussed during succeeding class sessions and individual results were discussed with each respective student.

The MBTI has four separate indices that when viewed individually, illustrates one of four preferred choices for describing how people perceive and react in a given situation. A brief description follows, based on the MBTI (Myers & McCaulley, 1985).

Extraversion-Introversion (EI): the EI index describes whether a person orients him/herself towards the outer world (E), by focusing on people and objects; or by orienting oneself towards the inner world (I), where the focus is on concepts and ideas.

Sensing-Intuition (SN): the SN index describes a person's choice in how one perceives new information. A person may prefer to gather information by observing facts or experiences through one of the five senses (S). When information is gathered through meanings, relationships, and/or possibilities, the preference is one of intuition (N).

Thinking-Feeling (TF): the TF index describes how a person draws conclusions or makes decisions. If a person relies on logic to make decisions, the thinking (T) preference is most prevalent. When personal, subjective, and/or social values are the basis for decision-making, a person is relying on the feeling (F) preference.

Judgment-Perception (JP): the JP index describes the process one uses to confront the outer world. That is, one who prefers judgment (J) has a preference for using either T or F in dealing with the outer world. If a person chooses perception (P), he/she has a preference for using S or N in dealing with the outer world.

Individual students' final course grades, reported as percentages, were acquired from the *GOaLD* instructor's database. Group-centered assignments comprised 50% (400 points) of the final course grade. Individual assignments (quizzes, journal critiques, exams) comprised the remaining 50% (400 points) of the final course grade.

The MBTI is content valid and reliable for college students (Myers & McCaulley, 1985). In addition to 94 forced-choice questions and word pairs (Form G Self-Scoreable), the MBTI included a demographics section requiring students to record their year in school, current major area of study, and gender. Descriptive statistics and bivariate analyses described the data.

Findings

Table 1 shows 141 males (65.6%) and 74 females (34.4%) participated in this study. Students in their senior year ($\underline{n} = 73$) made up the largest number by class status with juniors ($\underline{n} = 55$), freshmen ($\underline{n} = 40$), sophomores ($\underline{n} = 37$), and graduate students ($\underline{n} = 10$) following in respective order. Agricultural education students ($\underline{n} = 75$) represented the largest group by discipline. The mean age of *GOaLD* students was 20.95 years ($\underline{SD} = 2.59$). The majority (79.1%) of *GOaLD* students achieved a final course grade of "B" or better. Overall final grades had a composite mean of 86.15% ($\underline{SD} = 9.99$).

Table 1.
 Descriptive Statistics for Demographics for *GOaLD* 1995-1999 Course (N = 215)

Factor	Label	Freq.	Percent
Gender	Male	141	65.6
	Female	74	34.4
Class Status	Senior	73	34.0
	Junior	55	25.6
	Freshmen	40	18.6
	Sophomore	37	17.2
	Graduate	10	4.7
Major	Agricultural Education	75	34.9
	Animal Science	46	21.4
	Wildlife & Fisheries	25	11.6
	Outside COA ^a	15	7.0
	Plant Science	15	7.0
	Forestry	12	5.6
	Agribusiness	11	5.1
	Landscape Architecture	6	2.8
	Parks & Recreation	5	2.3
	Family & Consumer Sciences	3	1.4
	General Agriculture	2	0.9
Grades	(B) 83-91.9%	101	47.0
	(A) \geq 92%	69	32.1
	(C) 73-82.9%	25	11.6
	(F) \leq 64.9%	11	5.1
	(D) 65-72.9%	9	4.2

^a Majors outside the College of Agriculture included students from Engineering, Communication Studies, Exercise Physiology, and Business/Marketing

Bivariate analyses were performed on final course grades and MBTI personality type components, gender, class status, and college major. Davis' (1971) convention was used to describe the magnitude of relationships. The judging preference ($r = .22$) had a low, positive, significant relationship with final grades. This association was followed by a low, positive relationship for the sensing component ($r = .17$). Agricultural education students' final grades were significantly positive ($r = .17$). Low, negative, significant relationships existed between final grades and the perception ($r = -.20$) and intuitive ($r = -.16$) personality type components. The variable gender had a low, negative, significant relationship ($r = -.18$) with final grades. Significant, low, negative associations were evident for students from parks & recreation ($r = -.13$) and family & consumer sciences ($r = -.14$).

Numerous moderate and low relationships (positive and negative) were revealed between gender and the thinking, feeling, and judging type components. Additional low relationships (positive and negative) existed between freshman and the extravert/introvert type components

and between sophomores and the thinking/feeling type preferences. Low positive and negative relationships were evident between most majors and all personality type components except for the thinking type preference (Table 2).

Table 2.

Bivariate Correlation Coefficients for Final Course Grades, MBTI Personality Type Components, Gender, Class Status, and Major (N = 215)

Variable	Correlation Coefficients								
	Grades	E	I	S	N	T	F	J	P
Grades ^a		-.05	-.02	.17*	-.16*	-.07	.10	.22*	-.20*
Gender ^b	-.18*	-.08	.10	.09	-.07	.34*	-.39*	-.15*	.10
Freshman ^b	-.12	-.13*	.14*	.01	.02	-.05	.00	-.05	.02
Sophomore ^b	-.09	.06	.00	-.03	.07	-.14*	.18*	-.03	.05
Junior ^b	.04	.04	-.06	.10	-.09	.13	-.08	.05	-.04
Senior ^b	.08	.03	-.05	.06	-.00	.10	-.11	.01	-.01
Graduate ^b	.13	-.01	-.01	-.04	.00	-.12	.08	.02	-.02
Animal Science ^b	-.08	.01	-.02	.05	-.07	.01	.04	.10	-.09
Agribusiness ^b	-.03	.14*	-.10	.09	-.05	-.01	-.01	.00	.01
Ag Education ^b	.17*	.08	-.08	.09	-.07	-.06	.10	-.10	.09
Family Science ^b	-.14*	.14*	-.17*	-.16*	.16*	.01	-.06	-.16*	.15*
Forestry ^b	-.04	-.18*	.18*	-.06	.09	.01	-.06	.03	.00
General Ag ^b	-.05	.05	-.06	-.00	-.00	-.04	.04	-.09	.07
Landscape Arch ^b	-.08	-.01	.00	.05	-.06	.12	-.14*	.08	-.09
Parks/Recreatio n ^b	-.13*	.10	-.07	-.08	.11	-.09	.08	-.11	.09
Plant Science ^b	-.08	-.04	.01	-.19*	.18*	-.00	-.02	.03	-.05
Outside CoA ^b	.09	-.09	.11	.04	-.04	.00	-.04	.03	-.03
Wildlife/Fish ^b	.06	-.10	.10	-.01	-.02	.08	-.07	.04	-.05

Notes: **E** = Extraversion; **I** = Introversion; **S** = Sensing; **N** = Intuition; **T** = Thinking; **F** = Feeling; **J** = Judging; **P** = Perception.

^a Interval variable; reported as Pearson correlation coefficients.

^b Dichotomous nominal variable; reported as Point-biserial correlation coefficients.

*p<.05

Data in Table 3 indicate the rank order of MBTI personality type profiles by study and the national data base for all college students regardless of major. The national database was derived by including all students who have taken the MBTI and is the only available source of MBTI personality type profiles for college students (G. Macdaid, e-mail communication, February 10, 1999). Students who enrolled in the *GOaLD* course favored the ISTJ personality type (18.6%) most often. When viewing the MBTI personality profiles from other studies (Cano & Garton, 1994; Barrett, 1987; Macdaid, 1986) the ISTJ and ESTJ types have consistently ranked near the top in terms of most preferred personality types for all college students, regardless of discipline (Table 3).

Table 3.

Distribution of MBTI Personality Type Profiles by National College Database Populations and Agricultural College Student Samples

MBTI Type	CAPT ^a		GOaLD		Cano & Garton ^b		Barrett ^c	
	(N = 27,156)		(N = 215)		(N = 82)		(N = 2888)	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
ESTJ	2879	10.6	24	11.2	19	23.2	410	14.0
ESFJ	2875	10.6	14	6.5	11	13.4	177	6.0
ISTJ	2573	9.5	40	18.6	15	18.3	496	17.0
ENFP	2496	9.2	15	7.0	5	6.1	153	5.0
ISFJ	2352	8.7	15	7.0	2	2.4	211	7.0
ESFP	1767	6.5	14	6.5	4	4.9	158	5.0
INFP	1495	5.5	6	2.8	3	3.7	130	5.0
ENTP	1363	5.0	15	7.0	2	2.4	105	4.0
ISFP	1351	4.9	9	4.2	2	2.4	160	6.0
ENFJ	1309	4.8	7	3.3	1	1.2	63	2.0
ESTP	1257	4.6	23	10.7	5	6.1	274	9.0
ISTP	1216	4.5	15	7.0	3	3.7	290	10.0
ENTJ	1199	4.4	3	1.4	4	4.9	71	2.0
INTP	1142	4.2	12	5.6	3	3.7	105	4.0
INTJ	997	3.7	3	1.4	2	2.4	50	2.0
INFJ	885	3.3	2	0.9	1	1.2	35	1.0
Total	27,156	100.0	215	100.0	82	100.0	2,888	99.0

Notes: Research studies are cited fully in references.

^a Macdaid (1986); data were from 1971-1982 (males=12,637, females=14,519).

^b Cano & Garton (1994).

^c Barrett (1987); rounding of percentages does not equal 100.

Conclusions

Analyses revealed that sensing and judging types, as well as agricultural education students held positive, significant correlations to academic achievement in the *GOaLD* course. These findings support type theory that sensing individuals do well with details and are interested in realistic, practical, accurate facts. These types of students prefer skills they have already mastered and are quite conventional, even traditional; they do not like change or surprises. Ditiberio and Hammer (1993) contend that sensing types tend to do better on tests that allow them to demonstrate their mastery of facts and how ideas can be applied to real situations. This explanation may provide insight as to the reasons for *GOaLD* students' academic achievement in a course that is heavily dependent upon a "group-centered, action-oriented" learning approach. These data support earlier studies (Vomela, 1994; Sears, et al., 1997) in MBTI personality type and academic achievement.

MBTI personality type profiles of students in the *Group Organization and Leadership Development* course (1995-1999) were more closely aligned with the personality type profiles of students from all disciplines within colleges of agriculture and throughout universities (Barrett, 1985; Macdaid, 1986/1997). Students enrolled in the *GOaLD* course were categorized under the ISTJ type, as measured by the Myers-Briggs Type Indicator®. ISTJ students are characterized as introverted, sensing, thinking, and judging people. They are serious, quiet, and earn success by concentration and thoroughness. These (ISTJ) individuals are practical, orderly, logical, realistic, and dependable. Students in this study are well advised to heed Fremont's (1998) findings that introvert types who learn by sensing had higher educational stress. However, as future leaders, SJ types strive for stability, harmony, service, belonging, and they understand and conserve institutional values. On the downside, they focus more on negative outcomes and are often critical of others' mistakes. In an agribusiness or educational setting, this may pose problems for SJ types.

Students in all studies tended to be ST (sensing-thinking) types. Reality for ST people is what can be observed, collected, and verified by their senses. They use rational thinking techniques and make decisions based on logical analysis. The majority of "typical" university students relate academic achievement to the capacity for dealing with concepts and ideas, which are the principles enveloping the introversion personality type. Also, a capacity to understand abstract concepts and theoretical ideas—the basis for intuition—offers the university student a greater probability for academic success. Type theory predicts that NF personality types have a *relative* advantage, since their interests match academic tasks (Myers & McCaulley, 1985). If the greater majority of agricultural students are ST types, are they achieving as much academic success as their university peers in courses not originating from within the College of Agriculture?

Implications and Recommendations

Courses that are open to all university students, such as the *GOaLD* course, attract more sensing-thinking types than intuitive-feeling types. Leadership courses that focus serious study in personality typology are providing students with the requisite skills needed to succeed in agribusiness and educational settings. The more students know about themselves and how they will react in a group setting, the more they will know about how others, with different personalities, will interact in the same setting. In addition to assessing students' personality type profiles, agricultural educators should assess their own personality type. Doing so would help educators determine if convergence or divergence is occurring between their preferred type, its relationship to teaching and learning processes, and its affect on the personality types of their students.

College of agriculture educators in general and agricultural education faculty in particular, may want to assess how well we incorporate personality types in the teaching and learning environments for our students. Specifically, the problem solving approach is used frequently in our classrooms, but how well do we incorporate agriculture students' personality types? Myers (1998) offers a model derived from type theory "that the best decisions use both kinds of perception (S and N) in order to gather all useful information and both kinds of judgment (T and F) to ensure that all factors have been weighed" (p. 36). This model encourages

participation from many personality types in the problem solving approach. For example, *Sensing* types perform best in “defining the problem” because of their tendency to view the situation in a realistic manner. *Intuitive* types contribute most during the “consider all the possibilities” stage because of their brainstorming ability. *Thinking* types are best at “weighing the consequences of each course of action” because of their ability to address solutions in a detached manner. When “weighing the alternatives,” *Feeling* types are best able to offer judgment because they consider how each option fits with the groups’ values. Following these steps, all student personality types should be encouraged to “make a final decision, act on the decision, and evaluate the results.” This strategy not only has its advantages in the classroom, but educators can help students see its relevance in more realistic settings, like those found in quality control teams in the business world. Myers’ (1998) model now serves as a foundation for group-centered, problem solving activities in the *GOaLD* course.

Educators need to ascertain how student personality type is affected by teacher personality type and vice versa. What relationships exist between teacher personality types, teaching styles, and the effect it may have on learning style? Continued study is necessary with larger and more diverse groups of students to more fully understand the role personality typology plays in the teaching and learning process. The door is open for all educators involved in leadership, educational or agribusiness courses to help students become more astute purveyors of the variables affecting group dynamics. A better understanding of personality types may lead to advanced understanding of leaders in the agribusiness and agricultural education world.

References

Barrett, L. (1985, fall). Personality type differences of students and faculty and their effect on student achievement. Journal of the American Association of Teacher Educators in Agriculture, 26(3), 48-56.

Barrett, L., Sorensen, R., & Hartung, T. (1987, December). A four year study: Personality types of agricultural college students implications for teaching, retention and recruitment. NACTA Journal, 31(4), 14-19.

Cano, J., & Garton, B. (1994). The learning styles of agriculture preservice teachers as assessed by the MBTI. Journal of Agricultural Education, 35(1), 8-12.

Darst, K (1998). The Myers-Briggs Type of college student leaders: A comparison of residential and a commuter campus. (Doctoral dissertation, University of Cincinnati, 1998). Dissertation Abstracts International, 59-06A, 1919.

Davis, J. A. (1971). Elementary survey analysis. Englewood, NJ: Prentice-Hall.

Ditiberio, J., & Hammer, A. (1993). Introduction to Type in College. Consulting Psychologists Press, Palo Alto, CA.

Fremont, J. Z. (1998). Persistence of college freshman: Relationship among non-academic attitudes and personality types. (Doctoral dissertation, Temple University, 1998). Dissertation Abstracts International, 59-10A, 3702.

Jung, C. (1971). Psychological types. (H. G. Baynes, Trans. Revised by R. F. C. Hull). The collected works of C. G. Jung (Vol. 6). Princeton, NJ: Princeton University Press. (Original work published in 1921.)

Kretovics, M. (1998). Outcomes assessment: The impact of delivery methodologies and personality preference on student earning outcomes. (Doctoral dissertation, Colorado State University, 1998). Dissertation Abstracts International, 59-05A, 1543.

Macdaid, G., McCaulley, M., & Kainz, R. (1986/1997). Myers-Briggs type indicator: Atlas of type tables. Gainesville, FL: Center for the Applications of Psychological Type. [Online, 8631507.1]. Available E-mail: macdaid@capt.org.

Myers, I. (1962). Manual: The Myers-Briggs Type Indicator. Princeton, NJ: Educational Testing Service. [Distributed by Consulting Psychologists Press, Palo Alto, CA.]

Myers, I. (1998). Introduction to Type: A guide to understanding your results on the Myers-Briggs Type Indicator (6th ed.). Consulting Psychologists Press, Palo Alto, CA.

Myers, I., & McCaulley, M. (1985). Manual: A guide to the development and use of the Myers-Briggs Type Indicator. Palo Alto, CA: Consulting Psychologists Press.

Raven, M., Cano, J., Garton, B., & Shelhamer, V. (1993, spring). A comparison of learning styles, teaching styles, and personality styles of preservice Montana and Ohio agriculture teachers. Journal of Agricultural Education, 34(1), 40-50.

Sears, S., Kennedy, J., & Kaye, G. (1997). Myers-Briggs personality profiles of prospective educators. Journal of Educational Research, 90(4), 195-202.

Vomela, R. (1994). Students in a baccalaureate construction program: Correlations of personality type and teaching method preference. (Doctoral dissertation, University of Minnesota, 1994). Dissertation Abstracts International, 55-06A, 1541.

Personality Types and Final Grades in Group Organization and Leadership Development

A Critique

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Use of the Myers-Briggs Type Indicator (MBTI) with agriculture audiences has led to the establishment of an excellent line of research. It has provided factual information upon which to base recruiting, retention and teaching strategies, and linked agricultural education research with research across many disciplines and career paths. Thus, the potential for comparison has definitely strengthened the impact of the research on practice in agricultural education. Future opportunities in strengthening the impact of MBTI research in agricultural education exist with wider inclusion of established behavioral measures in the research design (Values Intensity Scale, Motivation Sources Inventory, Influence Behaviors, etc.).

The use of some of the Jungian over the more established Kersian temperaments bears some discussion. In my opinion, the wealth of comparative, current research using the Kersian temperaments (NT, NF, SP, SJ) would offer greater insight than the comparative, current research using Jungian temperaments. Therefore, further analysis of this data set according to Kersian temperaments is recommended.

Knowledge of the instructor's typology coupled with knowledge of the typology of the students in a class, at a "macro" level, underscores the need for instruction variability. In the same way that learner's prefer to learn in certain ways, instructor's prefer to teach in certain ways. Intentionally varying delivery strategies enhances the likelihood that the instructor will connect with all students at some point in the class, hopefully more learning occurs as a result. At the "micro" level, knowledge of individual student typology can offer instructors insight into individual student reaction to lessons, assignments, and activities.

The researcher is encouraged to continue this line of inquiry by increasing the data set and advancing the MBTI research in agricultural education through the addition of other measures of behavior.