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PROLOGUE

In 1966, I graduated from a segregated high school after having attended a two room elementary school. I graduated third in my class. I performed well enough on the SAT's to receive a national merit commendation for minority students. Nevertheless, my scores fell below the admissions standards for many of the schools to which I applied.

It was a long time before I again achieved the same level of academic success that I had in high school. In college, my English teachers all told me I could not write -- and I believed them. In fact, I spent most of my adult life avoiding writing. If anyone had told me that what lawyers do is write, I would have never gone to law school.

While majoring in nursing, I was counseled several times to consider another career. In fact, I failed medical-surgical nursing twice. Had it not been for a nursing educator who decided to teach me “how” to study, I likely would have never graduated. Eventually, I did graduate from the University of Texas with a 2.3 grade point average (GPA).

In 1978, I decided to attend graduate school. However, two small things stood in my way: my low undergraduate GPA and my low Graduate Record Exam (GRE) score. When I could not get admitted to the University of Washington, I made a special trip to meet with the Dean and asked her whether having me -- with my low grades and GPA -- was worse *64 than continuing to have a community health program with no black students. She apparently decided that I was worth the risk. I did not disappoint her faith in me because, even though I was placed on academic probation the first semester, I eventually graduated.

For some reason, I kept going back to school. In 1981, I decided to attend a graduate program in public health and it was there that I experienced my greatest academic success as an adult learner. Not only did I avoid probation entirely, I actually completed the course work with a 3.8 GPA. I believe that success was due in part to fifteen years of practice and maturity. However, I also performed well because the MPH program was primarily an independent program, which allowed me to approach my educational experience through my unique learning style. It was my success in the MPH program that provided me with the confidence to “do” law school.

INTRODUCTION

It is often said that many individuals, having been high achievers before entering law school, are surprised and dismayed when they receive Cs in law school. That was neither my experience nor my expectation. I fully expected to graduate in the bottom half of my class. I expected to work extraordinarily hard. Yet, I also had confidence that I could accomplish my goal of avoiding

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probation and possibly dismissal. My experiences taught me that it was not only what you knew that was important to succeeding in most educational environments, but understanding that a pedagogical and political nature is essential. I also learned that the ability to express what you knew in a manner acceptable to the instructor was important. [FN]1

Entering law school with these goals, I was both surprised at my success and dismayed at the general incompetency of the legal education system. Law school became a source of inspiration and frustration. I was inspired because my prior years of experience and skill building helped to make me successful. I was frustrated because of the confusing, humiliating, *65 and demoralizing effect that traditional legal pedagogy had on students. [FN]2

Although I enjoyed my success, I was disheartened by the implied notion embodied in traditional legal pedagogy. Namely, that only those individuals who have an extremely high level of the requisite skills upon entering law school can succeed in law school and will become "good lawyers." Legal education's failure to teach skills to varying levels of entering abilities displayed this attitude. Traditional legal pedagogy fails to clearly identify for students what a student needs to know and be able to do to succeed in law school. Moreover, traditional legal pedagogy fails to teach clearly and precisely the thinking skills embodied in the phrase "thinking like a lawyer." Traditional legal pedagogy fails to provide adequate opportunities for students to learn or improve their skills through practice and critique. [FN]3

Thus, success in law school is dependent not only upon the quality of the educational system and the efforts of the students, but also upon students entering with sufficiently high levels of the requisite skills so that the legal educational *66 system's failures minimally affect their success. [FN]4 Many students who fail in law school do so because legal education, through its failure, does not attempt to educate as much as it attempts to weed out students and to rank the students who remain. Thus, the problem of an educationally unsound legal pedagogy leads many students to failure (or poor performance) where failure (or poor performance) may have been avoidable.

Intuitively, if not consciously, recognition of this dilemma causes many first year law students to become overwhelmed by a fear of failure. [FN]5 The initial fear intensifies as the semester progresses until some students become paralyzed by "failure anxiety." Failure anxiety is the condition represented by the following statement: "I am so concerned about failing my examination that I am unable to study." [FN]6 The causes of failure anxiety can be traced to four factors: (1) high expectations, (2) the method of law school instruction, (3) the subject *67 matter and method of study, and (4) the importance of first semester grades. [FN]7

First, many students who enter law schools have done well academically in the past and have high expectations of how they will do in law school. When such students perceive themselves as being in the middle of the class, because they received only Cs, they consider themselves failures.

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[FN]8

Second, the student must adjust to a method of instruction that provides very little feedback or opportunity to practice developing skills. [FN]9 The so-called Socratic method results in many law professors making few evaluative comments about a student's classroom performance. Thus, typical first year classes provide little, if any, opportunity for feedback of written analytical skills such as issue-spotting, analysis, and writing. As a result, many law students enter their exams not having had any feedback on the skills needed to do well. In fact, most students will go through the entire semester not knowing how effective their method of study was and having even less information on how to improve their method of study. [FN]10

Third, most first-year law students do not know how to study successfully. In part, this is due to the significant change in teaching methods and expectations between college and law school -- a change that is more significant than the one between high school and college. [FN]11

The first semester in law school is like the first semester in college. You don't know what the hell you are doing, with the exception that you don't have any interim exams [in law school] to help you out. I suppose I betray something when I say I don't know how much I should study. I don't know how much we have to know, in what depth we have to go, what analysis we'll have to *68 do, and how much of an acquaintance we have to have with certain points. [FN]12

Finally, while one bad semester does not drastically influence an undergraduate's entire educational career, it can in law school. For instance, students who get poor first semester grades may not be able to recover sufficiently to be chosen for law review, moot court, judicial clerkships or prestigious summer job interviews. [FN]13 Given the lack of evaluative feedback, a student's generally poor study habits, and grading curves, it is a rare student who can offset a poor first semester.

Nevertheless, student anxiety can be lessened with improved legal instruction [FN]14 and with a legal pedagogy that is consistent with the principles of learning. Such a pedagogy includes understanding how students learn and helping students to develop strategies for learning that are consistent with their learning styles. [FN]15

Legal education prides itself in being an educational system that demands that its students be self-motivated learners. The student with poor study skills will not perform well. The student who has a poor understanding of how to achieve academic success will not do well. Yet, law schools do very little to assure that their students understand what it *69 means to be a self-motivated learner or to possess the necessary study skills. I am convinced that this failure is because legal education actually knows very little about self-motivated learning or learning styles. There have been only a few articles written in the last ten years on how law students learn

or learning style theory in legal education. [FN]16 The only study published on law students' learning styles utilizing the Myers-Briggs Type Indicator (MBTI) is almost thirty years old. [FN]17 As far as I can determine, no legal article has discussed improving students' performance by incorporating an understanding of the different learning styles of students into the development of teaching methods. [FN]18 Furthermore, despite changing demographics that have resulted in a more diverse student *70 population, [FN]19 only one article addresses differences in learning styles of law students in the context of the issue of diversity. [FN]20 Because performance in law school is so important, this lack of self-study is a major deficiency.

This study was done to explore the relationship between learning style and performance. In particular, its purpose was to discern the MBTI for first year law students and to describe the relationship between the MBTI and performance. [FN]21

A. Learning Style

Some researchers believe that learning "is the most important concept to demand attention in education in many years . . . ," [FN]22 others have called it the "foundation of a truly modern education." [FN]23 The phrase "learning style" first came *71 into use when researchers began to search for specific strategies for matching course presentation and materials to students' needs. [FN]24

Learning style is a student's way of responding to, and using, stimuli in the context of learning. [FN]25 It refers to a person's characteristic style of acquiring and using information in learning and solving problems. Using the layers of an onion as a metaphor for the different levels of a person's learning style, the core of a learning style is a person's basic characteristics of personality. [FN]26 Personality models of learning styles deal with the basic characteristics that a person brings to the learning situation. Personality characteristics are the most stable and the least subject to change in response to intervention by a researcher or instructor. [FN]27 Personality models include: (1) field dependence and independence; [FN]28 (2) Myers-Briggs Type Indicator; (3) reflectivity versus impulsivity models; [FN]29 (4) Omnibus Personality Inventory; [FN]30 and (5) The Holland Typology of Personality. [FN]31

The second layer of the learning style onion is the person's information processing style. [FN]32 Information processing models of learning styles deals with how people take in *72 and process information. Information processing models include: (1) comprehensive learners versus operation learners; [FN]33 (2) conceptual versus factual learner (sequencing of information) models; [FN]34 (3) deep-elaborative versus shallow-reiterative models; [FN]35 (4) Kolb's Model of Experiential Learning; [FN]36 and the (5) Gregorc model. [FN]37

The third layer of the learning style onion is the person's social interaction styles. [FN]38

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Students learn better in settings that meet their social-emotional needs and in social situations *73 that are attuned to their predominant pattern of behavior. Social-interaction models of learning styles include: (1) Mann's Research based on personality clusters; [FN]39 (2) Grasha-Reichman Student Learning Style Scales; [FN]40 (3) Furmann-Jacobs model; [FN]41 and (4) Eison's Learning and Grade orientation. [FN]42

The final layer of the learning style onion is the person's instructional preference and learning environment. [FN]43 Instructional style models are concerned with students preferences for particular teaching methods. Instructional style models of *74 learning style include: (1) cognitive mapping; [FN]44 and (2) Canfield Learning Style Inventory. [FN]45

The traits identified by the different learning style measures are not discrete and each level influences the other. [FN]46 Nevertheless, information from learning styles can help faculty become more sensitive to the diversity among students. In particular, this information can help faculty to design a broad range of learning experiences to meet the needs of the varied learning styles of students. [FN]47 Perhaps most importantly, in a self-directed learning situation, learning style information can help a student to become a better student. The more students know about their own styles, the better they can study and thus also increase their chances of succeeding. Learning style information gives students a greater appreciation of their strengths and helps them become more deliberate in their learning. [FN]48 Once law professors and law students understand the student's learning style, they can work together to help the student develop strategies for learning in styles different from their own. [FN]49

This study used the Myers-Briggs Type Indicator (MBTI) primarily because it is a personality model that is less susceptible to changes in the legal education environment. The MBTI has been widely used in over 100 research studies. [FN]50 Researchers have found that, while it is not comprehensive, this model *75 has many strengths that other instruments do not possess. [FN]51 For instance, the MBTI is better normed than most learning style instruments. [FN]52 Furthermore, the MBTI is more “sophisticated and complex” in that it identifies more approaches to learning. [FN]53

B. Myers-Briggs Type Indicator

The MBTI is a validated, reliable inventory that assesses a person's personality type. [FN]54 The MBTI makes the theories of Carl Jung more accessible to people. [FN]55 Jung believed that what seemed to be random behavior is actually predictable based on the differences in how individuals use their perception and judgment. [FN]56 Questions on the MBTI are designed to classify individuals according to four basic preferences: (1) extraversion versus introversion; (2) sensing versus intuitive; (3) thinking versus feeling; and (4) judgment versus perception. [FN]57

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Extraversion (E) versus introversion (I) are two opposite preferences used to describe a person's orientation of energy [FN]58 -- where a person likes to focus his or her attention. [FN]59 Sensing (S) versus intuitive (N) are opposite preferences that describe the perceiving function -- the way in which people prefer to acquire information. They deal with how a person *76 goes about finding out about the world around them. [FN]60 Thinking (T) and feeling (F) are the judging function. These opposite preferences reflect the different means that individuals use to reach conclusions, make decisions, form opinions, and arrive at judgments. [FN]61 Judgment (J) and perception (P) describe a person's orientation to outer life -- the way a person deals with the outer world. Each of the four preference types represent a habitual choice between rival alternatives. A person's preferences affect not only what they perceive, but how they draw conclusions about what they perceive. [FN]62

There are several uses of "learning styles" as determined by the MBTI. [FN]63 For instance, the MBTI has been used to predict and develop the different teaching methods and environments best suited to each type. [FN]64 The MBTI can be used to predict the preferred patterns of mental functioning, such as information processing, idea development, and judgment formation. [FN]65 The MBTI can be used to foretell patterns of attitudes and interests that influence an individual's learning situation [FN]66 and to predict a person's disposition to pursue certain learning circumstances and avoid others. [FN]67 In addition, the MBTI can be used to predict a person's nature to use "certain learning tools and to avoid others." [FN]68 While the MBTI has been used to predict academic performance, [FN]69 it cannot effectively foretell a student's actual study behavior. [FN]70 Consequently, it cannot be used effectively as *77 either an admission tool or an ultimate tool for predicting the success of particular students.

C. Data Collection

At orientation, all members of the entering first year class of law students were asked to participate. They were asked to complete the MBTI Form G, which has ninety-two self-scoreable items. Each item offers a forced choice between two opposing answers that equate to one of the four opposing preferences. [FN]71 The choices are between every day events and word pairs selected to evoke a choice between the competing preferences. [FN]72 A person's type is based on which pole of the four preferences the person prefers, with the four preferences combining to render sixteen possible types. [FN]73

The items are weighted 0-2, and scores are given for each pole based on the points totaled from the responses. The result allows a person to determine not only which pole is preferred, but by how much. [FN]74 The level of a person's preference can be slight (1-9), moderate (11-19), clear (21-39), or very clear (41 or higher). [FN]75 For example, a person might score 43 on extravert items and 20 on introvert items. His score would be E 23. The E indicates that he has a preference for extraversion, and the 23 indicates that his preference is "clear." [FN]76

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D. Data Interpretation

Throughout this paper, I compare different groups, such as: males v. females, white students v. students of color, and extraverts v. introverts. When comparing groups, the question arises whether the groups really represent populations that are *78 different from each other. It is possible, some may say even probable, that different groups given the same treatment (i.e., extraverted law students versus introverted law students) could make different grades merely by chance. That is, any observed difference could result merely from sampling error. Thus, as a researcher, I wanted to test the null hypothesis that the groups being compared are really only two samples from the same population and any observed difference is due to chance or sampling error. In short, the null hypothesis establishes that the real difference between groups being compared is zero.

So the question becomes: How large does an observed difference have to be before a researcher is justified in rejecting the null hypothesis? [FN]77 I used Tests of Statistical Significance to answer those questions. Significance is designated with the symbol " p". Most social scientists treat results with a statistical significance of .05 or less as "significant," or meaningful, and treat a statistical significance of .01 as very significant. [FN]78 A statistical significance of .05 means that only five times out of a hundred will the observed result come from chance or some random process. A statistical significance of .01 means that only one time out of a hundred will the observed result come from chance. Consequently, lower significance levels indicate a higher probability of real or reliable results.

While conventional research reports significance at three levels (<.05 or <. 01 or <.001), I reported the actual probability. I did so, in part because I believe conventional significance levels may be too conservative in interpreting the practical significance of differences in grade point averages. While results greater than .05 are not as statistically reliable as results meeting the .05 test, they do indicate possible non-random differences in the population. Such differences would be extremely important in a population where even very small differences in grades can result in substantial differences in treatment in the job market, in selection to law review, and most importantly, in being placed on probation or being dismissed. [FN]79

*79 E. Description of Students

Initially, all 170 students in the entering class completed the Myers-Briggs Type Indicator. However, the study was limited to the 154 students who had first semester grade point averages (FSGPA). [FN]80 The students were overwhelmingly white, [FN]81 male [FN]82 and young. [FN]83 The average undergraduate grade point average (UGPA) for the entering students was 3.069. [FN]84 The students' mean law school admission test (LSAT) score was 155.040. [FN]85

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I. MBTI AND FIRST SEMESTER GRADES

A. Extraversion (E)-Introversion (I) Preference

Extraversion (E) and introversion (I) are used to describe where a student focuses his or her attention in the learning process. [FN]86 Extraverts tend to focus their perception and judgment on people and objects; they are energized by what *80 is going on in the outer world rather than the inner world of their mind. Extraverts usually prefer to communicate more by talking than by writing and to learn by experiencing. Thus, extraverts prefer to learn through acting rather than reflecting. Introverts become aroused to action by what goes on in their own mind. Introverts tend to focus their attention on concepts and ideas and are more comfortable when they are expected to spend most of their time just thinking. In fact, introverts prefer to reflect before acting.

In the Myers & McCaulley study, seventy-nine students (51.3%) were extraverts and the remaining seventy-five students (48.7%) were introverts. [FN]87 A larger percentage of female students (57.8%) than male students (46.7%) preferred extraversion over introversion. However, the difference was not statistically significant (p=.173). A larger percentage of students of color (52.9%) than whites (51.1%) preferred extraversion. However, the difference was not statistically significant (p=.886).

Students preferring extraversion had a lower mean first semester grade point average (2.499) than students preferring introversion (2.610). The difference was not statistically significant -- it was highly correlated (p=. 1504). Furthermore, even though there was not a significant correlation between first semester grades and dichotomous type (EI), the law students' EI continuous scores increased as their first semester grades increased and the correlation was statistically significant *81 (p=.020). [FN]88 That is, the more the student preferred introversion, the better the student performed. [FN]89 This result was true for all groups except males -- females (p=. 001), whites (p=.040) and students of color (p=.038).

It is no wonder that students preferring extraversion had a lower mean FSGPA than students preferring introversion. Legal education rewards the preferred learning style of introverts, although you might be misled if you sat in on a typical socratic classroom. Extraverted law students think best when talking, learn well in groups, and may have difficulty sitting in front of a book for a long period of time. [FN]90 Because of the legal education's reliance on socratic discussion in the classroom, extraverted law students are usually able to concentrate well and tend to leap into discussion readily. [FN]91 In fact, extraverted law students are likely to begin answering the questions immediately, thinking of what they want to say as they speak. [FN]92

Introverted law students, on the other hand, need some time to think before they are required to

answer. [FN]93 If introverted law students have not anticipated questions before *82 hand, they may perform poorly during socratic dialogue. [FN]94 Furthermore, because introverts do not always share what they know, teachers may be slow to appreciate their talents and depth of knowledge. Typical socratic dialogue may cause some law professors to press introverted law students into participating. [FN]95 However, such pressure will often only increase the introverted law student's withdrawal. [FN]96 Law professors should respect introverted law students' need to think before talking by either giving them advanced notice of being called on, advance notice of the questions, or a brief twenty to thirty seconds to think before answering. If professors use one of these routes, introverted students will participate more effectively without increasing their withdrawal. However, professors should encourage introverted law students to participate in class and group activities that help to develop the extraverted side of their personalities. [FN]97

Nevertheless, despite the socratic dialogic behavior emphasis in the classroom, most of the learning in law school occurs outside the classroom in “solidarity reflection” and involves a high degree of reading and verbal reasoning. Consequently, introverted law students are able to study more effectively, since introversion is correlated with reading and verbal reasoning. [FN]98 Further, much of law study involves thinking alone, something introverts do well. [FN]99 Furthermore, since introverts tend to prefer writing over talking, they often do better on written tests on concepts than oral tests on practical application. [FN]100 Consequently, it is not unexpected *83 that introverted law students will have a relative advantage on most law school exams that are more concerned with the students' understanding of concepts. [FN]101 They will also have a relative advantage in obtaining favorable grades since few law professors factor in class participation as a component of the course grade.

On the other hand, “solidarity reflection” can be counterproductive for extraverted law students who prefer to think while acting (or even after acting). [FN]102 Extraverted law students need to be encouraged to make the process of the legal learning environment more active. They need to be encouraged to fill their learning situation with talking and discussion, activity and group work. [FN]103 They can use group discussions, cooperative projects and study groups to more thoroughly understand legal theories. [FN]104 However, they also need to be encouraged to identify experiences where they learn to study effectively alone. [FN]105

Furthermore, extraverted law students will learn theories or facts better if they connect the theories or facts with their own experience. [FN]106 However, because extraverted law students tend to leap into reading assignments with little forethought, [FN]107 even in the classroom discussion, they need to be encouraged to take time to anticipate issues and problems.

Extraverted law students generally perform better on oral than on written tests. [FN]108 Consequently, they should be encouraged *84 to practice writing exams and hypotheticals.

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[FN]109 Law students often rely on their ability to learn facts. Because many law school exams test a law student's understanding of concepts and analysis -- this reliance is misplaced. This may be a particular problem for extraverted law students who actually learn facts better than concepts and ideas. Consequently, extraverted law students need to be repeatedly encouraged not to rely on their understanding of facts but to undertake activities that will stress their learning of concepts and analysis.

Finally, extraverted law students should be encouraged to take clinical programs since they particularly benefit from programs where “practical experience goes hand-in-hand with concepts and theories.” [FN]110

Summary of How the E and I Preferences affect Learning [FN]a

Extraversion

Introversion

Cognitive Style: The extroverted law student favors a

Cognitive Style: The introverted law student favors a

cognitive style that involves:cognitive style that involves:

-Learning by talking and physically engaging the

-quit reflection,

environment.

-keeping one's thought inside until they arepolished.

-Letting attention flow outward toward objective

Talking to help thoughts to form and become clear,

-being engrossed in inner events: ideas, impressions,

and

concepts, and

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-Learning through interactions, verbal and verbal and non-verbal.

-learning in private, individual ways.

Study Style: The extroverted law student favors a

Study Style: The introverted law student favors a

study style that involves:

study style that involves:

-acting first and reflecting after,

-reflecting first, acting after (if necessary).

-plunging into new material.

-loocing for new data to fit into the internal dialogue that is always going on.

-starting interactions needed to stimulate reflection and

that is always going on,

-having a strong, interesting, external-extroverted reason

someone who is trusted.

for studying beyond learning for its own sake,

-reading as the main way of studying.

-avoiding distractions that will cut into their

-listening to others talk about the topic being studied,

concentration.

and privately processing what they take in, and

-studying to prepare to teach someone.

Instruction that fits E's: Extroverted law students

Instruction that fits I's: Introverted law students

do their best work when:

do their vest work when:

-opportunities to ‘think out loud’ for example, one-to

-working internally with their own thoughts: listening,

one with the teacher, classroom discussions, working

observing, lab work, reading, writing.

with another student on projects.

-processing their experiences at their own pace.

-learning activities that have an effect outside the

-presenting the results of their work in forms that let

learner, such as visible results from a project.

them keep their privacy,

-teachers who manage classroom dialogue so that

-having ample time to polish their work before needing

extroverts have ways to clarify their ideas before they

to present it.

add them to class discussion, and

to present it,

-assignments that let them see what other people are

-having time to reflect before answering the teacher's

doing and what they regard as important.

questions, and

-tieing their studies to their own personal interests;

their internal agenda.

TABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT DISPLAYABLE

TABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT DISPLAYABLE

*86 B. Sensing (S)-Intuition (N) Preference

The sensing (S) and intuitive (N) preferences index reflects the way in which people prefer to acquire information. [FN]111 The index reflects how a person finds out about the world around them. A person relies either on sensing (S), which reports observable facts through one of the five senses, or on intuition (N), which reports meanings, relationships, and possibilities worked out in the subconscious.

Sensing types appreciate the realities of a situation -- accepting and working with what is “given” in the here-and-now. Sensing types tend to be realistic and practical. Sensing types are good at remembering and working with a large number of facts. Intuitive types, on the other hand, tend to look at the big picture and try to grasp the essential patterns. Intuitive types are imaginative and inspirational -- seeing new possibilities and new ways of doing things.

Seventy-four students (48.1%) preferred sensing and eighty students (51.9%) preferred intuition. [FN]112 A larger percentage of male law students (55.6%) than female law students (46.9%) preferred intuition over sensing. However, the difference was not statistically significant (p=.288). A larger percentage of students of color (52.9%) than whites (51.8%) preferred intuition over sensing. Similarly, the difference was not statistically significant (p=. 931).

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Students preferring sensing had a lower mean FSGPA (2.532) than students preferring intuition (2.573). [FN]113 However, *87 this difference was not statistically significant (p=.6010). [FN]114 While first semester grades increased (for every group except women) as SN continuous scores increased (as preference for intuition increased), the correlation was not statistically significant (p=.377). [FN]115

Sensing law students learn best when they are given concrete examples that allow them to move to abstract theory in a step-by-step progression. [FN]116 Thus, sensing law students should be encouraged to work with programmed, modular, or computer-assisted activities. [FN]117 Law professors should provide sensing law students with knowledge that is practical. Furthermore, sensing law students will do better with clear directions that are concise, detailed, and precise. [FN]118 They are comfortable with, and interested in, situations where each part of the whole can be grasped. [FN]119 Sensing law students learn best when given a principle, or rule, followed by many examples of variations in applying it. They tend to enjoy practice and drill. Furthermore, because sensing law students are more exact in judging how long things take, they are more likely to work steadily at preparing for exams. [FN]120

Sensing law students may have less of a natural aptitude for reading and writing. Consequently, because much of learning in law school relies on reading or writing, grades of sensing law students "may underestimate their true grasp of a *88 subject." [FN]121 In fact, sensing law students may be particularly disadvantaged because most first year law school exams are timed, written essays tests. [FN]122 However, sensing law students may actually be at an advantage in upper division, clinical based courses that rely on performance as a testing measure. [FN]123 Furthermore, they may also be at an advantage in courses that rely on objective tests. [FN]124

Intuitive law students may be at an advantage because legal analysis requires a person to have insight and perception. Intuitive law students are likely to be able to "leap to a conceptual understanding of material." [FN]125 However, while they are likely to have quick flashes of insight, they are often careless about details and facts. [FN]126 Nevertheless, intuitive law students tend to do well in law school because they excel at theoretical topics and abstract theories. [FN]127 Unlike sensing law students, intuitive law students get bored after they have seen what they consider the main point. This may make intuitive students inpatient in the classroom as sensing students struggle to understand. In fact, intuitive law students learn best when given a problem with the task of discovering the solution. While intuitive law students resist drill, they will pay attention to facts in order to verify the correct solution to a problem. [FN]128 However, intuitive law students often underestimate how long things will take and may finish tasks in a last-minute rush when a deadline makes them interesting or important. [FN]129 Furthermore, intuitive law students need to be challenged and kept interested. [FN]130 "Because they are often so quick at insight, they often grasp the principle the teacher is presenting and daydream during the [class]." [FN]131 However, law faculty need to provide

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exercises and opportunities for *89 intuitive law students to develop a "healthy respect for facts." Because of the rapid movement of a law class and intuitive students' flashes of insight, the intuitive student will need to be challenged not to talk "off-the-top-of-their-heads." [FN]132 Otherwise, intuitive law students are in danger of developing slipshod habits. They need to be challenged to find a "basis for the inspirations and insights that come to them." [FN]133

One way to help both intuitive law students and sensing law students may be to have collaborative exercises in which intuitive students are paired with sensing law students. Intuitive types might gain a healthy respect for the sensing type's solid grasp of reality, while sensing types might be pushed to use their imagination, inspirations, and insights.

Intuitive law students tend to do well on timed, written essay exams because of their intuitive perception and their facility with the written word. [FN]134 However, as far as performance is concerned, it seems to make little statistical difference whether students are sensing (mastering "first the facts and details") or intuitive (mastering "first the theories and concepts"). [FN]135 This is probably because law school exams focus on both practical facts (preferred by sensing law students) and application (preferred by intuitive law students). [FN]136

Summary of How the S and N Preferences Affect Learning [FN]a

Sensing

Intuition

Cognitive Style: A sensing law student favors a cognitive style

Cognitive Style: An intuitive law student favors a cognitive

that involves:

style that involves:

-memory of facts.

-being caught up in inspiration.

-observing specifics.

-quickly seeing associations and meanings.

Vernellia R. Randall, The Myers-briggs Type Indicator, First Year Law Students and Performance, 26 Cumberland Law Review 63 (1995-1996)

-processing data step by step,

-reading between the lines.

-starting with the concrete, then moving to abstract,

-relying on verbal fluency more than on memory of facts.

-being careful and thorough,

-relying on insight more than careful observation, and

-aiming toward soundness of understanding,

-focusing on general concepts more than details and practical

-staying connected to practical realities around them, and

matters.

-being attentive to what is, in the present moment.

Study Style: A sensing law student favors a study style that

Study Style: A intuitive law student favors a study style that

involves

involves:

-a sequential, step by step approach to new material,

-following inspirations.

-beginning with familiar, sold facts.

-jumping into new material to pursue an intriguing concept.

-moving gradually toward abstract concepts and principles, and

-finding their own way through new material, hopping from

-approaching abstract principals and concepts by distilling them out#concept to concept.

of their own personal, concrete experience.

-attending to details only after the big picture is clear,

-exploring new skills rather than honing present ones, and

-reading.

Instruction that fits S's: Sensing law students do their best

Instruction that fits N's: Intuitive law students do their best

work with:

work with:

-hands-on labs,

-learning assignments that put them on their own initiative,

-relevant films and other audiovisual presentations,

idnvidually or with a group.

-materials that can be ahndled.

-real choices in the ways they work out their assignments.

-computer assisted instruction.

-opportunities to find their own ways to solve problems,

-first-hand experience that gives practice in the skills and concepts

-opportunities to be inventive and original,

Vernellia R. Randall, The Myers-briggs Type Indicator, First Year Law Students and Performance, 26 Cumberland Law Review 63 (1995-1996)

to be learned,

-opportunities for self-instruction, individually or with a group,

-teachers who provide concrete learning experiences first, in any

-a system of individual contracts between teacher and students,

-learning sequence, before using the textbook,

-beginnings that fire them with the fascination of new

-teachers who show them exactly what is expected of them,

possibilities, and

-teachers who do not move 'too quickly' through material,

-experiences rich with complexities which may include

touching just the high spot or jumping from throught to thought,

stimulating lectures.

-assignments that do not expect them to generate possibilities not

based on solid facts, and

-skills and facts they can use in their present lives.

Footnotes

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Adapted from Gordon Lawrence. People Types and Tiger Stripes 44 (1992).

*91 C. Thinking (T)-Feeling (F) Preference

The thinking (T) and feeling (F) preference index reflects the means that individuals use to reach conclusions, make decisions, form opinions, and arrive at judgments. [FN]137 Persons who

prefer thinking decide impersonally on the basis of logical consequences. Individuals who prefer feeling rely on judgments that are based on personal and social values.

Persons who rely on thinking make decisions objectively -- making decisions on the basis of cause and effect. Individuals that prefer thinking make decisions by analyzing and weighing the evidence. They seek an objective standard of truth and are frequently good at analyzing what went wrong or why something does not work.

Persons who prefer to decide through feelings make decisions based on values or on what is important to them and to others. They do not require logical decisions, so long as the decisions are consistent with their values. While feeling persons tend to be sympathetic, appreciative, and tactful when dealing with people, their decisions are not based on emotions, but rather on values.

One hundred and twenty students (77.9%) preferred thinking and thirty-four students (22.1%) preferred feeling. [FN]138 A larger percentage of males (82.2%) than females *92 (71.9%) preferred thinking over feeling. Even though the difference was not statistically significant (p=.1271), it is meaningful that although only one-third of all women are thinkers, nearly two-thirds of the women in law schools are thinkers. [FN]139 A larger percentage of students of color (94.1%) than whites (75.9%) preferred thinking over feeling, although the difference was not statistically significant (p=.088).

Students preferring thinking had a higher mean FSGPA (2.585) than those preferring feeling (2.440). [FN]140 While this association was highly correlated, it was not statistically significant (p=.1174). However, the students' TF continuous scores decreased as their first semester grades increased. [FN]141 That is, the more the student preferred thinking, the better the student performed (p=.003). [FN]142

The thinking-feeling dimension provides insights into what motivates a person to learn. Thinking law students are most motivated to learn when they are provided with a logical rationale. [FN]143 Legal education seeks to help students to systematically understand the principles underlying the legal system. Thinking law students prefer topics that help them to understand systems or cause-and-effect relationships. [FN]144 Their thought is syllogistic and analytic. [FN]145 Consequently, if given a logical reason for doing boring, uninteresting tasks (i.e., outlining), they are less likely to complain about these *93 tasks. [FN]146 One might predict that thinking students would perform better in law school since law school teaches to their level. However, thinking law students are likely to undervalue factors, such as the importance of human relationships in legal problems, the human side of legal issues, the role of values in legal decision-making, and the art of communication. [FN]147 Thinking law students need activities, like exposure to real clients, early in their legal education. That experience will help them develop their less preferred feeling. [FN]148 It is through these experiences that thinking law

students can learn to appreciate the problems of people. [FN]149 Substantive law school courses need to develop mechanisms to constantly keep the thinking law students in touch with the role of values. Otherwise, it will be too easy for the thinking law student to objectify and dehumanize the entire process.

In contrast, feeling law students are likely to find little motivation in the structure of legal education. Feeling law students need to know that what they are about to learn can be "put to work for people they are concerned about or in the service of personally held convictions and values." [FN]150 Feeling law students think "to clarify their values and to establish networks of values." [FN]151 Consequently, "even when their expressions seem syllogistic, they usually evolve from some personally held belief or value." [FN]152 Feeling law students need to be encouraged to keep that perspective. Without personal encouragement, feeling law students may find it difficult to be motivated, since they may find many law school activities boring and unrewarding. [FN]153 Feeling law students are more likely to understand legal material if it is presented from the human angle. [FN]154 Consequently, law faculty need to remember to interject into the discussion of cases the human aspect of the issue. This consists of something more than the cold *94 discussion of facts, but rather of discussion of the underlying values motivating the parties. Feeling law students can master legal education and do well if they are in "pursuit of a goal that has important personal value." [FN]155 Furthermore, because feeling law students are particularly motivated by approval, law faculty need to show appreciation for the work of feeling law students. [FN]156

Feeling law students need to work on developing their preferred process of judgment as a reliable guide for legal decision making. They can do so by working on "values clarification, developing concern for others, weighing long against short range good, and on determining what is more important and what is less important." [FN]157 Furthermore, feeling law students need activities that teach them to take into account the probable consequences of legal actions, especially where their own high value for the action makes it hard for them to see the probable negative outcomes. [FN]158

Summary of How the T and F Preferences Affect Learning [FN]a

Thinking

Feeling

Cognitive Style: Thinking law students favor a

Cognitive Style: feeling law students favor a

cognitive style that involves:

cognitive style that involves:

-making impersonal judgments,

-making value judgments concerning human motives

-keeping mental life ordered by logical principles,

and personal values,

-analyzing experiences to find logical principles

-attending to relationships,

underlying them,

-personalizing issues and causes they care about,

-avoiding emotional concerns while making decisions,

-staying tuned to the quality of the subjective tone of

and

relationships and seeking harmony in relationships,

-naturally critiquing things, aiming toward clarity and

-attending to the quality of their own emotional life,

precision.

and

-naturally appreciating people and their

accomplishments.

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Study Style: Thinking law students favor a study style

Study Style: Feeling law students favor a study style

that includes:

that involves:

-having objective material to study,

-learning through personal relationships rather than

-compartmentalizing emotional issues to get clear

impersonal individualized activities,

thinking on the task at hand,

-learning by helping and responding to other peoples'

-analyzing problems to bring logical order out of

needs,

confusion, and

-studying with friends, and

-seeking to get a sense of mastery over the material.

-wanting to choose study topics that they care deeply

about.

Instruction that fits T's: Thinking law students do

Instruction that fits F's: Feeling law students do

their vest work with:

their best work with:

-teachers who are logically organized,

-teachers who value a personal rapport with students,

-subjects and materials that flow logically and respond to

-assignments that have a goal of helping people,

logic, and

-feedback that shows warm appreciation for the

-feedback that shows them their specific, objective

students and their efforts, and gives corrective

achievements.

suggestions in that context, and

-personalized assignments.

Footnotes

a

Adapted from Gordon Lawrence, People Types and Tiger Stripes 45 (1992).

*96 D. Judgment (J)-Perception (P) Preference

The judgment (J) and perception (P) preference index describes the way an individual deals with the outer world. [FN]159 People preferring judgment prefer using thinking or feeling when dealing with the outer world. People preferring perception would rather use sensing or intuition for their dealings with the outer world. [FN]160

Individuals preferring judgment (either thinking or feeling) tend to live in a planned, orderly way. They have a strong desire to want to regulate and control life. People who prefer judgment like to make decisions. They like to have things come to a closure and then move on to the next project.

Vernellia R. Randall, The Myers-briggs Type Indicator, First Year Law Students and Performance, 26 Cumberland Law Review 63 (1995-1996)

However, a preference for judgment does not mean that the person is judgmental, merely that he or she likes a structured and organized life where things are settled.

Persons preferring perception when dealing with the outer world like to live in a flexible and spontaneous way. They like to gather information and seek to understand rather than to control. Persons preferring perception tend to stay open to experiences, and enjoy and trust their ability to adapt.

One hundred and four students (67.5%) preferred judgment and fifty-four students (32.5%) preferred perception. [FN]161 A larger percentage of females (78.1%) than males (60.0%) preferred judgment over perception. The difference was statistically significant (p=.0179). A larger percentage of whites (67.9%) than students of color (64.7%) preferred *97 judgment over perception. However, the difference was not statistically significant (p=. 7919).

Students preferring judgment had higher mean FSGPA (2.568) than students preferring perception (2.523). [FN]162 However, this difference was not statistically significant (p=.5903). The students' JP continuous scores decreased as their first semester grades increased. [FN]163 That is, the more the student preferred judgment, the better the student performed. However, the difference was not statistically significant (p=.112). [FN]164

The judging-perception distinction is important in determining whether law students prefer structured learning environments or spontaneous learning environments. [FN]165 Law schools are highly structured environments. They require a student to make outlines, brief cases, read a certain number of pages, and write a certain number of papers. Judging law students prefer the kind of highly structured learning environment present in law schools. Judging law students take satisfaction in accomplishing the tasks of law schools and generally like law schools because of their “system, order, defined tasks and structured assignments.” [FN]166 Judging law students are more likely to have and follow a schedule. In fact, more than any other student, judging law students are likely to like the work of law schools. [FN]167 Judging law students learn more through fulfilling their duty than through curiosity and *98 may sometimes encounter difficulty in their legal analyses because “they have probably decided prematurely, on the basis of insufficient information, either that they are right or that there is nothing more to be done.” [FN]168

Law faculty need to provide judging law students with structure and organization, since they like to “know what they are accountable for, and . . . be held to it.” [FN]169 However, since many legal problems require “spontaneity, [and] flexibility in the face of sudden changes,” judging law students require exercises which get them to operate without structure. [FN]170 Law faculty need to help judging law students avoid fulfilling their need for closure when the problem really calls for a broader curiosity. [FN]171

Since perceptive students prefer open and spontaneous learning environments, [FN]172 they may feel imprisoned in the highly structured environment of law school. Because perceptive law students like courses that are free-wheeling, flexible, and adapted to their interests as they arise, they are likely to find much of law school stagnant and boring. [FN]173 Perceptive law students need to be encouraged to organize and plan. [FN]174 They need to be encouraged not to procrastinate. [FN]175 Unlike judging law students, perceptive law students are likely to learn more through curiosity about the legal system than through duty to the studying process. [FN]176 In fact, even during examinations, perceptive law students are open to other possibilities even though their judging attitude "might stand them in better stead." [FN]177 Perceptive law students need "practice in recognizing when it is time to be open, curious and perceptive; and when it is time to stop looking and decide to act." [FN]178 Law faculty should be alert to occasions where *99 seeking one more bit of information prevents a perceptive law student from making a legal connection that could have been made had the student been more decisive. [FN]179

However, whether a law student prefers a structured learning environment seems to make no statistical difference in performance. That is, it made little statistical difference whether law students prefer a "highly structured environment" or an "open and spontaneous environment."

Summary of How the J and P Preferences Affect Learning [FN]a

Judgment

Perception

Cognitive Style: Judging law students favor a

Cognitive Style: The perceiving law students favor

cognitive style that involves:

a cognitive style that involves

-having a clear structure in a learning situation from the

-open exploration without a pre-planned structure,

beginning,

-staying open to new experiences,

-aiming toward completions and getting closure, and

-managing emerging problems with emerging

-having life organized into an orderly plan.

structures, and

-the stimulation of something new and different.

Study Style: Judging law students favor a study style

Study Style: The perceiving law student favors a

that involves:

study style that involves:

-planned and scheduled work drawing energy from the

-spontaneously following their curiosity,

steady, orderly process of doing their work,

-studying when the surges of impulsive energy come

-wanting to know exactly what they are accountable for

to them,

and by what standards they will be judged, and

-studying to discover something new to them, and

-treating assignments as serious business, and persisting

-finding novel ways to do routine assignments so as to

in doing them.

spark enough interest to do the assignments.

Instruction that fits J's: Judging law students do

Instruction that fits P's: Perception law students

their vest work with:

do their best work when:

-pre-planned structure, and a teacher who carefully

-they can pursue problems in their own way,

provides it,

-they have genuine choices in assignments, as with a

-predictability and cosnistency,

system of individual contracts in which the student can

-formalized instruction that moves in orderly sequences,

negotiate some of the activities,

-prescribed tasks, and

-assignments make sense to them, and

-milestones, completion points, with little ceremonies to

-their work feels like play.

honor successful completions.

Footnotes

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Vernellia R. Randall, The Myers-briggs Type Indicator, First Year Law Students and Performance, 26 Cumberland Law Review 63 (1995-1996)

Adapted from Gordon Lawrence, People Types and Tiger Stripes 46 (1992).

*101 II. IMPLICATIONS OF RESEARCH

The findings of this research provide some information for suggesting change in various aspects of legal education. The first implication is that it is urgent that law schools recognize, accept, and understand the diversity of students with regard to learning styles. Law schools and the legal profession are made up of diverse learners.

A second implication is the need for faculty to know and teach about learning style. By doing so, the faculty will help students to understand their own strengths and weaknesses. Such understanding will contribute to increased self-esteem and ultimately to achievement. It may also contribute to decreased feelings of frustration and cognitive dissonance among first year law students.

A third implication of the research is the need for faculty to use a variety of teaching techniques. The traditional pseudo-socratic teaching style fits the learning style of only some learners. [FN]180 More importantly, this style is misleading. Since it relies on thinking while acting, it may lead extraverts to believe that they are actually doing better than they really are. Extraverts need activities that will require them to engage in reflective thinking and to communicate that thinking in writing rather than orally. Furthermore, it is important that faculty develop teaching methods that address the full range of learning styles.

Since learning styles tend to guide teaching styles, counseling styles, and communication practices, a fourth implication *102 is the need for law schools to hire faculty with diverse learning styles. Obviously, by having a faculty and support staff with diverse learning styles, law schools will provide students with a selection of instructors and other personnel from which to learn and seek advice.

A final implication is the urgent need for further research on learning style. There is a need for research on learning style throughout the law school experience and even into practice. There is a need for research on the different aspects of learning style and academic performance. For instance, what impact does learning style have on first year grades, upper division grades, and bar passage? Another important question that needs further research is how learning styles affect the performance of students of color and how it may have different implications for whites. Also, a study needs to be made of differences based on gender.

CONCLUSION

While all types may perform well in law school, it is predictable that (I), (N), (T), and (J) types

may have a relative, if not significant, advantage. Introverts (I) deal intensively with concepts and ideas. Intuitives (N) work with abstraction, symbols, and theory. Thinkers (T) prefer logical analysis. Finally, judges (J) plan, focus, and organize their work. Consequently, the study of law matches the interests of those preferences. However, grades are much more than a matching of interest. They are the end product of the interaction between aptitude, application, interest, and persistence. While type theory and data can help explain achievement, it is not a full explanation. Consequently, it would be a mistake to use type theory for either admissions or to predict success of particular students. However, information on type can help professors in their choice of teaching methods and in the variety of study aids they choose to make available to their students. It can help students become better self-learners by helping them to plan their learning to maximize their abilities and interests.

If law schools are serious about conforming legal education to known educational theory, law schools must do more than to take a "sink or swim" attitude toward student success. Law schools must understand which factors contribute to *103 student learning and which do not. While understanding learning styles is not a cure-all for the ills of legal education, it is a start toward helping the student become a better self-learner. Legal educators could use the MBTI to help students maximize the learning experience by: (1) helping them to understand how they learn best; (2) by helping them to understand how the learning environment differs from their preferred learning modes; and (3) by helping to determine activities and behaviors to maximize their learning, notwithstanding any learning style differences. Understanding learning styles can help legal educators understand the thought processes of law students who are quite different from themselves. Despite the favoring in legal education of a particular type, the practice of law needs: people who prefer acting without getting bogged down in reflection (extraverts); people who prefer giving attention to details, facts and reality of the situation (sensing); people who prefer making judgments based on the underlying value implications (feeling); and people who prefer spontaneous and flexible environments (perceptive). It is the responsibility of legal education to assure those characteristics in the profession by facilitating the learning of all types.

EPILOGUE

I graduated eleventh in my law school class. I significantly outperformed my LSAT of 33, which was somewhat below the class median. I significantly outperformed my UGPA of 2.3, which was well below the class median. I excelled despite my learning disability. As a ENTJ, I had a relative advantage. I know that as a person who had learned over the years how to study effectively I had a significant advantage.

All law students deserve that advantage and we, legal educators, should take responsibility for helping them gain it.

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Table F 1

MBTI for First Year Law Student

Compared to Lawyers and Judges

ISTJ

ISFJ

INFJ

INTJ

Students

17.5%

Students

1.9%

Students

1.9%

Students:

3.0%

Lawyers

12.4%

Lawyers

4.6%

Lawyers

5.39%

Lawyers:

12.33%

Judges

14.8%

Judges

8.59%

Judges

4.69%

Judges:

4.69%

ISTP

ISFP

INFP

INTP

Students

3.2%

Students

.6%

Student

1.9%

Students:

8.4%

Lawyers

5.9%

Lawyers

1.16%

Lawyers

6.17%

Lawyers:

8.9%

Judges

3.9%

Judges

0.0%

Judges

3.12%

Judges:

7.03%

ESTP

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ESFP

ENFP

ENTP

Students:

4.5%

Students:

1.9%

Students:

3.9%

Students:

7.8%

Lawyers:

.96%

Lawyers:

1.54%

Lawyers:

8.09%

Lawyers:

6.74%

Judges:

2.3%

Judges:

1.56%

Judges:

3.91%

Judges:

3.91%

ESTJ

ESFJ

ENFJ

ENTJ

Students:

13.6%

Students:

4.5%

Students:

5.2%

Students:

9.7%

Lawyers:

9.8%

Lawyers:

4.05%

Lawyers:

4.82%

Lawyers:

6.25%

Judges:

21.1%

Judges:

8.59%

Judges:

5.47%

Judges:

9.06%

Appendix: Tables and Charts

A. Demographic Information

Table A 1

Race

Study participants

Total Population

No.

Percent

African American

12

7.8%

8.2%

Asian American

3

1.9%

1.8%

European American

136

88.3%

88.2%

Hispanic American

2

1.3%

1.2%

Native American

0

0.0%

0.0%

International

1

.6%

.6%

Table A 2

Gender

Study participants

No.

Percent

Total population

Female

64

41.6%

40.6%

Male

90

58.4%

59.4%

Table A 3

Age

Study participants

Total Population

Median

26.4

26.7

Maximum

59.0

59.0

Minimum

22.0

22.0

Std dev

5.36

5.49

Table A 4

Undergraduate Grade Point Average

Study participants

Total Population

Mean

3.078

3.052

Maximum

3.890

3.920

Minimum

1.600

1.600

Std dev

.496

.508

Table A 5

Law School Admission Test

Study participants

Total Population

Mean

154.986

154.780

Maximum

170.00

170.00

Minimum

136.00

133.000

Std dev

5.905

6.179

Table B 1

Extroversion versus Introversion Preference

Extraverts

Introverts

Frequency

79

75

Percentage

51.3%

48.7%

FSGPA Mean

2.499

2.610

F-value

2.089

Significance

.1504

Table B 2

Level of Preference

Scale Percent for Each

Level of Preference

Extroversion (E)

Introversion (e)

Slight Preference

24.1

22.7

Moderate Preference

25.3

20.0

Clear Preference

36.7

37.3

Very Clear Preference

13.9

20.0

Table B 3

Extroversion-Introversion Continuous Scores and

Correlation with First Semester Grades

Number

Mean

Correlation

Probability

Coefficient

Total

154

99.84

.1663

.020

Males

90

102.98

.0624

.279

Females

64

95.42

.3675

.001

Whites

136

99.63

.1502

.040

Students of color

17

101.53

.4425

.038

C. Sensation versus Intuition Preference

Table C 1

Sensation versus Intuition Preference

Sensing

Intuitive

Frequence

74

90

Percentage

48.1%

51.9%

FSGPA Mean

2.532

2.573

F-value

-.2746

Signifiance

.6010

Table C2

Level of Preference

Scale Percent for Each

Level of Preference

Sensing (S)

Intuition (N)

Slight Preference

22.5

24.3

Moderate Preference

21.3

20.3

Clear Preference

39.3

41.3

Very Clear Preference

16.2

15.0

Table C 3

Sensing -- Intuitive Continuous Score and

Correlation with First Semester Grades

Number

Mean

Correlation

Probability

Coefficient

Mean

154

99.73

.0254

.377

Males

90

103.24

.0965

.184

Females

64

94.78

-0718

.286

Whites

136

100.23

.0047

.478

Students of color

17

95.71

.1464

.288

D. Thinking-Feeling Preference

Table D 1

Thinking-Feeling Preference

Thinking

Feeling

Frequence

120

34

Percentage

77.9%

22.1%

FSGPA Mean

2.585

2.440

F-value

2.4797

Significance

.1174

Table D 2

Level of Preference

Scale Percent for Each

LEvel of Perference

T

F

Slight Preference

17.5

50.0

Moderate Preference

20.0

17.6

Clear Preference

33.3

17.6

Very Clear Preference

29.2

14.7

Table D 3

Thinking -- Feeling Continuous Score

Number

Mean

Correlation

Probability

Coefficient

Total

154

79.61

-.2205

.003

Males

90

76.18

-.2743

.004

Females

64

84.44

-.1702

.089

Whites

136

79.96

-.2334

.003

Students of color

17

76.77

-.3158

.108

E. Judgment-Perception

Table E 1

Judgment-Perception Preference

Judgment

Perception

Frequency

104

50

Percentage

67.5%

32.5%

FSGPA Mean

2.568

2.523

F-value

.2912

Significance

.5903

Table E 2

Level of Preference

Scale Percent for Each

Level of Preference

Judgment

Perception

Slight Preference

15.4

20.0

Moderate Preference

26.9

24.0

Clear Preference

34.6

38.0

Very Clear Preference

23.1

18.0

Table E 3

Judgment -- Perception Continuous Score

Number

Mean

Correlation

Probability

Coefficient

Total

154

89.62

-.0979

.114

Males

90

94.56

-.1607

.065

Females

64

82.69

.0351

.392

Whites

136

89.74

-.1892

.013

Students of color

17

88.71

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.4141

.049

Footnotes

a

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1

So, even before entering law school, I undertook a goal of figuring out what the legal education system wanted. I bought several books on how to study for law school and, unlike many students, I did not enter law school thinking that I would become some great legal scholar, jurist, rainmaker, or even a law professor. I entered focused on conquering the environment.

2

When you enter law school, you are told that you will be taught to “think like a lawyer.” The general unspoken implication is that “thinking like a lawyer” is uniquely different from thinking like a nurse, a physician, or any other profession. Yet, it is my observation that the skills required to think like a lawyer are exactly the skills required to think like a nurse. To think like a nurse you must be able take a set of facts provided by a patient, define the nursing problem, select which of the facts provided by the patient are pertinent to the problem, determine what nursing rules apply to the situation, formulate and select alternative nursing diagnoses, and draw valid conclusions from the facts, nursing knowledge, and inferences. How this process differs from “thinking like a lawyer” remains a mystery to me.

3

Exams once a semester are not a sufficient opportunity for law students to learn from his or her mistakes. Such a practice gives a significant advantage to some based upon behavioral characteristics that were brought into the law school environment.

Imagine, if you will, taking a class in piano playing. Assume the teacher focuses all of her effort on analyzing sheet music of great musicians. At each class, students are called on to dissect, digest, analyze and compare various works. Occasionally, they are asked to play very short snippets, but most of the time they read and discuss. At the end of the course when the students have learned everything there is to know about the treble and base clefs, timing, notes, beats and rhythms, the student is asked to take a final exam, which consists of playing a piano piece that they have never seen before. They are given no time to practice the piece. The piano is wheeled in and the students proceed.

Assume the professor discloses to the students this testing practice, but adamantly assures the students that if they prepare for class diligently they will be prepared for the exam. Who will do well on the exam? Will it be the person who never sat down to a piano before this class? Will it be the student who ignores the professor's assurances and takes piano lessons independently? Will it be the person who has taken piano as a child or during college?

4

Some will argue this is the role of the law school -- to teach to the highest level of skill. It might have been justifiable to take that stance when all the entering students had essentially the same background -- white, upper-middle class, male -- and when the legal system was tailored for the practice of persons from that background. Such a stance today is unconscionable. The American society is multi-ethnic and multi-cultural. The legal system, and those representing the system, must come from diverse cultural, ethnic, and educational backgrounds. Law schools must develop a pedagogy that allows those who are not white, upper-middle class males to succeed with the same frequency as those who are. Many students, while having the intelligence and abilities necessary to make a good lawyer, lack the requisite skill level to succeed the way legal education is currently approached. This is evidenced by the extremely high (up to 50%) attrition rate among students of color.

5

Lawrence Silver, Comment, Anxiety and the First Semester of Law School, 1968 Wis. L. Rev. 1201-18 (1968); See generally G. Andrew H. Benjamin, et al., The Role of Legal Education in Producing Psychological Distress Among Law Students and Lawyers, 1986 Am. B. Found. Res. J. 225, 246 (reporting results of statistical study which shows that law school produces a wide variety of psychological symptoms including obsessive-compulsive behavior, interpersonal

sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism (social alienation and isolation)); Robert Stevens, Law Schools and Law Students, 59 Va. L. Rev. 551, 639-40 (1973) (reporting results of study of a small number of students at Yale Law School); James Archer, Jr. & Martha M. Peters, Law Student Stress, 23 NASPA J. 48, 51 (1986) (reporting that more than half of the 367 students in the study emphasized that lack of feedback regarding grades during the semester produced the most stress); Steven B. Shanfield & G. Andrew H. Benjamin, Psychiatric Distress in Law Students, 35 J. Legal Educ. 65, 69 (1985) (reporting study that suggests law students have a higher rate of psychiatric distress than medical students). But see M.J. Hamilton et al., Thirty-five Law Student Suicides, 11 J. Psychiatry & L. 335, 342 (1983) (suggesting that the suicide rate for law students is lower than the general population for the same age group).

6

Silver, supra note 5, at 1202. See generally Alan A. Stone, Legal Education on the Couch, 85 Harv. L. Rev. 392 (1971) (analyzing the psychological pressures to which law students are subject).

7

Silver, supra note 5, at 1202-10. Additional causes of anxiety have been identified as “insensitive classroom teaching methods,” unsympathetic families and friends, absence of periodic meaningful feedback, a narrow focus of traditional legal analysis, unapproachability of professors, confusion in the classroom, uncertainty over what one should be learning, “a realization that the study of law is open-ended, the recognition that one's friends are also one's competitors; and, most significantly, disappointment over grades.” Michael I. Swygert, Putting Law School Grades in Perspective, 12 Stetson L. Rev. 701, 702 (1983).

8

Silver, supra note 5, at 1202.

9

See generally Banks McDowell, The Dilemma of a (Law) Teacher, 52 B.U.L. Rev. 247 (1972); Suzanne Dallimore, The Socratic Method -- More Harm Than Good, 3 J. Contemp. L. 177 (1977).

10

Silver, supra note 5, at 1205.

11

Id.

12

Id. at 1209 (alteration in original).

13

See Swygert, supra note 7, at 704 (noting that "to be asked to join law review, and to maximize job opportunities all require certain levels of grades"); Emily Campbell & Alan J. Tomkins, Gender, Race, Grades, and Law Review Membership as Factors in Law Firm Hiring Decisions: An Empirical Study, 18 J. Contemp. L. 211, 232-33 (1992) (reporting that the most important variable in applicant evaluation was grades because law firms consistently favor students in the upper 10% of the class as compared to the upper 30% of the class; although the study also suggests that blacks are not always treated the same as whites and women are not always treated the same as men); Thomas Doniger, Grades: Review of Academic Evaluations in Law Schools, 11 Pac. L.J. 743, 743-46 (1980) (noting that not only do grades affect ability to secure law-related employment but they also affect a student's eligibility for financial assistance).

14

See generally Charles D. Kelso, Science and our Teaching Methods: Harmony or Discord?, 13 J. Legal Educ. 183 (1960).

15

Fifty years ago law students may have been a homogenous lot: recent college graduates, upper middle-class white males in the top 15% of their undergraduate class with a pre-law, political science, or liberal arts major. Today, the entering law school student is as likely to be female or a person of color as a white male. Many of the students have been out of college for three to five years. Furthermore, there is significant diversity in their college majors: education, fine arts, engineering, nursing, medicine, as well as political science and liberal arts. Thus, we can no longer afford to assume that all students will learn through one strategy. It has become increasingly more important that legal education adapt its curriculum and instruction to learners' aptitudes.

16

See generally Raymond B. Marcin, Psychological Type Theory in the Legal Profession, 24 U. Tol. L. Rev. 103 (1992) (discussing the role of psychological type theory in the context of law study or entry into the legal profession); David W. Champagne, Improving Your Teaching: How Do Students Learn?, 83 Law Libr. J. 85 (1991) (presenting several learning styles and providing a broad overview of the application of learning styles to teaching in general); Eileen B. Cohen, Teaching Legal Research to a Diverse Student Body, 85 Law Libr. J. 583 (1993) (asserting that student learning of legal research can be improved by expanding teaching methods to incorporate the variety of learning styles that characterize a diverse law student population); Don J. DeBenedictis, Learning by Doing: The Clinical Skills Movement Comes of Age, 76 A.B.A. J. 54 (Sept. 1990) (mentioning the use of the Myers-Briggs Type Indicator in a clinical setting to suggest negotiating methods and to explore students' learning styles or to line them up with compatible externship supervisors); Cynthia A. Kelly, Education for Lawyer Competency: A Proposal for Curricular Reform, 18 New Eng. L. Rev. 607 (1983) (discussing learning styles and the application of learning theory to legal education); Robert Bookman, Helping Associates Succeed, 12 ALA News 6 (June/July 1993) (suggesting that helping associates succeed requires good teachers who adapt their teaching style to the associate's learning style); Julie Macfarlane & Pat Boyle, Instructional Design and Student Learning in Professional Legal Education, 4 Legal Educ. Rev. 63 (1993); Nicolette Rogers, Improving the Quality of Learning in Law Schools by Improving Student Assessment, 4 Legal Educ. Rev. 113 (1993); Paul T. Wangerin, Learning Strategies for Law Students, 52 Alb. L. Rev. 471-528 (1988); Paul T. Wangerin, Teaching and Learning in Law School: An “Alternative” Bookshelf for Law School Teachers, 29 Gonz. L. Rev. 49 (1994); Paul T. Wangerin, Law School Academic Support Programs, 40 Hastings L.J. 771 (1989) (suggesting that several techniques of law school classroom teaching can be used to help high risk and probationary students learn both substantive material and independent learning skills).

17

See Paul V. Miller, The Contribution of Non-Cognitive Variables to the Prediction of Student Performance in Law School, Dissertation Abstracts 27, 1679A (Univ. Microfilms No. 66-4630) (1966); Paul V. Miller, Personality Differences and Student Survival in Law School, 19 J. Legal Educ. 460 (1967); cf. Raymond B. Marcin, Psychological Type Theory in the Legal Profession, 24 U. Tol. L. Rev. 103 (1992) (indicating that pre-law advisors have taken to using psychological typing indicators as aids in career counseling, family law practitioners use psychological typing indicators as conciliation tools, and law firms use them in personnel development programs).

18

Vernellia R. Randall, The Myers-briggs Type Indicator, First Year Law Students and Performance, 26 Cumberland Law Review 63 (1995-1996) Copyright (c) 1995 Cumberland Law Review; Vernellia R. Randall

But cf., Lisa I. Leiden et al., Assessing Learning-Style Inventories and How Well They Predict Academic Performance, 65(6) Acad. Med. 395-401 (1990).

19

Between 1963 and 1992, female law students increased from 4 percent to 43 percent. Between 1977 and 1992, law students of color increased from 8 percent to 17 percent. A Review of Legal Education in the United States: Fall 1992, A.B.A. Sec. Legal Educ. & Admis. Bar, at 67-70 (1993). Furthermore, in 1988, twenty-seven percent of students graduating from law school were over 29 years old. Lisa Green Markoff, Bias Against Older Students, Gays Has an Effect on Two Campuses, Nat'l L.J., Oct. 30, 1989, at 4.

20

See Cohen, supra note 16; cf. Norma J. Ewing & Fung Lan Yong, Learning Style Preferences of Gifted Minority Students, 9 Gifted Educ. Int'l 40-44 (1993) (comparing learning style preferences among gifted African-American, Mexican-American, and American-born Chinese middle grade students. Significant ethnic, gender, and grade differences were found.); Charles S. Claxton, Learning Styles, Minority Students, and Effective Education, 14 J. Dev. Educ., Fall 1990, at 6-8, 35 (arguing that minority students do not have learning styles different from students of the dominant culture; stressing that an understanding of cultural and gender factors will help developmental instructors become more effective teachers); Rita Dunn & Shirley A. Griggs, Research on the Learning Style Characteristics of Selected Racial and Ethnic Groups, 6 J. Reading, Writing, & Learning Disabilities Int'l, July-Sept. 1990, at 261-80 (concluding that individual rather than group characteristics must be addressed when providing instruction -- regardless of cultural or racial background); Asa G. Hilliard, III, Teachers and Cultural Styles in a Pluralistic Society, 7(6) NEA Today, Jan. 1989, at 65-69 (suggesting that teachers be sensitive to and respectful of their students' cultural learning styles without stereotyping; arguing that a student's learning style is neither an excuse for poor teaching nor an index of low capacity).

21

This study was made on the following assumptions. First, law schools admit students with differing learning styles, study habits, and study attitudes and will continue to do so. Second, law schools have grading practices that result in dismissal at the end of the first semester or first year. Finally, law students attending the University of Dayton School of Law are representative of students attending other law schools.

The study did not consider learning styles not measured by the MBTI. The study did not consider the impact of cultural or educational differences on study habits, learning attitudes or

performance.

22

Charles S. Claxton & Patricia H. Murrell, Learning Styles: Implications for Improving Education Practices 1 (1987).

23

Rita Dunn, Rita Dunn Answers Questions on Learning Styles, 48 Educ. Lead., Oct. 1990, at 15-19.

24

Claxton & Murrell, supra note 22, at 71. See generally Rita Dunn et al., Learning Style Researchers Define Differences Differently, 38 Educ. Lead. 372, 372-75 (1981) (explaining that although widespread agreement supports the existence of individual differences in learning, researches define the concept differently).

25

Claxton & Murrell, supra note 22, at 71.

26

Id. at 20-21.

27

Id.

28

Id. at 8-13. People who are significantly influenced by their surroundings are “field dependent,” while those who are relatively uninfluenced by surroundings are “field independent.” Thus, field dependent individuals are strongly influenced by authority figures and peer groups. Field independent individuals tend to be more autonomous. Furthermore, field dependents and field independents exhibit different speech patterns. For instance, field independents use more personal pronouns and active verbs than field dependents. Id. at 9.

29

Claxton & Murrell, supra note 22, at 16-17. This model addresses how individuals respond to problems with highly uncertain responses. It looks at an individuals tendency to reflect over alternative solutions (reflectivity) and the individual's tendency to make an impulsive selection of a solution (impulsivity). Id. at 17.

30

Id. at 17-18. This instrument looks at the modes of thinking, ways of handling feelings and impulses, and ways of relating to self and others. Id. at 18. This scale is helpful in making students aware of how they think and how it meshes with how their disciplines think. Id. at 20.

31

Id. at 18-19. The Holland typology of personality identifies six personality types: realistic, investigative, social, conventional, enterprising and artistic. Id. Each of these personality types have a preference for a certain learning environment. Id.

32

Id. at 21.

33

There are two basic strategies for processing information: holistic or comprehensive learners and serialistic or operation learners. Id. at 21-22. Comprehensive learners use a global approach to learning and develop a broad framework for understanding the information. Typically, they will start at the top, examine several aspects of the subject at the same time, and make connections constantly between the theoretical aspects of the subject and the practical implications of the information. Id. at 21. Operation learners, on the other hand, focus their attention on pieces of information and develop understanding through “logical, sequential and well-defined steps.” The theoretical aspects and the practical implication of information are learned in separate steps. As a result of these differences in information processing, comprehensive learners are better at description building, while operation learners are better at procedure building. Id. at 22-23.

34

Id. at 23-24. How one sequences information is clearly related to learning style. Some researchers believe students learn more effectively when they are first taught general concepts and then later

taught details and examples. Id. at 23. Others believe sequencing depends on different learning styles. That is, some learners prefer factual content and are not motivated to interrelate the facts into a complex framework. Thus, these factual learners are most effective when the facts-concept sequence is implemented. While other learners see facts as merely an element to be related to the broader contextual whole, conceptual learners are more effective with a concepts-facts sequence. Id. at 23-24.

35

Id. at 24. This learning style looks at the predisposition of a student to adopt a particular learning strategy regardless of the learning task. Thus, deep-elaborative processors devote more time and attention to meaning and classification of an idea than to learning a fact. While shallow-reiterative processors focus on learning the fact. Id. at 24-25.

36

Id. at 25-33. Kolb's learning style looks at how the person and the environment interacts to promote learning. The fundamental elements in this learning theory focuses on the taking in of information and the transforming of the information. Some people prefer to take information in concrete ways, while others prefer more abstract means. Having taken in the information, some individuals prefer to process the information through reflecting on the information, while others prefer to process through active experimentation. Id. at 27-33.

37

Id. at 33-35. This instrument is based on the idea that learning styles emerge from innate predispositions (random versus sequential) and that individuals learn both through concrete experience and abstraction. Id. at 33. The instrument identifies four types of learners. Concrete sequential learners prefer obtaining information from direct, hands-on experience. Concrete random learners prefer to learn with active experimentation -- a trial and error method. Abstract sequential learners prefer obtaining information from written and verbal symbols. Abstract random learners prefer to obtain information from the nuances of mood and atmosphere. Id. at 33-35.

38

Id. at 7.

39

Id. at 37-40. This model is based on the behavior of students in the class room. It identifies seven categories of student behavior: compliant, anxious-dependent, discouraged worker, independent, heroes, snipers, attention seekers and silent. Id. at 38. Compliant learners adapt themselves to the demands of the classroom and the teacher. Id. They conform, are task-oriented and are non-rebellious. Id. Anxious-dependent students are angry, frustrated and dependent. Id. They tend to have low verbal skills. Id. Discouraged workers have feelings of mixed-self-esteem, they feel guilt, are depressed and are dissatisfied with themselves. Id. 38-39. Independent students are secure, individualistic, and often aloof. Id. at 39. Heroes are rebellious with feelings of superiority, however they tend to be underachievers. Id. Snipers are much like heroes except they tend to be more defensive and to have low self esteem. Id. Attention seekers are predominately socially oriented. They joke, brag, talk and show off. Id. The silent students are a very large group. Id. These students want attention but fear of failure forces them into silence. Id. at 40.

40

Id. at 40-41. This model focuses on three classroom dimensions: students' attitudes toward learning, their views of the teacher or peers or both, and their reaction to classroom procedures. Id. at 40. Based on assessment of these dimensions, students are divided into six learning styles: independent, dependent, collaborative, competitive, students, and avoidant. Id. at 40-41. Based on these classifications, classroom activity preferences have been identified for each style. Id. at 40-41.

41

Id. at 42. This model involves three styles: dependent, collaborative, and independent. Id. However, the style that the student demonstrates will be tied to the learning situation. Id. For example, dependent learning style may occur in introductory courses where the student has little or no information on entering the course. Id. Collaborative learning style may occur when the learner has some knowledge, information and ideas to share with others. Id. at 44. Independent learning style occurs when the student has knowledge and skills about the subject matter and wants to continue to learn on his or her own, or when the student feels the teacher cannot offer as much as he or she already knows. Id.

42

Id at 42-46. This model is based on students' attitudes toward grading and classroom learning. Id. That is, learning-oriented students see the classroom as a place to find information and ideas, while grade-oriented students see the classroom as the place where they will be tested and graded. Id. at 43, 45. It is a place they endure in order to obtain a degree or certification. Id. at 43. The model includes four orientations: High Learning/High Grade Orientation, High

Learning/Low Grade Orientation, Low Learning/High Grade Orientation and Low Learning/Low Grade Orientation. Id. at 43, 45.

43

Id. at 7.

44

Id. at 46-51. Cognitive mapping assesses a students learning style in an extensive comprehensive framework called “educational sciences.” Id. at 47. It includes symbols and their meanings, cultural influences on the meanings of symbols, the method through which a person makes inferences, biochemical and electrophysiological aspects of memory, cognitive style, teaching, counseling, administrative style, and systematic analysis decision making. Id. at 47.

45

Id. at 51-53. This model developed scales in four areas: conditions of learning, content preferences, mode preferences and students' expectations as to grades. Id.

46

Id. at 77.

47

Id.

48

Id. at 37.

49

Id at 77.

50

Gordon Lawrence, A Synthesis of Learning Style Research Involving the MBTI, 8 J. Psychol. Type 2, 2 (1984). Lawrence synthesized the studies into major categories: validation studies in

which the MBTI preference scores were correlated with scales of other instruments; studies which used the MBTI to identify styles; and studies which dealt with the types rather than the four dimensions of type. He concluded that despite the wide spread use of the MBTI and the consistency of the findings, the scope of research undertaken to examine the MBTI as an indicator of learning has been limited. See id.

51

George H. Jensen, Learning Styles, in Application of the Myers-Briggs Type Indicator in Higher Education 181 (Judith A. Provost & Scott Anchors eds. 1987).

52

Id.

53

Id.

54

Marcin, supra note 17, at 105 (discussing the ancient history of type theory including astrology).

55

See generally Don Peters, Forever Jung: Psychological Type Theory, the Myers-Briggs Type Indicator and Learning Negotiation, 42 Drake L. Rev. 1, nn.42-90 (1993); Marcin, supra note 17, at 103-105. See also Carl G. Jung, Psychological Types (1921) reprinted in 6 The Collected Works of C. G. Jung (William McGuire et al. eds. & R.C.F. Hull trans., 1971).

56

See generally Mary H. McCaulley, Jung's Theory of Psychological Types and the Myers-Briggs Type Indicator in Advances in Personality Assessment (Paul M. Reynolds ed. 1981); Marcin, supra note 17.

57

Isabel Briggs Myers & Mary H. McCaulley, Manual: A Guide to The Development and Use of the Myers-Briggs Type Indicator 1 (1985).

Vernellia R. Randall, The Myers-briggs Type Indicator, First Year Law Students and Performance, 26 Cumberland Law Review 63 (1995-1996) Copyright (c) 1995 Cumberland Law Review; Vernellia R. Randall

58

Isabel Briggs Myers, Introduction to Type: A Description of the Theory & Application of the Myers-Briggs Type Indicator 5 (Allen L. Hammer ed., 4th ed. 1987).

59

Marie-Louise Von Franz & James Hillman, Lectures on Jung's Typology 160 (1971); Daryl Sharp, Personality Types: Jung's Model of Typology (1987).

60

Myers & McCaulley, supra note 57, at 5.

61

Id. at 6.

62

Myers & McCaulley, supra note 57, at 2.

63

See generally Jensen, supra note 51, at 182; Lawrence, supra note 50, at 15; Gordon D. Lawrence, People Types and Tiger Stripes: A Practical Guide to Learning Styles (1982); Mary H. McCaulley & Frank L. Natter, Psychological (Myers-Briggs) Type Differences in Education (1974).

64

Jensen, supra note 51, at 181-83.

65

Id. at 182.

66

Id.

67

Id. at 183.

68

Id.

69

See generally Leiden, supra note 18, at 395-401; Janice A. Nisbet et al., Predictors of Academic Success with High Risk College Students, 23 J.C. Student Personnel 227-35 (1982); John G. Bruhn, et al., Predictors of Academic Performance Among Physician Assistants, 8 The P.A. Journal 181-87 (1978). In fact, the MBTI has been widely used in examining teaching, learning and academic aptitudes. Lawrence, supra note 50, at 2.

70

Jensen, supra note 51, at 183. Many different factors influence a student's actual behavior, including personality type, parental influence, instruction, learning environment, and maturity. Id. Consequently, a "perfect correlation between personality type and learning style is not possible." Id.

71

Myers & McCaulley, supra note 57, at 3.

72

Id. at 3.

73

Id. at 2-3.

74

Id. at 58. However, this does not necessarily show how strongly the preference is felt, how well developed the skills associated with the preference are, or the problems a person may have using that preference in inappropriate contexts. Id. at 52-61.

75

Id. at 58.

76

Id.

77

John L. Phillips, Jr., How to Think About Statistics 109-10 (1982).

78

Id.

79

For example, a student with a 1.79 will be dismissed from the University of Dayton law school at the end of the first year, while a student with a 1.80 (a difference of .01) will be placed on probation.

80

Interesting questions arise as to why sixteen students withdrew before finals, some even before the completion of orientation, and whether learning styles would have any predictive value.

81

Of the 154 students in the first year class, 88.3% were white, 7.8% were African-American, 1.9% were Asian-American/Pacific Islander, 1.3% were Hispanic-American and .6% were international students. Appendix, Table A1. A slightly larger percentage of the students in the study was students of color than was represented by the students who were not in the program. However, the difference was not statistically significant (p=.908).

82

Of the 154 students, 58.4% (90) were male and 41.6% (64) were female. Appendix, Table A2. While the study had a higher percentage of female students than was represented by the students not in the program, the difference was not significant (p.424).

83

The mean age of the students was 26.4 years; the youngest student was 22; the oldest student was 59. Appendix, Table A3. The students in the study were younger than students who were not in the study. The difference was statistically significant (p.033).

84

The mean undergraduate grade point average (UGPA) was 3.069, while the minimum was 1.600; the maximum GPA was 3.890. Appendix, Table A4. While the students in the study had a slightly higher UGPA than the students who did not participate (2.89), the difference was not statistically significant (p=.1913).

85

LSAT scores were available on only 136 study participants. Of those 136, the mean LSAT was 154.986; the minimum was 136; the maximum was 170 with a standard deviation of 5.91. Appendix, Table A5. The students in the study had higher LSAT scores than students who were not in the study. However, the difference was not statistically significant (p = .103).

86

Myers & McCaulley, supra note 57, at 2, 13. Jung saw extraversion and introversion as "mutually complementary" attitudes. The differences generated "the tension that both the individual and society need for the maintenance of life." Id. at 2. See also McCaulley, supra note 56.

87

With only 25% of the general population introverted, this sample of first year law students was more introverted. Myers & McCaulley, supra note 57, at 45.

However, this sample of first year law students was more introverted than law students in a previous study, less introverted than practicing lawyers, and more introverted than judges. See Frank L. Natter, The Human Factor: Psychological Type in Legal Education, 3 Res. in Psychol. Type 55, 56 (1981) (reporting data gathered by Miller in 1965 and 1967. Forty-five percent of 2248 law students from five different schools were introverted); Myers & McCaulley, supra note 57, at 245-46 (reporting that 54.91% of 519 lawyers and judges were introverted with 58.67% of 271 lawyers being introverted and 46.875% of 128 judges being introverted); Larry Richard, The Lawyer Types, A.B.A. J., July 1993, at 74, 75.) (reporting that 57% of all lawyers were introverted with 59% of male lawyers and 51% of female lawyers being introverted).

As to the level of preference, a smaller percentage of extraverts (50.6%) than introverts (57.3%) had a clear/very clear preference for their index. However, the difference is not statistically significant ($p = .716$). Myers & McCaulley, supra note 57, at 59 (reporting the level of preference for 32,671 individuals with 47.08% extraverts having a clear or very clear preference and 48.54% introverts having a clear or very clear preference).

88

Continuous scores are a linear transformation of preference scores. The lower the score (minimum is 33) the stronger the preference for extraversion; the higher the score (maximum is 167) the stronger the preference for introversion. A score of 100 is a median score showing no preference for either extraversion or introversion.

On extraversion-introversion continuous score, the mean score for the class was 99.84 -- a slight preference for extraversion; males had a mean score of 102.98 (a preference for introversion); females had a mean score of 95.42 (a preference for extraversion); whites had a mean score of 99.63 (essentially no preference); and, students of color had a mean score of 101.53 (a preference for introversion). Appendix, Table B3.

89

In other studies, extraverted high school students scored lower grades than introverted high school students on several academic measures. McCaulley & Natter, supra note 63, at 138. However, the overall grade point average was higher for extraverted students than introverted students. Id. at 138. These findings may not be totally inconsistent with the findings of this study, since overall grades in high school are based on many courses that require activity and value class participation.

90

Jensen, supra note 51, at 183; cf. A.B. Smith and R. Irey, Personality Variables and the Improvement of College Teaching, (E.R.I.C. Doc. Rep. Serv. No. Ed 096313) (April 1974) (noting that extraverts more often than introverts chose learning activities which involved dialogue with advanced students).

91

Jensen, supra note 51, at 183; McCaulley and Natter, supra note 63, at 150.

92

Jensen, supra note 51, at 184.

93

Id. Jung called introverts “prometheans” (Greek for “fore-thinkers”) because they do most of their thinking before they act. See also McCaulley, supra note 56.

94

See McCaulley and Natter, supra note 63, at 152 (reporting that introverted students not only prefer to think before acting, but that they may hesitate to act at all).

95

See id. at 153 (reporting that introverted students tend to be underestimated in the classroom).

96

Jensen, supra note 51, at 184.

97

McCaulley & Natter, supra note 63, at 153.

98

Lawrence, supra note 50, at 7, 12 (citing Martray, An Empirical Investigation into Learning Styles and Retention Patterns of Various Personality Types, (1972) 32 Dissertation Abstracts Int'l. 5043A and noting that Introverted students prefer reading and verbal reasoning as opposed to psychomotor activities); cf. McCaulley and Natter, supra note 63, at 152.

99

Jensen, supra note 51, at 183; cf., Lawrence, supra note 50, at 7; Jeffery L. Hoffman et al., Personality Types and Computer Assisted Instruction in a Self-paced Technical Training Environment, 3 Res. Psycol. Type 81, 85 (1981) (noting that introverts prefer working individually).

100

McCaulley & Natter, supra note 63, at 152.

101

Id. at 152.

102

Jensen, supra note 51, at 183. Jung refers to extraverts as “epimetheans” (Greek for “after-thinkers”) because thinking while acting or after acting is how extraverts think best. See also McCaulley, supra note 56.

103

Jensen, supra note 51, at 183; Lawrence, supra note 50, at 12.

104

Cf. Hoffman, supra note 99 (noting that high dropout rate of extraverted students decreased significantly when course was changed to include the option of several students working together and to increase the frequency of question-discussion sessions); Mary H. McCaulley & Frank L. Natter, Psychological (Myers-Briggs) Type Differences in Education in The Governor's Taskforce on Disruptive Youth: Phase II Report (Frank L. Natter & Stephen A. Rollin eds., 1974) (reporting that there was a significant correlation ($p<.01$) with extraverts and their expressed preference for working with a group on a project).

105

McCaulley & Natter, supra note 63, at 151.

106

Jensen, supra note 51, at 184; McCaulley & Natter, supra note 63, at 150.

107

McCaulley & Natter, supra note 63, at 150.

108

Id. at 150.

109

Although one alternative for legal education might be to make oral examinations more available. Steven I. Friedland, Towards the Legitimacy of Oral Examinations in American Legal Education, 39 Syracuse L. Rev. 616-27 (1988).

110

McCaulley & Natter, supra note 63, at 151.

111

Myers & McCaulley, supra note 57, at 2, 12; Peters, supra note 55, at 12 n.42.

112

With only 25% of the general population preferring intuition, this sample of first year law students was more intuitive. See Myers & McCaulley, supra note 57, at 45.

However, first year law students were less intuitive than previous studies of law students, less intuitive than practicing lawyers, and more intuitive than judges. Natter, supra note 87, at 56 (reporting data gathered by Paul Miller in 1965 and 1967 in which 59% of 2248 law students from five different schools were intuitive); Myers & McCaulley, supra note 57, at 248 (reporting that 60.69% of 519 lawyers and 69.37% of 271 lawyers were intuitive; and that 39.06% of 128 judges were intuitive); Richard, supra note 87, at 76 (reporting that 57% of lawyers were intuitive, with 55% of male lawyers and 47% of female lawyers as intuitive).

As to the level of preference, both sensors and intuitives had a clear or very clear preference for their choice. However, a smaller percentage of sensors (55.4%) than intuitive (55.3%) had a clear or very clear preference (p.985). Myers & McCaulley, supra note 57, at 59 (reporting level of preference for 32,671 individuals with 53.6% sensing having a clear or very clear preference and 49.3% intuitive having a clear or very clear preference).

113

The difference was not statistically significant (p.6010). In a study of high school students, intuitive students had higher mean scores than the sensing types on all academic measures. McCaulley & Natter, supra note 63, at 139.

114

In a study of high school students, sensing types score significantly lower than the intuitives on almost all written measures, except everyday reading and some of the motor-skill related items. McCaulley & Natter, supra note 63, at 139.

115

Between 33 to 99 is a preference for sensing and the lower the score the stronger the preference. Between 101 to 167 is a preference for intuition and the higher the score the stronger the preference for intuition. A score of 100 is a median score showing no preference for either sensing or intuition. On sensing-intuitive continuous score the mean score was 99.73, a slight preference for sensing; males had a mean score of 103.24 (a preference for intuition); females had a mean score of 94.78 (a preference for sensing); whites had a mean score of 100.23 (essentially no preference); and, students of color had a mean score of 95.71 (a preference for sensing). Appendix, Table C3. Female and white students continuous scores were negatively correlated, meaning that as female students became more sensing, the FSGPA grade increased. However, the correlation was not statistically significant. Appendix, Table C1.

116

See generally Jensen, supra note 51, at 184; Lawrence, supra note 50, at 10 .

117

Jensen, supra note 51, at 184.

118

Id. at 184.

119

McCaulley & Natter, supra note 63, at 154.

120

Id. at 155.

121

Vernellia R. Randall, The Myers-briggs Type Indicator, First Year Law Students and Performance, 26 Cumberland Law Review 63 (1995-1996) Copyright (c) 1995 Cumberland Law Review; Vernellia R. Randall

Id.

122

Id. at 154.

123

McCaulley & Natter, supra note 63, at 154.

124

Id. at 154.

125

Id. at 156.

126

Jensen, supra note 51, at 184.

127

Id. at 184.

128

McCaulley & Natter, supra note 63, at 157.

129

Id. at 157.

130

Id.

131

Id.

132

McCaulley & Natter, supra note 63, at 157.

133

Id. at 157.

134

Id. at 156.

135

Jensen, supra note 51, at 186.

136

McCaulley & Natter, supra note 63, at 139, 155-57.

137

Myers & McCaulley, supra note 57, at 12-13.

138

With only 60% of males in the general population preferring thinking, this sample of first year male law students consisted of more thinkers (82.2%). Id. at 45. With only 35% of females in the general population preferring thinking, this sample of first year female law students was overwhelmingly thinkers (71.9%). Id. at 45.

As a group, this sample of first year law students preferred thinking more than law students from previous studies, more than practicing lawyers, and more than judges. Appendix, Table F1; Natter, supra note 87, at 56 (reporting data gathered by Paul Miller in 1965 and 1967 in which 73% of 2248 law students from five different schools were thinkers); Myers & McCaulley, supra note 57, at 248-49 (reporting that 64.06% of 128 lawyers and 64.94% of 271 lawyers were thinkers); Richard, supra note 87, at 75 (reporting 78% of lawyers as thinkers, with 81% of male lawyers and 66% of female lawyers as thinkers).

As to the level of preference, a significantly smaller percentage of feeling types (32.3%) than thinking types (62.5%) had a clear or very clear preference for their choice. The difference was statistically significant (p.0013).

More first year law students who preferred thinking had a clear or very clear preference for their choice than the general population. Myers & McCaulley, supra note 57, at 59 (reporting level of preference for 32,671 with 39.9% thinking having a clear or very clear preference). However, first year law students who preferred feeling had a similar level of clear or very clear preference for their choice as the general population. Id. at 59 (reporting level of preference for 32,671 individuals with 32.7% feeling having a clear or very clear preference).

139

McCaulley & Natter, supra note 63, at 158.

140

Interestingly enough, although thinking types had higher overall grades in academic areas, they scored significantly higher only in such areas as electrical, mechanical, motor mechanical, and technical. Id. at 140.

141

Continuous Scores are a linear transformation of preference scores. On the TF continuous scale, between 33 to 99 is a preference for thinking and the lower the score the stronger the preference. Between 101 to 167 is a preference for feeling. The higher the score the stronger the preference for feeling. A score of 100 is a median score showing no preference for either thinking or feeling. On the TF continuous score, the mean score was 79.61 (a preference for thinking); males had a mean score of 76.18 (a preference for thinking); females had a mean score of 84.44 (a preference for thinking); whites had a mean score of 79.96 (a preference for thinking); and, students of color had a mean score of 76.77 (a preference for thinking). Appendix, Table D3.

142

This was true for males (p=.004), and whites (p.003). However, while the same association was observed for females (p=.089) and students of color (p=. 108), the association was not statistically significant. Appendix, Table D3.

143

Jensen, supra note 51, at 185.

144

Id. at 185.

145

Id.

146

Id.

147

McCaulley & Natter, supra note 63, at 158.

148

Id. at 159.

149

Id.

150

Jensen, supra note 51, at 185; McCaulley & Natter, supra note 63, at 160.

151

Jensen, supra note 51, at 186.

152

Id. at 186.

153

Id. at 185.

154

McCaulley & Natter, supra note 63, at 160.

155

Id. at 160.

156

Id. at 161.

157

Id.

158

Id.

159

Myers & McCaulley, supra note 57, at 13-14.

160

Id.

161

With 60% of the general population, this sample of first year law students prefer judgment more. Id. at 45. This sample of first year law students preferred judgment more than law students from a previous study, less than lawyers in one study and more than lawyers in another study, and less than judges. Natter, supra note 87, at 56 (reporting data gathered by Paul Miller in 1965 and 1967 in which 57% of 2248 law students from five different schools were judges); Myers & McCaulley, supra note 57, at 248 (reporting that 62.43% of 519 lawyers preferred judgment, that 53.87% of 271 lawyers preferred judgment, and that 74.22% of 128 judges preferred judgment); Richard, supra note 88, at 76 (reporting 63% of lawyers as judging, with 61% of male lawyers

and 67% of female lawyers as judges).

As to the level of preference, a slightly smaller percentage of judgment types (57.7%) than perception types (56.0%) had a clear or very clear preference (p.789). Myers & McCaulley, supra note 57, at 59 (reporting level of preference for 32,671 individuals from the MBTI data bank, with 56.2% preferring judgment having a clear or very clear preference and 48.2% preferring perception having a clear or very clear preference).

162

In another study, judging types achieved slightly higher grades than perceptive types, while scoring lower on all other academic measures. McCaulley & Natter, supra note 63, at 141.

163

Continuous Scores are a linear transformation of preference scores. On the JP continuous scale, between 33 to 99 is a preference for Judgment and the lower the score the stronger the preference. Between 101 to 167 is a preference for perception and the higher the score the stronger the preference for perception. A score of 100 is a median score showing no preference for either judgment or perception. On JP continuous score, the mean score was 89.62 (a mean preference for judgment); males had a mean score of 94.56 (a mean preference for judgment); females had a mean score of 82.69 (a mean preference for judgment); whites had a mean score of 89.74 (a mean preference for judgment); and, students of color had a mean score of 88.71 (a mean preference for judgment). Appendix, Table E3.

164

Similarly, males (p=.065) and whites (p=.013) had the same association. Females (p=.392) and students of color (p=.049) continuous scores increased as the FSGPA increased. Appendix, Table E3.

165

Jensen, supra note 51, at 185.

166

McCaulley & Natter, supra note 63, at 162.

167

Id. at 163.

168

Id. at 162.

169

Id. at 163.

170

Id.

171

Id.

172

Jensen, supra note 51, at 186.

173

McCaulley & Natter, supra note 63, at 164.

174

Id.

175

Id.

176

Id.

177

Id. at 165.

178

Id.

179

Id.

180

See Duncan Kennedy, How the Law School Fails: A Polemic, 1 Yale Rev. L. & Soc. Action 71 (1970) (arguing that the Socratic method promotes hostility among law students); Carrie Menkel-Meadow, Feminist Legal Theory, Critical Legal Studies, and Legal Education or "The Fem-Crits Go to Law School," 38 J.Legal Educ. 61, 67 (1988) ("[T]he law school form of Socratic dialogue occurs in so large a group that little reciprocity, genuine communication, or exploration is possible. Students are often glad that someone else is 'on the hook,' and, while 'out there,' each student feels alone, unsupported, alienated, fearful, and grows increasingly apathetic. Thus, the metamessages of such classes are that teachers know it all, that students must guess at what is temporarily 'right,' and that learning is highly individualized"); Jenny Morgan, The Socratic Method: Silencing Cooperation, 1 Legal Educ. Rev. 151 (1989) (describing teaching as encouraging an environment of cooperation); Andrew S. Watson, The Quest for Professional Competence: Psychological Aspects of Legal Education, 37 U. Cin. L. Rev. 93, 119-24 (1968) (describing some of the negative aspects of the method: increasing a student's feelings of inadequacy in the face of even gentle questioning, turning the teacher into an adversary, offering little "overt" reward for good performance, distorting the importance of intellect over emotion, and fostering an unemotional response).