

RELATIONSHIP BETWEEN PERSONALITY TYPE AND  
GRADE POINT AVERAGE OF TECHNICAL  
COLLEGE STUDENTS

by

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ABSTRACT

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A Correlational Study of Keirseey Temperament Indicator II Personality Types and Grade  
(Title)

Point Averages of Technical College Students

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Vocational Education (Graduate Major)	Dr. Michael J. Galloy (Research Advisor)	6/00 (Month/Year)	T.B.D. (No. of Pages)
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American Psychological Association (APA) Publication Manual  
(Name of Style Manual Used in this Study)

The purpose of this research was to determine if a relationship exists between personality type and grade point average of technical college students in the Computer Information Systems (CIS)-Network Specialist Program at Fox Valley Technical College in Appleton, WI. The instrument chosen was the Keirseey Temperament Sorter II which is a personality inventory that determines the four dimensions a person's personality including Extroversion vs. Introversion, Intuition vs. Sensing, Thinking vs. Feeling, and Judgment vs. Perception.

The Temperament Sorter II contains seventy questions and each student chose one of two possible answers to each question. The personality inventory was administered to third and fourth semester students in the CIS-Network Specialist Program

during one class period. Involvement in the research was voluntary and approximately sixty students chose to become involved.

Once the personality inventories were completed the question responses were compiled in a spreadsheet. The tests were scored to determine which of each of the four dimensions of each student's personality type was more dominant. Grade point information was downloaded from the Fox Valley Technical College mainframe. The Point-Biserial measure of correlation was used to analyze the data to determine whether a relationship exists between personality type and grade point average.

Other helpful information that was obtained from this study includes composite personality type of students in the CIS-Network Specialist Program. Since the relationship between personality type and learning style is well documented, this information can help CIS Instructors at Fox Valley Technical College to identify the most appropriate teaching methods for those personality types.

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## CHAPTER I

### INTRODUCTION

#### Introduction

The world is a melting pot of people who are different from one another. People have different life experiences, personalities, perspectives, skills, and ways of interacting with one another. Fox Valley Technical College's (FVTC) student body is a reflection of that diverse world.

One of the fastest growing program areas at FVTC is Computer Information Systems (CIS). The CIS Program is broken down into three different areas of emphasis – Network Specialist, Programmer/Analyst, and Microcomputer Specialist. This research concentrated on the Network Specialist Program area of emphasis. See Appendix A for a listing of course requirements for this program.

What considerations go into selecting a career as a Network Specialist? Career professionals have long been aware that certain types of people are better at certain types of jobs and that it is important to find as close a match as possible between the person you are and the job that you choose. The most common factors a conventional job analysis looks at include a person's abilities, interests, and values. The importance of these factors is easy to recognize. You need the right abilities to perform a job well. It also helps if you are interested in your work and it is important to feel good or value what you do. Unfortunately a conventional job analysis leaves out some important factors.



Your personality has additional dimensions that also need to be recognized. As a general rule, the more aspects of your personality you match to your work, the more satisfied you would be on the job (Tieger & Barron-Tieger, 1995).

Your personality also affects the way you learn. The teaching/learning process creates unique chemistry between instructors and students because different instructors have different teaching styles and different students have different learning styles. In order to understand student motivation and learning style, it is important to understand personality type (Lawrence, 1995). Type makes a natural and predictable difference in learning styles and in student response to teaching methods. An understanding of type can help to explain why some students catch on to a way of teaching and like it, whereas others do not catch on and do not like it (Myers & Myers, 1980). The teaching style of a particular instructor may or may not be compatible with the learning style of a particular student. It would seem logical that if cohesiveness exists between instructor teaching style and student learning style, that students would be more likely to be successfully complete courses in their program of choice.

How can success in a program be measured? Different opinions exist regarding the relationship between grades and success. Even though these differences exist, there are certain facts that cannot be disputed:

- Employers consider grades when determining whether to hire a particular individual. This is particularly true if the candidate is a recent college graduate.
- Grades can and do open or close the gates of opportunity in American higher education and thereby determine entry to the most prized careers (Milton, Pollio & Eison, 1986).

- Grade point average is a consideration in the application process for some scholarships.
- Grades are a factor in the selection of individuals for Academic Honors such as the Dean's List, Phi Theta Kappa, and Graduation with Honors. All of these honors require a cumulative GPA of 3.5 (of 4.0) at Fox Valley Technical College (FVTC College Catalog, 1999).
- Certain grade averages are required to receive financial aid and to graduate from college programs. Fox Valley Technical College requires a cumulative GPA of 2.0 or better to graduate. Additionally, if student semester grades drop below 2.0 (of 4.0), a student will be placed on academic probation. If a student is on probation for two consecutive semesters, that student will be suspended from school for a semester (FVTC College Catalog, 1999).

### Statement of the Problem

A review of the literature shows that college students should enroll in programs based upon perceptions of “good fit” between their personality type and their perceived ability to be successful in those programs. Studies have also shown that Grade Point Average is one viable measure of academic success in college programs. Therefore, the purpose of this study was to find out if a relationship exists between personality type as measured by the Keirsey Temperament Sorter II and student success in the CIS-Network Specialist Program as measured by GPA.

### Objectives of the Study

The objectives of the study were to determine:

1. The strength or weakness of the relationship between the Extroversion or Introversion preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC.

2. The strength or weakness of the relationship between Intuition or Sensation preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC.

3. The strength or weakness of the relationship between Feeling or Thinking preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC.

4. The strength or weakness of the relationship between Perceiving or Judging preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC.

5. The composite personality type of students in the CIS-Network Specialist Program at FVTC.

### Significance of the Study

A major goal at FVTC is to provide the highest quality education possible. To date, little research has been done to measure the teaching effectiveness of the CIS-Network Specialist Program. There are annual job placement reports that are published with a more than one semester delay. While these placement reports provide valuable information, a closer look at grade point average in the Network Specialist Program will provide important information regarding successful completion of program courses.

Additionally, an analysis of personality type and appropriate teaching style for different personality types will provide valuable information to instructors in the program.

### Limitations of the Study

The following limitations were identified for this study:

1. This study was done on only one technical college campus. Socioeconomic conditions may create a variance between this technical college and other technical colleges.
2. No consideration was given to course withdrawals in this study.
3. Only students in the researcher's classes were involved in the study.
4. This study was done during a single semester.

### Assumptions of the Study

The following assumptions were made for this study:

1. That grade point average is a measure of success in the CIS-Network Specialist Associate Degree Program at FVTC.
2. There is consistency in the way grades are given to students in the CIS-Network Specialist Program at FVTC from instructor to instructor.
3. That the Keirsey Temperament Sorter II represents an accurate measure of personality type.
4. That subjects understood all of the questions from the Keirsey Temperament Sorter II and answered the questions honestly.
5. That tests and evaluation mechanisms were free from bias.

## Definition of Terms

CIS Cumulative Grade Point Average - grade point average in courses starting with a Wisconsin Vocational Technical Adult Education course number of 107 or 150.

Determined using the following scale: A=4.0; B=3.0; C=2.0; D=1.0; F=0.0.

Fox Valley Technical College - has two main campuses - one on the northeast side of Appleton and the other in Oshkosh. Students may select from more than 60 Associate Degree and technical diploma programs and certificates or from any of the hundreds of credit or noncredit courses available (FVTC College Catalog, 1999).

Network Specialist Job Description - Network specialists implement and maintain various telecommunication systems. Graduates may manage a single local area network or be involved in a complex telecommunication environment. They may administer a local area network, install or troubleshoot communication hardware or software, or integrate technologies to meet the corporate demands for information sharing. Any time there is a need to share information is an opportunity for a network specialist to implement a network solution (FVTC College Catalog, 1999).

Network Specialist Program Description - The major focus of this program is to provide training consistent with current and future industry standards in telecommunications support. The graduate will have specific skills pertaining to Local Area Network (LAN) installation, maintenance and support. Additionally, the graduate will be exposed to data communications methodologies and will be versed in integrating technologies to meet the corporate demands for information sharing (FVTC College Catalog, 1999).

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Introduction

Much research has been done on personality type and the relationship between personality type and all aspects of a person's life. Major contributors to this research include Carl Jung, the founder of personality type theory, Katharine Briggs and her daughter, Isabel Briggs Myers, and David Keirsey. The theories of these contributors will be reviewed. The relationship between personality type and learning style will also be explored. Additionally, personality type and temperament in relation to vocational choice will be investigated. Finally, vocational success and grade point average will be discussed.

#### History of Personality Type

Personality type can be defined in a multitude of ways. The concept of Type came about due to the work of Swiss psychologist Carl Jung and two American women, Katharine Briggs and her daughter, Isabel Briggs Myers. Jung, a psychoanalyst, realized that behavior that seemed unpredictable could in fact be anticipated if one understood the underlying mental functions and attitudes people preferred (Tieger & Barron-Tieger, 1995).

In 1921, Jung's theory of personality was published in a book called

Psychological Types. When Katharine read the English translation published in 1923, she realized that Jung had already discovered what she had been looking for, so she adopted his model and began a serious study of his work. Fortunately for us, she interested her young daughter Isabel in her pursuit (Tieger & Barron-Tieger, 1995).

After he learned about type through the work of Isabel Myers, David Keirsey became intrigued with the relationship between type and temperament (Tieger & Barron-Tieger, 1995). Keirsey defined temperament as that which places a signature or thumbprint on each of one's actions, making it recognizably one's own (Keirsey, 1978)

### Jungian Psychology

Jung's system focuses on how people go about gathering information about the world (perception), how they reach conclusions about what they have perceived (judgment), and what their sources of energy are (attitude or orientation). Based on many years of keen observation, Jung hypothesized two opposite ways of perceiving, sensation (or sensation) versus intuition, and two opposite ways of judging, thinking versus feeling. In addition to these opposite mental functions or processes, Jung described two opposite attitudes or orientations of energy, extraversion versus introversion (Quenk, 1993).

### Myers Briggs Personality Indicator

Myers and Briggs built upon the theoretical work related to type done by Carl Jung, and both expanded it and gave it practical application. The Myers Briggs Type system of personality assessment is based on four basic aspects of human personality: how we interact with the world and where we direct our energy; the kind of information we naturally notice; how we make decisions and whether we prefer to live in a more

structured way (making decisions) or in a more spontaneous way (taking in information). We call these aspects of human personality dimensions because each one can be pictured as a continuum between opposite extremes:

Extraversion (E)-----Introversion (I)

Sensation (S)-----Intuition (N)

Thinking (T)-----Feeling (F)

Judging (J)-----Perceiving (P)

Everyone's personality falls onto one side of the midpoint or the other on each of these four scales. We call the opposite ends of the scales preferences. If you fall on the extraverted side, for example, then you are said to have a preference for Extraversion. If you fall on the introverted side, your preference is for Introversion (Tieger & Barron-Tieger, 1995).

Extroversion - People who prefer Extraversion have an outward focus and can be described as initiating, expressive, interactive, participative, enthusiastic, and sociable (Kummerow, Barger & Kirby, 1997). Instruction that fits Extroverts includes:

- opportunities to "think out loud"; for example, one-to-one with the teacher, classroom discussions, working with another student, action projects involving people,
- learning activities that have an effect outside the learner, such as visible results from a project,
- teachers who manage classroom dialogue so that extraverts have ways to clarify their ideas before they add them to class discussion,



- assignments that let them see what other people are doing and what they regard as important (Lawrence, 1995).

Introversion - Those who prefer Introversion have an inward focus and can be described as receiving, contained, intimate, reflective, quiet, and independent (Kummerow, Barger & Kirby, 1997). Instruction that fits Introverts includes:

- work internally with their own thoughts: listening, observing, lab work, reading, writing,
- process their experiences at their own pace,
- present the results of their work in forms that let them keep their privacy,
- have ample time to polish their work before needing to present it,
- have time to reflect before answering the teacher's questions,
- ties their studies to their own personal interests, their internal agenda (Lawrence, 1995).

Sensation - Those who prefer Sensation pay attention to what is real, actual, and factual and are described as concrete, realistic, practical, experiential, and traditional (Kummerow, Barger & Kirby, 1997). Sensation types do best with instruction that allows them to hear and touch as well as see (or only read about) what they are learning.

They like:

- hands-on labs,
- relevant files and other audio-visual presentations,
- materials that can be handled,
- computer-assisted instruction

- first-hand experience that gives practice in the skills and concepts to be learned,
- teachers who provide concrete learning experiences first in any learning sequence, before using the textbook,
- teachers who show them exactly what is expected of them,
- teachers who do not move "too quickly" through material, touching just the high spots of jumping from thought to thought,
- assignments that do not expect them to generate possibilities not based on solid facts,
- skills and facts they can use in their present lives (Lawrence, 1995).

Intuition - Those who prefer Intuition pay attention to the big picture, the patterns and connections. They can be described as abstract, imaginative, inferential, theoretical, and original (Kummerow, Barger & Kirby, 1997). Academically, the Intuitive types do their best work with:

- teachers who are logically organized,
- subjects and materials that flow logically and respond to logic,
- feedback that shows them their specific, objective achievements (Lawrence, 1995).

Thinking - Those who prefer Thinking step back from the situation and assess pros and cons from a detached perspective. They can be described as logical, reasonable, questioning, critical, and tough (Kummerow, Barger & Kirby, 1997). Academically, thinking types do their best work with:

- teachers who are logically organized,

- subjects and materials that flow logically and respond to logic,
- feedback that shows them their specific, objective achievements (Lawrence, 1995).

Feeling - Those who prefer Feeling put themselves into a situation to empathize with the people involved and personalize it. Feeling types can be described as empathetic, compassionate, accommodating, accepting, and tender (Kummerow, Barger & Kirby, 1997). Academically, the Feeling types do their best work with:

- teachers who value a personal rapport with students,
- assignments that have a goal of helping people,
- feedback that shows warm appreciation for the student and his or her effort, and gives corrective suggestions in that context,
- personalized assignments (Lawrence, 1995).

Judging - Those who prefer Judging focus on identifying goals, planning how to reach them, and following through to get them completed. They can be described as systematic, playful, early starting, scheduled, and methodical (Kummerow, Barger & Kirby, 1997). Academically, the Judging types do their best work with:

- pre-planned structure, and a teacher who carefully provides it,
- predictability and consistency,
- formalized instruction that moves in orderly sequences,
- prescribed tasks,
- milestones, completion points with little ceremonies to honor successful completions (Lawrence, 1995).

Perceiving - Those who prefer Perceiving focus on gathering all the information and know that, whatever the challenge, they can pull it off. They can be described as casual, open-ended, pressure-prompted, spontaneous, and emergent (Kummerow, Barger & Kirby, 1997). Academically, the Perceiving types do their best work when:

- they can pursue problems in their own way,
- they have genuine choices in assignments, as with a system of individual contracts in which the student can negotiate some of the activities,
- assignments make sense to them,
- their work feels like play (Lawrence, 1995).

### Personality Preference Combinations

When you put preferences together - Extraversion with Judging, or Sensation with Thinking - that is richer and more complex than any of the individual preferences. When you add a third, or fourth, preference, things get even more complex. So, while you may understand Extraversion, Intuition, Thinking, and Judging, you still may not fully comprehend what it means for someone to be an ESFP, for example (Kroeger & Theusen, 1993). See Appendix B for a Personality Type Chart.

Hierarchy of Functions - Each personality type has what is called a hierarchy of functions. This hierarchy ranks your functions from strongest to weakest. Although you grow and change and develop your abilities over time, your hierarchy of functions stays the same throughout your life (Tieger & Barron-Tieger, 1995)

The Dominant Function - One of the biggest mysteries of psychological type is what hierarchy our two middle letters (S or N and T or F) take in our lives. One of these four functions, S, N, T, or F is developed earliest in our lives and takes charge of who we

are. It's called our dominant, like a dominant force. It uses the other three letters in its support (Hirsh & Kise, 1996). For each personality type there is only one dominant function and it always stays the same (Tieger & Barron-Tieger, 1995).

The Auxiliary Function - Now, the dominant function is balanced by the second function on your list. It's called your auxiliary function. If your dominant wants to get information (either through Sensation or Intuition), your auxiliary will want to organize that information (through Thinking or Feeling) and vice versa (Hirsh & Kise, 1996).

Third Function - We don't know as much about your third function, which is the preference opposite to your auxiliary. It usually develops in adulthood. If your auxiliary is Sensation, then your third function will be Intuition, and vice versa; and if your auxiliary is Thinking, then your third function will be Feeling, and vice versa. The third function is not as large a part of your conscious mental activity as your dominant and auxiliary. It's more elusive (Hirsh & Kise, 1996).

Fourth Function - The fourth function in your hierarchy of functions is always the opposite of your dominant function. In a way, it is a casualty of your dominant function. Since your dominant function is the most powerful preference in your personality, it figures that the opposite of this preference should be your weakest (Tieger & Barron-Tieger, 1995). See Appendix C for a table that shows the Hierarchy of Functions.

### Keirsey Temperament Indicator

One shortcut that is helpful in making personality type easier to understand has to do with what are called Temperaments. They are four special two-letter combinations, the creating of David Keirsey and Marilyn Bates, authors of Please Understand Me, another book on personality type. Temperaments are useful because they allow you to

know just two letters of someone's type and still make some pretty accurate predications about his or her behavior. So, even if we don't understand how all four letters fit together, the two-letter temperament helps us predict such things as how people teach, learn, lead others, socialize, manage money, and relate to others (Kroeger & Thuesen, 1992).

Keirsey determined that four combinations of type preferences correspond to the four temperaments people have posited throughout history. The four combinations are

- SJ (Sensation, Judging) => Guardians
- SP (Sensation, Perceiving) => Artisans
- NF (Intuition, Feeling) => Idealists
- NT (Intuition, Thinking) => Rationals (Tieger & Barron-Tieger, 1995)

### Keirsey Temperaments and Job Choices

A person's temperament affects the vocation he or she chooses. Following are the most common interests of each temperament type:

Guardians are interested in occupations that have to do with procedures for managing material, that is, for gathering, storing, recording, measuring, and distributing equipment and supplies. Their creativity comes to the front most easily in the area of arranging and scheduling (Keirsey, 1998). Guardians make up from 40 to 45% of the population (<http://www.keirsey.com>).

Artisans are happiest when working with any and all sorts of equipment. Apparatus, implements, machines, and instruments captivate them. They must drive the bulldozer, pilot the plane, steer the boat, fire the gun, toot the horn, wield the scalpel, brush, or chisel (Keirsey, 1998). Artisans make up from 35 to 40% of the population

(<http://www.keirsey.com>).

Rationals are intrigued by machines and by organisms, the two kinds of systematic entities. Organisms are the province of anthropologists, biologists, ethnologists, psychologists, and sociologists; machines the province of engineers of any kind (Keirsey, 1998). Rationals make up from 5 to 7% of the population

(<http://www.keirsey.com>).

Vocationally Idealists have one very special talent, they are drawn to and can do wonders in recruiting, training, deploying, advancing, and counseling personnel. With their insight into people, their interest in human potential, and their glow of enthusiasm, NFs shine when they take on the job of finding quality employees, of guiding them into the right positions, and of helping them develop over the course of their careers (Keirsey, 1998). Idealists make up from 8 to 10% of the population (<http://www.keirsey.com>).

### Vocational Success and GPA

After a student selects a course of study the next challenge is to successfully complete courses and move forward toward graduation. Studies have shown that GPA is the best predictor of a student's completion of a college degree (Astin, 1984). Student grades are probably the most revealing indicator of the successful adjustment to the intellectual demands of a particular course of study (Terenzini, 1994).

Is GPA a good indicator of potential vocational success? Research indicates that there is a correlation between GPA and vocational success. Many highly intelligent students have lower GPAs than students of average intelligence. It is this very fact that sheds light on why employers do think the GPA is important. The GPA is important because it provides an indication of dedication to success and willingness to work hard,

both very desirable traits in an employee (SUNY Oswego Honors Program, 1996).

Remember, the GPA is one of the few consistently available pieces of information that employers have in their evaluation process. An interviewer won't have the chance to really get to know you during a job interview. Never forget that to a potential employer, your GPA is a measure of your level of dedication to success and your willingness to work hard (SUNY Oswego Honors Program, 1996).



## CHAPTER III

### METHODOLOGY

The purpose of this chapter is to describe the subjects, instrumentation, procedures, and methods of analysis that will be used in this study.

#### Subjects

The subjects for this study were third and fourth semester CIS-Network Specialist students at Fox Valley Technical College. Participation was requested in various third and fourth semester CIS-Network Specialist classes and was voluntary.

Since this research included a correlation of student personality type and student GPA, the researcher needed to know the identity of each student. Because a student's anonymity was compromised, the researcher needed to ensure that each participant's confidentiality was maintained. Written consent forms were designed and were given to each subject prior to administration of the personality type test instrument.

#### Instrumentation

The Keirsey Temperament Sorter II was used to determine the personality type of each CIS-Network Specialist student. The Temperament Sorter II contained seventy questions that attempted to determine preferences for Extraversion (E) or Introversion (I), Intuition (N) or Sensation (S), Feeling (F) or Thinking (T), and Perceiving (P) or Judging (J). In each question the test taker selected one of two possible choices. Combinations of

the four preferences determined which of the sixteen personality types each person was included in.

### Method of Analysis

The design of this research was a correlational study. A correlational study was carried out to see to what extent among a single group of people, two or more variables were related (Crowl, 1993). The group of people in this study was third and fourth semester CIS-Network Specialist students. The variables were personality type as measured by the Keirsey Temperament Sorter II and student success as measured by GPA. The data generated in this study was frequency of students that select one of two of the preferences in each of the four personality categories.

In order to determine how to analyze the data, the type of data needed to be determined. The frequency of personality type preference was nominal data because it is qualitative or categorical in nature (Crowl, 1993). GPA was interval data since it has equal units of measurement, such as raw scores (Crowl, 1993). Since both nominal and interval data were utilized in this study, the Point-Biserial measure of correlation was used.

## CHAPTER IV

### RESULTS AND DISCUSSION

This study was conducted to determine if a correlation exists between personality type and GPA of technical college students in the Network Specialist Program at Fox Valley Technical College. The Keirsey Temperament Sorter II was given to fifty-eight respondents in the researcher's third and fourth semester Networking classes. Each respondent's identity was preserved because the respondent's GPA was needed to complete the study. The results of fifty-three of the fifty-eight students were included in the analysis because five of the people who completed the Keirsey Temperament Sorter II were not students in the CIS-Network Specialist Program according to the FVTC Information System. There were six objectives of this study. Each objective will be presented with analysis of the results and discussion.

#### Analysis of Correlation between GPA and Extroversion/Introversion Preference

The first objective of the study was to determine the strength or weakness of the relationship between personality type preference for Extroversion or Introversion and grade point average in the CIS-Network Specialist Program at FVTC. Of the fifty-three respondents who completed the Keirsey Temperament Sorter II, twenty-two (46%) showed a preference for Extroversion over Introversion. The mean GPA of this group was 3.273. Twenty-six (54%) showed a preference for Introversion over Extroversion.

The mean GPA of this group was 3.391. The remaining five respondents did not show a preference for Introversion or Extroversion and were not included in the correlation analysis. The standard deviation for this analysis was .64. The r-value of  $-0.09$  shows that a correlation does not exist either at the .05 significance value or the .01 significance value.

<b>Preference</b>	<b>No. of Respondents</b>	<b>Mean GPA</b>	<b>Standard Deviation</b>	<b>Proportion</b>	<b>r</b>
Extroversion	22	3.273	.64	46%	-0.09
Introversion	26	3.391		54%	

#### Analysis of Correlation between GPA and Intuition/Sensation Preference

The second objective of the study was to determine the strength or weakness of the relationship between personality type preference for Intuition or Sensation and grade point average in the CIS-Network Specialist Program at FVTC. Of the fifty-three respondents who completed the Keirsey Temperament Sorter II, nine (19%) showed a preference for Intuition over Sensation. The mean GPA of this group was 3.260. Thirty-eight (81%) showed a preference for Sensation over Intuition. The mean GPA of this group was 3.364. The remaining six respondents did not show a preference for Intuition or Sensation and were not included in the correlation analysis. The standard deviation for this analysis was .57. The r-value of  $-0.07$  shows that a correlation does not exist either at the .05 significance value or the .01 significance value.

<b>Preference</b>	<b>No. of Respondents</b>	<b>Mean GPA</b>	<b>Standard Deviation</b>	<b>Proportion</b>	<b>r</b>
Intuition	9	3.260	.57	19%	-0.07
Sensation	38	3.364		81%	

Analysis of Correlation between GPA and Feeling/Thinking Preference

The third objective of the study was to determine the strength or weakness of the relationship between personality type preference for Feeling or Thinking and grade point average in the CIS-Network Specialist Program at FVTC. Of the fifty-three respondents who completed the Keirsey Temperament Sorter II, thirty-seven (82%) showed a preference for Feeling over Thinking. The mean GPA of this group was 3.157. Eight (18%) showed a preference for Thinking over Feeling. The mean GPA of this group was 3.684. The remaining eight respondents did not show a preference for Feeling or Thinking and were not included in the correlation analysis. The standard deviation for this analysis was .66. The r-value of  $-0.31$  shows that a correlation does exist at the .05 significance value but not at the .01 significance value.

<b>Preference</b>	<b>No. of Respondents</b>	<b>Mean GPA</b>	<b>Standard Deviation</b>	<b>Proportion</b>	<b>r</b>
Feeling	37	3.157	.66	82%	-0.31
Thinking	8	3.684		18%	

Analysis of Correlation between GPA and Perceiving/Judging Preference

The fourth objective of the study was to determine the strength or weakness of the relationship between personality type preference for Perceiving or Judging and grade point average in the CIS-Network Specialist Program at FVTC. Of the fifty-three respondents who completed the Keirsey Temperament Sorter II, fifteen (31%) showed a preference for Perceiving over Judging. The mean GPA of this group was 3.229. Thirty-three (69%) showed a preference for Judging over Perceiving. The mean GPA of this group was 3.307. The remaining five respondents did not show a preference for Perceiving or Judging and were not included in the correlation analysis. The standard

deviation for this analysis was .64. The r-value of 0.06 shows that a correlation does not exist either at the .05 significance value or the .01 significance value.

<b>Preference</b>	<b>No. of Respondents</b>	<b>Mean GPA</b>	<b>Standard Deviation</b>	<b>Proportion</b>	<b>r</b>
Perceiving	15	3.229	.64	31%	-0.06
Judging	33	3.307		69%	

#### Analysis of Composite Personality Type

The fifth objective of the study was to determine the composite personality type of students in the CIS-Network Specialist Program at FVTC. Of the fifty-three respondents who completed the Keirsey Temperament Sorter II, twenty-five (47.3%) preferred the Guardian temperament, ten (18.9%) preferred the Artisan temperament, five (9.5%) preferred the Idealist temperament, two (3.8%) preferred the Rational temperament, and eleven (20.9%) were indeterminate because they did not show a preference for one or more personality dimensions.

If results of the indeterminate respondents are excluded, Guardians composed 59.6% of the sample, Artisans composed 23.9% of the sample, Idealists composed 12.0% of the sample, and Rationals composed 4.8% of the sample.

Type				Number in Sample	% of Total Total Sample	% of Determinate Sample
<b>Guardian (SJ)</b>						
E/I	N/S	F/T	P/J			
E	S	F	J	8	15.1%	19.0%
E	S	X*	J	2	3.8%	4.8%
I	S	F	J	8	15.1%	19.0%
I	S	T	J	2	3.8%	4.8%
I	S	X*	J	2	3.8%	4.8%
X*	S	F	J	2	3.8%	4.8%
X*	S	X*	J	1	1.9%	2.4%
				25	47.3%	59.6%
<b>Artisan (SP)</b>						
E	S	F/T	P/J			
E	S	F	P	4	7.5%	9.5%
E	S	T	P	2	3.8%	4.8%
I	S	F	P	2	3.8%	4.8%
I	S	T	P	1	1.9%	2.4%
I	S	X*	P	1	1.9%	2.4%
				10	18.9%	23.9%
<b>Idealist (NF)</b>						
E/I	N/S	F/T	P/J			
E	N	F	J	1	1.9%	2.4%
E	N	F	P	1	1.9%	2.4%
I	N	F	J	2	3.8%	4.8%
I	N	F	P	1	1.9%	2.4%
				5	9.5%	12.0%
<b>Rational (NT)</b>						
E/I	N/S	F/T	P/J			
I	N	T	J	1	1.9%	2.4%
X*	N	T	J	1	1.9%	2.4%
				2	3.8%	4.8%
<b>Indeterminate</b>						
E/I	N/S	F/T	P/J			
E	N	X*	P	1	1.9%	
E	X*	F	P	1	1.9%	
E	X*	F	J	1	1.9%	
E	X*	F	X*	1	1.9%	
I	S	F	X*	2	3.8%	
I	S	T	X*	1	1.9%	
I	X*	F	J	1	1.9%	
I	X*	F	P	1	1.9%	
I	X*	F	X*	1	1.9%	
X*	N	X*	J	1	1.9%	
				11	20.9%	
				53	100.4%	100.3%

\* No preference for either personality dimension.

## CHAPTER V

### CONCLUSIONS

#### Purpose

The purpose of this research was to determine if a relationship exists between personality type and grade point average of technical college students in the Computer Information Systems (CIS)-Network Specialist Program at Fox Valley Technical College in Appleton, WI. The instrument chosen was the Keirsey Temperament Sorter II, a personality inventory that determines the four dimensions a person's personality type including Extroversion vs. Introversion, Intuition vs. Sensation, Thinking vs. Feeling, and Judging vs. Perceiving.

The Temperament Sorter II contains seventy questions and each student chose one of two possible answers to each question. The test was administered to third and fourth semester students in the CIS-Network Specialist Program during one class period. Involvement in the research was voluntary and approximately sixty students chose to become involved.

Once the Temperament Sorter surveys were completed the responses were compiled in a spreadsheet. The surveys were scored to determine which of each of the four dimensions of each student's personality type was more dominant. Grade point information was downloaded from the Fox Valley Technical College mainframe. The Point-Biserial measure of correlation was used to analyze the data to determine whether a



relationship existed between personality type and grade point average.

Other helpful information that was obtained from this study includes composite personality type of students in the CIS-Network Specialist Program. Since the relationship between personality type and learning style is well documented, this information can help instructors to identify the most appropriate teaching methods for those personality types.

### Major Findings

The objectives of the study were to determine:

1. The strength or weakness of the relationship between the Extroversion or Introversion preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC.
2. The strength or weakness of the relationship between Sensation or Intuition preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC.
3. The strength or weakness of the relationship between Thinking or Feeling preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC.
4. The strength or weakness of the relationship between Judging or Perceiving preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC.
5. The composite personality type of students in the CIS-Network Specialist Program at FVTC.

## Objective #1

Does a correlation exist between the Extroversion or Introversion preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC? Fifty-three respondents completed the Keirsey Temperament Sorter II. Twenty-two respondents (46%) showed a preference for Extroversion over Introversion. The mean GPA of this group was 3.273. Twenty-six respondents (54%) showed a preference for Introversion over Extroversion. The mean GPA of this group was 3.391. Five respondents showed no preference for Extroversion over Introversion or Introversion over Extroversion and were not included in the correlation analysis. The standard deviation for this analysis was .64 and the r-value for this analysis was  $-0.09$ . Thus, it can be concluded that a correlation does not exist either at the .05 significance value or the .01 significance value.

Based on this conclusion it is recommended that further study of the CIS-Network Specialist Program address the following questions:

- Is the coursework appropriate for a student population that is composed of a mixture of Extroverted personality types and Introverted personality types?
- Could coursework be more effective taking this dimension (Extroverted vs. Introverted) of personality type into consideration?
- Given a career as a Network Specialist, would a better vocational “fit” be someone with a preference for Extroversion or someone with a preference for Introversion? What behavior adjustments would make an Extroverted type more successful? What behavior adjustments would make an

Introverted type more successful?

## Objective #2

Does a correlation exist between the Sensation or Intuition preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC? Fifty-three respondents completed the Keirsey Temperament Sorter II. Nine respondents (19%) showed a preference for Intuition over Sensation. The mean GPA of this group was 3.260. Thirty-eight respondents (81%) showed a preference for Sensation over Intuition. The mean GPA of this group was 3.364. Six respondents showed no preference for Intuition over Sensation or Sensation over Intuition and were not included in the correlation analysis. The standard deviation for this analysis was .64 and the r-value for this analysis was  $-0.07$ . Thus, it can be concluded that a correlation does not exist either at the .05 significance value or the .01 significance value.

Based on this conclusion it is recommended that further study of the CIS-Network Specialist Program address the following questions:

- Is the coursework appropriate for a student population that is composed of a mixture of Intuitive personality types and Sensing personality types?
- Could coursework be more effective taking this dimension (Sensation vs. Intuition) of personality type into consideration?
- Given a career as a Network Specialist, would a better vocational “fit” be someone with a preference for Sensation or someone with a preference for Intuition? What behavior adjustments would make an Intuitive person more successful? What behavior adjustments would make a Sensing person more successful?

### Objective #3

Does a correlation exist between the Feeling or Thinking preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC? Fifty-three respondents completed the Keirsey Temperament Sorter II. Thirty-seven respondents (82%) showed a preference for Feeling over Thinking. The mean GPA of this group was 3.157. Eight respondents (18%) showed a preference for Thinking over Feeling. The mean GPA of this group was 3.684. Eight respondents showed no preference for Feeling over Thinking or Thinking over Feeling and were not included in the correlation analysis. The standard deviation for this analysis was .66 and the r-value for this analysis was  $-0.31$ . Thus, it can be concluded that a correlation does exist at the .05 significance value but not at the .01 significance value.

Based on this conclusion it is recommended that further study of the CIS-Network Specialist Program address the following questions:

- Why does a correlation exist between personality type and grade point average for this personality type dimension (Feeling vs. Thinking) and not the other three personality type dimensions (Extroversion vs. Introversion, Sensation vs. Intuition, Perceiving vs. Judging)?
- If students with a preference for Thinking perform better than students with a preference for Feeling, why do only 18% of the students in this program have the Thinking type preference?
- Is the coursework appropriate for a student population that is composed of a mixture of Feeling personality types and Thinking personality types?
- Could coursework be more effective taking this dimension (Feeling vs.

Thinking) of personality type into consideration?

- Given a career as a Network Specialist, would a better vocational “fit” be someone with a preference for Feeling or someone with a preference for Thinking? What behavior adjustments would make a Feeling person more successful? What behavior adjustments would make a Thinking person more successful?

#### Objective #4

Does a correlation exist between the Perceiving or Judging preference of personality type and grade point average in the CIS-Network Specialist Program at FVTC? Fifty-three respondents completed the Keirsey Temperament Sorter II. Fifteen respondents (31%) showed a preference for Perceiving over Judging. The mean GPA of this group was 3.229. Thirty-three respondents (69%) showed a preference for Judging over Perceiving. The mean GPA of this group was 3.307. Five respondents showed no preference for Perceiving over Judging or Judging over Perceiving and were not included in the correlation analysis. The standard deviation for this analysis was .64 and the r-value for this analysis was  $-0.06$ . Thus, it can be concluded that a correlation does not exist either at the .05 significance value or the .01 significance value.

Based on this conclusion it is recommended that further study of the CIS-Network Specialist Program address the following questions:

- Is the coursework appropriate for a student population that is composed of a mixture of Perceiving personality types and Judging personality types?
- Could coursework be more effective taking this dimension (Perceiving vs. Judging) of personality type into consideration?

- Given a career as a Network Specialist, would a better vocational “fit” be someone with a preference for Perceiving or someone with a preference for Judging? What behavior adjustments would make a Perceiving type more successful? What behavior adjustments would make a Sensing type more successful?

#### Objective #5

What is the composite personality type of student in the CIS-Network Specialist Program at FVTC? Fifty-three respondents completed the Keirsey Temperament Sorter II. Of these fifty-three respondents, eleven had indeterminate personality types because they did not show a preference for one or more personality dimension. With the indeterminate surveys excluded, Guardians composed 59.6% of the sample (40-45% of the total population), Artisans composed 23.9% of the sample (35-40% of the total population), Idealists composed 12.0% of the sample (8-10% of the total population), and Rationals composed 4.8% of the sample (5-7% of the total population).

When comparing the composition of the respondents with the composition of the total population, it can be concluded that the sample contained more Guardians and Idealists than the total population, less Artisans than the total population and slightly less Rationals than the total population.

Based on this conclusion it is recommended that further study of the CIS-Network Specialist Program address the following questions:

- How does the personality type makeup in this program change over time?
- Is there significance to the difference between composite personality type in the CIS–Network Specialist Program and the total population?

- Is personality type a significant factor in a student's choice of the CIS–Network Specialist Program as their program of choice?

### Summary

The purpose of this research was to determine if a relationship exists between personality type and grade point average of technical college students in the Computer Information Systems (CIS)-Network Specialist Program at Fox Valley Technical College in Appleton, WI. Additional information that was gathered in this analysis was the composite personality type of students in this program.

A correlation existed at the .05 significance value between the Feeling/Thinking personality dimension and GPA. Thinking personality types had higher GPAs (3.684) than Feeling personality types (3.157). Thinking types can be described as logical, reasonable, questioning, critical, and tougher. Feeling types can be described as empathetic, compassionate, accommodating, accepting, and tender (Kummerow, Barger & Kirby, 1997). There was no correlation between GPA and personality type in the other personality dimensions – Extroversion vs. Introversion, Intuition vs. Sensation, and Perceiving vs. Judging.

The composite personality type of the respondents is somewhat similar to the composite personality type of the entire population. There are a wide variety of people in the CIS-Network Specialist Program who have a wide variety of learning styles.

Instructors need to be aware of the different types of personalities and the different teaching methods that are most appropriate for each. An instructor also needs to be aware of his/her personality type and related teaching style. An instructor should not assume that just because he/she enjoys teaching in a certain way that students enjoy

learning in the same way. Of the fifty-three respondents included in the study, there were twenty-eight different personality combinations. Thus, a variety of teaching techniques will probably meet the needs of the greatest number of students.

Recommendations for future study with this sample group would focus on the appropriateness of coursework and vocational “fit” considering personality type. Additionally, learning more about the correlation between the Thinking and Feeling personality type and grade point average would be interesting. Finally, further study of the personality type composure and the significance of personality type could provide valuable insights into the students in the CIS-Network Specialist Program at FVTC.

Recommendations for future study with other sample groups include:

- Analyzing personality type and grade point data with sample groups of demographically different people.
- Comparing GPA data from the CIS-Network Specialist Program at FVTC with GPA data from other FVTC programs.
- Comparing GPA data from the CIS–Network Specialist Program at FVTC with GPA data from similar programs at other technical colleges.
- Determining if a relationship exists between GPA and career success.
- Determining if a relationship exists between personality type and career success.

Given the complexity of personality type, student grades and success, there is no end to the potential research that could be done in these areas in the future. Studying these topics is similar to life. It is truly a “process” that will never be completely finished.



## Appendix A

### CIS-Network Specialist Program Courses (FVTC College Catalog, 1999)

<b>Occupational Courses</b>		<b>Credits</b>
107-126	Computer Concepts, Beginning	2
107-146	Visual Basic, Introduction	3
107-150	Microcomputer Applications	2
107-147	DOS/Microcomputer Hardware	2
107-158	Systems Analysis	3
107-160	Database Fundamentals	2
107-165	Data Communications	2
107-133	Network Cabling Technologies	1
107-182	LAN Management 1	3
107-191	Voice Communications	3
107-155	Data Communications, Advanced	2
107-157	UNIX Operating System	1
107-166	LAN Management 2	3
107-173	Hardware Support	3
107-192	Video Networking Technologies	1
107-193	Computer Telephony Integration	2
	<b>Total</b>	<b>35</b>
<b>Support Courses</b>		
625-100	Foundations of Quality	2
804-108	Business Math	3
804-109	Algebra	2
101-120	Accounting Concepts	4
	<b>Total</b>	<b>11</b>
<b>General Education Courses</b>		
801-195	Communications, Written	3
801-196	Oral/Interpersonal Communication	3
809-197	Contemporary American Society	3
809-199	Psychology of Human Relations	3
809-195	Economics	3
	<b>Total</b>	<b>15</b>
<b>Electives (suggested)</b>		
107-123	Introduction to the Internet	2
807-184	MS Windows NT 4.0 Core Tech #922	2
107-186	Network Implementation	2
	<b>Total</b>	<b>6</b>

## Appendix B

### Personality Type Chart (Hirsh & Kise, 1996)

<p style="text-align: center;"><b>ISTJ</b></p> <ul style="list-style-type: none"> <li>• Leads by bringing order and efficiency to meetings and tasks</li> <li>• Influences by using logical arguments backed by specifics and realism</li> <li>• Focus is on facts, details, and results</li> </ul>	<p style="text-align: center;"><b>ISFJ</b></p> <ul style="list-style-type: none"> <li>• Leads by encouraging others in tasks that suit them best</li> <li>• Influences by ensuring that information is accurate, things are organized</li> <li>• Focus is on setting priorities based on the needs of people</li> </ul>	<p style="text-align: center;"><b>INFJ</b></p> <ul style="list-style-type: none"> <li>• Leads by encouraging others to cooperate in working toward a vision</li> <li>• Influences by being creative and dedicated</li> <li>• Focus is on creative insight and strong values</li> </ul>	<p style="text-align: center;"><b>INTJ</b></p> <ul style="list-style-type: none"> <li>• Leads by setting the course to make an idea become reality</li> <li>• Influences by intellectual depth and dedication</li> <li>• Focus is on designing systems, changing the status quo</li> </ul>
<p style="text-align: center;"><b>ISTP</b></p> <ul style="list-style-type: none"> <li>• Leads by quietly setting an example</li> <li>• Influences when asked, by having all the needed information ready</li> <li>• Focus is on finding the logical ways to get things done</li> </ul>	<p style="text-align: center;"><b>ISFP</b></p> <ul style="list-style-type: none"> <li>• Leads by encouraging others to cooperate</li> <li>• Influences by example, helping others pursue their ideals</li> <li>• Focus is on the practical care of people</li> </ul>	<p style="text-align: center;"><b>INFP</b></p> <ul style="list-style-type: none"> <li>• Leads by promoting harmonious teams where each person is valued</li> <li>• Influences by highlighting common ideas and new possibilities</li> <li>• Focus is group consensus and shared values</li> </ul>	<p style="text-align: center;"><b>INTP</b></p> <ul style="list-style-type: none"> <li>• Leads by convincing others of the merit and logic of their ideals</li> <li>• Influences by providing in-depth knowledge and analysis</li> <li>• Focus is on logical, intellectual insights to problems</li> </ul>
<p style="text-align: center;"><b>ESTP</b></p> <ul style="list-style-type: none"> <li>• Leads by finding the most efficient way to work together</li> <li>• Influences by establishing logical processes, pursuing them with enthusiasm</li> <li>• Focus is on action, taking care of problems as they arise</li> </ul>	<p style="text-align: center;"><b>ESFP</b></p> <ul style="list-style-type: none"> <li>• Leads by encouraging the contributions of others</li> <li>• Influences by enthusiasm and enjoyment of the tasks at hand</li> <li>• Focus is on creating an upbeat atmosphere for people</li> </ul>	<p style="text-align: center;"><b>ENFP</b></p> <ul style="list-style-type: none"> <li>• Leads by creating a vision, helping people see their potential</li> <li>• Influences by listening to and incorporating the ideas of others</li> <li>• Focus is on exploring all the possibilities</li> </ul>	<p style="text-align: center;"><b>ENTP</b></p> <ul style="list-style-type: none"> <li>• Leads by developing novel strategies for new enterprises</li> <li>• Influences by going the extra mile</li> <li>• Focus is on innovative models, conquering challenges</li> </ul>
<p style="text-align: center;"><b>ESTJ</b></p> <ul style="list-style-type: none"> <li>• Leads by planning, providing direction, and assigning responsibilities</li> <li>• Influences by modeling the standards and commitment they expect from others</li> <li>• Focus is on structuring tasks so goals are met</li> </ul>	<p style="text-align: center;"><b>ESFJ</b></p> <ul style="list-style-type: none"> <li>• Leads by paying attention to the needs of others and making sure they feel important</li> <li>• Influences by being conscientious and hard-working</li> <li>• Focus is on getting things organized so that people's personal needs are met</li> </ul>	<p style="text-align: center;"><b>ENFJ</b></p> <ul style="list-style-type: none"> <li>• Leads by facilitating, helping others plan and cooperate to meet goals</li> <li>• Influences by clarifying processes by which goals can be met</li> <li>• Focus is on encouraging others in building consensus</li> </ul>	<p style="text-align: center;"><b>ENTJ</b></p> <ul style="list-style-type: none"> <li>• Leads by presenting a vision, then energizing and directing others to meet it</li> <li>• Influences by objectively analyzing ideals, setting goals</li> <li>• Focus is on making decision</li> </ul>

## Appendix C

Personality Hierarchy Chart (Hirsh & Kise, 1996)

<b>ISTJ</b> 1. Sensation 2. Thinking 3. Feeling 4. Intuition	<b>ISFJ</b> 1. Sensation 2. Feeling 3. Thinking 4. Intuition	<b>INFJ</b> 1. Intuition 2. Feeling 3. Thinking 4. Sensation	<b>INTJ</b> 1. Intuition 2. Thinking 3. Feeling 4. Sensation
<b>ISTP</b> 1. Thinking 2. Sensing 3. Intuition 4. Feeling	<b>ISFP</b> 1. Feeling 2. Sensation 3. Intuition 4. Thinking	<b>INFP</b> 1. Feeling 2. Intuition 3. Sensation 4. Thinking	<b>INTP</b> 1. Thinking 2. Intuition 3. Sensation 4. Feeling
<b>ESTP</b> 1. Sensation 2. Thinking 3. Feeling 4. Intuition	<b>ESFP</b> 1. Sensation 2. Feeling 3. Thinking 4. Intuition	<b>ENFP</b> 1. Intuition 2. Feeling 3. Thinking 4. Sensation	<b>ENTP</b> 1. Intuition 2. Thinking 3. Feeling 4. Sensation
<b>ESTJ</b> 1. Thinking 2. Sensation 3. Intuition 4. Feeling	<b>ESFJ</b> 1. Feeling 2. Sensation 3. Intuition 4. Thinking	<b>ENFJ</b> 1. Feeling 2. Intuition 3. Sensation 4. Thinking	<b>ENTJ</b> 1. Thinking 2. Intuition 3. Sensation 4. Feeling

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