

The Myers-Briggs Type Indicator and a Student's College Major

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### Abstract

Worldwide, approximately eighty-five percent of adults in the workforce despise their jobs. Many students enter college with a path already in mind, only to discover that their chosen career is not aligned with their personality traits. Personality assessments, if accurate, may help students better determine a career path best suited for their personality traits before entering college, saving both time and money. My project investigated the accuracy of the Myers-Briggs Type Indicator (MBTI), a widely used personality test, in assessing the academic and recreational characteristics of an individual. I researched the sixteen personality types and categorized the types in order to better explain how they are determined. I then instructed UTSA students to take the Myers-Briggs personality test using the website [16personalities.com](http://16personalities.com) and surveyed the participants to determine how accurately the test assessed their academic aptitude, college major, and individual traits. Of the seventy-two students who responded, 87.5% found their results of the personality test to be accurate and 43.1% of the participants stated that they would use their test results to help determine their career goals. Overall, my work supports the view that the MBTI would be useful for incoming college freshman who are undeclared.

*Keywords:* college major, personality, personality tests, Myers-Briggs

### The Myers-Briggs Type Indicator and a Student's College Major

According to Virginia N. Gordon, Assistant Dean Emeritus and faculty member at Ohio State University who has experience in teaching, administration, and counseling in higher education settings, “approximately [half of students] entering college are admitted as ‘undeclared’, and [nearly seventy-five percent of all college students] change their major at least once before graduation” (as cited in Freedman, 2013, para. 2). A majority of these students change their major three or even four times. In some cases, students may take longer than four years to complete a degree in order to accommodate for new classes needed for a degree after switching majors. Both the extra classes and the additional years spent in school quickly add up to tens of thousands of dollars in student loans and debt.

Approximately eighty-five percent of adults worldwide are dissatisfied with their current employment, according to a Gallup Poll referred to in *Return to Now* (as cited in “85% of People Hate Their Jobs”, 2017). This may be due to the path they chose in college. From my observations, many college students choose their major based on the average annual salary and job outlook. However, the chosen career paths may not be aligned with an individual's passions, resulting in a dull and unfulfilling career in the future. A common misconception in today's society is that in order to be successful, one should pursue a career with a large salary potential. In order for people to make the most of a prosperous and joyful career, they should choose a path that aligns with their passions and interests. If the MBTI proves accurate, schools should provide personality assessments to students early on to determine which majors would work best with their personality types and interests. By implementing these tests at the high school level, students will be able to enter college with a focus to graduate without wasted time and money.

The Myers-Briggs Type Indicator test is one of many personality assessments that exists for individuals to better understand themselves. This test was “developed by Isabel Myers (1897-1980) and her mother, Katharine Cook Briggs (1875-1968) in [the twentieth century]” (“Isabel Briggs Myers”, n.d., para. 1). Their goal was for the test to help individuals better understand themselves and appreciate others. The test can help determine an individual’s interests, best-suited careers, and academic persona. Personality assessments such as the MBTI are typically found in career centers and continuing education programs and are administered by a certified professional.

I will investigate how accurate the Myers-Briggs personality test is in assessing the academic and recreational characteristics of an individual. First, I will characterize the sixteen personality types defined in the Myers-Briggs personality test. Then, I will determine the accuracy of the Myers-Briggs personality test.

### **Methods**

For specific aim 1, I researched the sixteen personality types and categorized the types in order to better explain how they are determined. The categories I explained were introvert and extrovert, intuition and sensing, feeling and thinking, and judging and perceiving. For specific aim 2, I instructed participants to take the Myers-Briggs personality test using the website [16personalities.com](http://16personalities.com). I then surveyed participants to determine how accurately they felt the test assessed their academic aptitude, college major, and individual traits. Finally, I entered data into a spreadsheet to analyze the results.

## Findings

### Specific aim 1: What is the Myers-Briggs Type Indicator?

The Myers-Briggs Type Indicator is one of many personality assessments that exists for individuals to better understand themselves. As stated previously, this test was developed by Isabel Myers and Katharine Cook Briggs. Their test can help identify an individual's interests, best-suited careers, and academic persona. Sixteen personality types are defined in the Myers-Briggs Type Indicator: INFJ, INFP, INTJ, INTP, ISFJ, ISTJ, ISFP, ISTP, ENFJ, ENFP, ENTJ, ENTP, ESFJ, ESTJ, ESFP, and ESTP. These types are each defined by four traits: Introversion and Extraversion (I and E), Intuition and Sensing (N and S), Feeling and Thinking (F and T), and Judging and Perceiving (J and P).

John Sample (2017), a retired associate professor who is certified in the administration of the Myers-Briggs Type Indicator, explained the breakdown of the personality types in his publication *A Review of the Myers-Briggs Type Indicator in Public Affairs Education*.

Introversion and Extraversion refers to where an individual gets his or her energy from. Contrary to popular belief in today's society, introverts are not always shy, and extroverts are not always outgoing. Those who have Introversion as their dominant trait tend to derive their energy from solitude and their own personal thoughts and reflections, and they "have a preference that focuses their energy on their inner world" (Sample, 2017, p. 980). Those who have Extraversion as their dominant trait tend to derive their energy from the company of others and their environment, and they "have a preference that focuses their energy on the outer world of human interaction and activity" (Sample, 2017, p. 980).

Intuition and Sensing refers to how individuals perceive the world around them. Those who have Intuition as their dominant trait reflect back on their past experiences to determine how

they will act in current or future situations; they “perceive situational possibilities from a larger perspective and are more abstract and theoretical [regarding] what could be and what is possible for the future” (Sample, 2017, 981). This means they tend to look at the overall picture rather than specific instances and are future-oriented. Those who have Sensing as their dominant trait examine facts around them at a given moment to determine how they will act in current situations; they “have a preference for relying on their five senses when gathering information [and] prefer concrete, factual, and practical application when taking in information [focusing on] the past and present” (Sample, 2017, p.981). This means they tend to be more realistic and practical in their decision-making and focus on what is happening now.

Feeling and Thinking refers to how an individual makes decisions. Those who have Feeling as their dominant trait tend to rely on gut feelings and empathy and will make a decision about something if it “feels right” (Sample, 2017, p.981). Those who have Thinking as their dominant trait tend to rely on facts and logic and will make a decision about something if it “makes sense” (Sample, 2017, p. 981).

Judging and Perceiving refers to how individuals relate to the environment. Those who have Judging as their dominant trait prefer “decisiveness and closure that focuses on organizing self and others in the outer world” (Sample, 2017, p. 981). These individuals are concise and reliable in their methods and approaches toward work, school, and their personal lives. Those who have Perceiving as their dominant trait prefer “flexibility and spontaneity, resulting in adaptation and free-flowing views of the outer world” (Sample, 2017, p. 981). These individuals often improvise their methods and enjoy change in work, school, and their personal lives.

According to Sample, “personality type is predictive of organizational preferences for problem solving and decision making” (p. 983). This means that one’s ideal career or job

position can be determined by the obtained personality type. Sample looked at the previous research of Macdaid, McCaulley, and Kainz in their publication of *Myers-Briggs Type Indicator Atlas of Type Tables* (1986), where researchers performed a study in which they surveyed the population of managers in city, county, and state governments and Master of Public Administration students, taking note of their personality types. As shown in **Table 1** from Sample's research study, two personality types dominated that career field: ISTJ and ESTJ. This result is because the job duties and responsibilities aligned well with those personality traits. The sensing trait worked well with the concrete, definitive data in the job, allowing the individual to use their five senses in hands-on tasks. The Thinking trait aligned with the logical facts provided in the job, allowing the individual to make decisions regarding whether the given data was accurate and logical. The Judging trait was ideal for organization and decisiveness regarding job duties, allowing individuals to be consistent in their work habits. College students with either an ISTJ or ESTJ personality type are most likely interested in a major that allows them to accomplish these tasks, such as management or public administration. This applies to other personality types as well. This example shows the immense potential for implementing the Myers-Briggs Type Indicator in schools.

**MBTI Type Table for Managers in City, County, and State Government and for MPA Students**

<b>ISTJ</b> *N = 79 % = 30.74 **N = 138 % = 26.39 +N = 55 % = 27.09	<b>ISFJ</b> *N = 16 % = 6.23 **N = 29 % = 5.40 +N = 11 % = 5.41	<b>INFJ</b> *N = 5 % = 1.95 **N = 8 % = 5.40 +N = 8 % = 3.94	<b>INTJ</b> *N = 19 % = 7.39 **N = 29 % = 5.54 +N = 15 % = 7.39
<b>ISTP</b> *N = 12 % = 4.67 **N = 25 % = 4.78 +N = 7 % = 3.44	<b>ISFP</b> *N = 4 % = 1.56 **N = 10 % = 1.91 +N = 5 % = 2.46	<b>INFP</b> *N = 3 % = 1.17 **N = 8 % = 1.53 +N = 1 % = 1.49	<b>INTP</b> *N = 10 % = 3.89 **N = 15 % = 2.87 +N = 8 % = 3.94
<b>ESTP</b> *N = 4 % = 1.56 **N = 14 % = 1.91 +N = 6 % = 2.95	<b>ESFP</b> *N = 4 % = 1.56 **N = 10 % = 1.91 +N = 3 % = 1.48	<b>ENFP</b> *N = 5 % = 1.95 **N = 18 % = 3.44 +N = 6 % = 2.95	<b>ENTP</b> *N = 4 % = 1.56 **N = 14 % = 2.68 +N = 5 % = 2.46
<b>ESTJ</b> *N = 57 % = 22.18 **N = 119 % = 22.75 +N = 51 % = 25.12	<b>ESFJ</b> *N = 10 % = 3.89 **N = 37 % = 7.07 +N = 9 % = 4.43	<b>ENFJ</b> *N = 7 % = 2.72 **N = 13 % = 2.49 +N = 5 % = 2.46	<b>ENTJ</b> *N = 7 % = 2.72 **N = 36 % = 6.86 +N = 8 % = 3.94

Source: Reproduced and adapted by permission from Macdavid, McCaulley, & Kainz (1986, pp. 316-317).

\* Subjects were 257 top-level city, county, and state government managers, 20% female and 80% male attending the institute from across North Carolina. Data collected by Ron Lynch of the Institute of Government, University of North Carolina at Chapel Hill from 1980 to 1983.

\*\* Subjects were 523 public sector managers, 26% female and 74% male, attending the institute from across North Carolina. Data collected by Ron Lynch of the Institute of Government, University of North Carolina at Chapel Hill from 1980 to 1986.

+ Subjects were 203 MPA students, 55% female and 45% male. Data collected by John Sample, Askew School of Public Administration and Policy, Florida State University, from 2013 to 2015.

**Table 1**

**Taken from:** Sample, J. (2017). A review of the myers-briggs type indicator in public affairs education. *Journal of Public Affairs Education*, 23 (4), 979-992. Retrieved from [http://www.naspaa.org/JPAEMessenger/Article/VOL234/JPAE%2023\\_04\\_20170921\\_04\\_Sample.pdf](http://www.naspaa.org/JPAEMessenger/Article/VOL234/JPAE%2023_04_20170921_04_Sample.pdf)

This table shows the percentage of managers with each personality type from this sample. ISTJ and ESTJ are the most common personality types from this sample.

An additional study conducted by Sana Jafrani, Nosheen Zehra, Muneeza Zehra, Sye Muhammad Abuzar Ali, Salyed Abdullah Abubakar Mohsin, and Rasheed Azhar (2017) found that an individual's personality type "had a significant impact on specialty and career choice [within the medical field]" (p. 520). In this study, four hundred participants from two medical universities completed the Myers-Briggs Type Indicator, and the data was sorted by personality type. As shown in **Table 2**, the researchers found that each personality type preferred certain specialties within the medical field. ISTJ medical students tended to specialize in dermatology,

obstetrics/gynecology, family practice, urology, or orthopedic surgery. ENFP medical students, who were on the opposite sides of the personality spectrum, also preferred to specialize in dermatology. They tended to also specialize in psychiatry, otolaryngology, or pediatrics. These results are due to the focus within each specialty. As stated previously, the ISTJ personality type aligns with logical facts, organization and decisiveness, and hands-on activities. Orthopedic surgery, for example, relies heavily on these traits.

Personality Types and Recommended Medical Specialty	
<b>1. Introverted–Sensing–Thinking–Judging (ISTJ)</b> Dermatology Obstetrics?gynaecology Family practice Urology Orthopaedic surgery	<b>9. Introverted–Intuitive–Thinking–Judging (INTJ)</b> Psychiatry Pathology Neurology Internal medicine Anaesthesiology
<b>2. Introverted–Sensing–Feeling–Judging (ISFJ)</b> Anaesthesiology Ophthalmology General practice Family practice Paediatrics	<b>10. Introverted–Intuitive–Feeling–Perceptive (INFP)</b> Psychiatry Cardiology Neurology Dermatology Pathology
<b>3. Introverted–Sensing–Thinking–Perceptive (ISTP)</b> Otolaryngology Anaesthesiology Radiology Ophthalmology General practice	<b>11. Introverted–Intuitive–Thinking–Perceptive (INTP)</b> Neurology Pathology Psychiatry Cardiology Thoracic surgery
<b>4. Introverted–Sensing–Feeling–Perceptive (ISFP)</b> Anaesthesiology Urology Family practice Thoracic surgery General practice	<b>12. Extroverted–Sensing–Thinking–Perceptive (ESTP)</b> Orthopaedic surgery Dermatology Family practice Radiology General surgery
<b>5. Introverted–Intuitive–Feeling–Judging (INFJ)</b> Psychiatry Internal medicine Thoracic surgery General surgery Pathology	<b>13. Extroverted–Sensing–Feeling–Perceptive (ESFP)</b> Ophthalmology Thoracic surgery Obstetrics?gynaecology Orthopaedic surgery General surgery
<b>6. Extroverted–Sensing–Thinking–Judging (ESTJ)</b> Obstetrics?gynaecology General practice General surgery Orthopaedic surgery Paediatrics	<b>14. Extroverted–Intuitive–Thinking–Perceptive (ENTP)</b> Otolaryngology Psychiatry Radiology Paediatrics Pathology
<b>7. Extroverted–Sensing–Feeling–Judging (ESFJ)</b> Paediatrics Orthopaedic surgery Otolaryngology General practice Internal medicine	<b>15. Extroverted–Intuitive–Feeling–Judging (ENFJ)</b> Thoracic surgery Dermatology Psychiatry Ophthalmology Radiology
<b>8. Extroverted–Intuitive–Feeling–Perceptive (ENFP)</b> Psychiatry Dermatology Otolaryngology Psychiatry Paediatrics	<b>16. Extroverted–Intuitive–Thinking–Judging (ENTJ)</b> Neurology Cardiology Urology Thoracic surgery Internal medicine

**Table 2**

**Taken from:** Jafranl, S., Zehra, N., Zehra, M., Muhmmad Abuzar Ali, S., Abdullah Abubakar Mohsin, S. & Azhar, R. (2017). Assessment of personality type and medical specialty choice among medical students from Karchi; using myers-briggs type indicator (MBTI) tool. *J Pak Medical Association*, 67 (4), 520-526. Retrieved from <http://jpma.org.pk/PdfDownload/8148.pdf>

This table shows the different medical specialties chosen by each personality type.

Overall, they concluded that “understanding the personality type remains useful for future career selection [and] MBTI was found to be an efficient tool for personality assessment” (Jafrani, et al., 2017, p. 526). This example also exemplifies the extraordinary potential for using the MBTI in schools.

Cherie E. Fretwell, Carmen C. Lewis, and Maureen Hannay (2013), researchers at Troy University, conducted a similar study with the use of the MBTI and concluded that “an awareness of which personality factors are linked to types of occupations may be useful for students seeking a better job fit, and some specific personality traits may be even more beneficial in certain occupations and work environments” (Fretwell et al., 2013, p. 59). They also suggested that:

Human resource departments should incorporate such personality tests in their initial assessment of job candidates to improve the selection process [and that] there should be active efforts in higher education classrooms through case study sessions, job fit discussions, and personality analyses to help students identify their own personality traits. (p. 65)

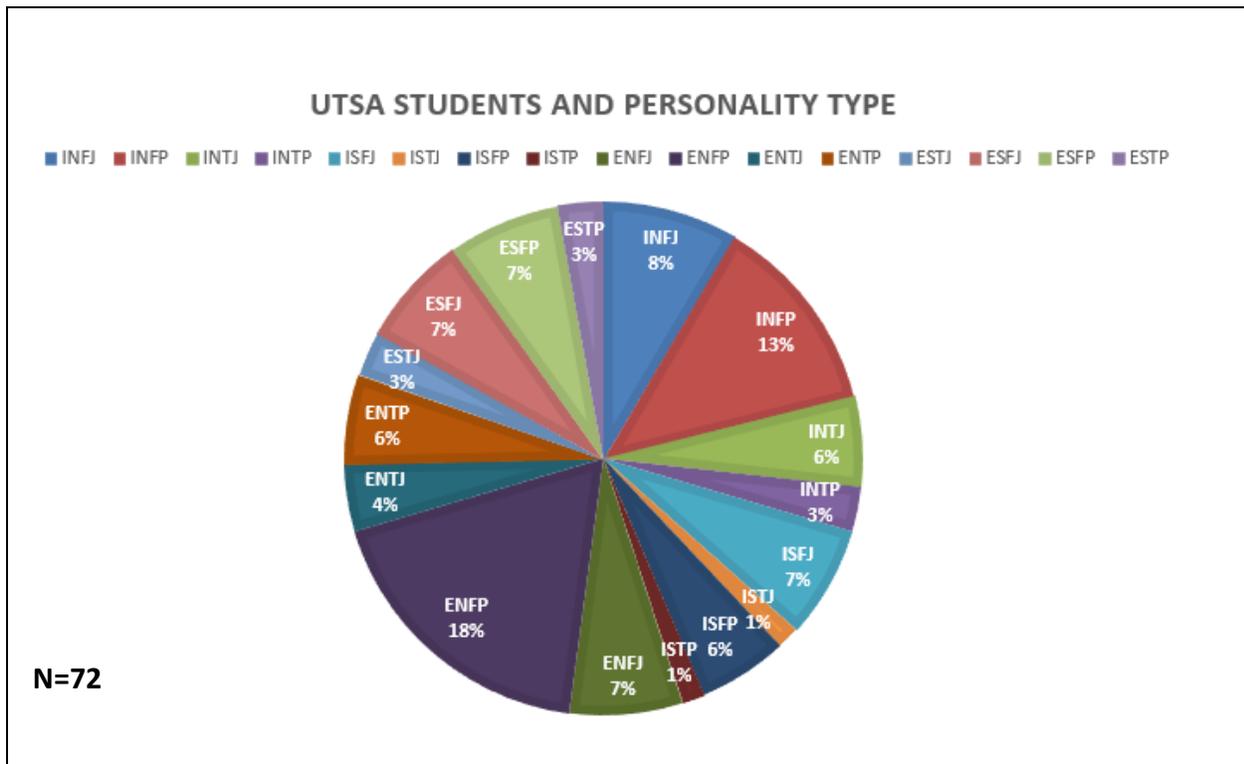
For example, as stated previously, ISTJ and ESTJ personality types thrive in management positions. When choosing a candidate for a management position within a given field, employers may tend to lean towards either of these types as opposed to someone with an ESFJ personality type, as these individuals tend to be great team players and loyal to authority. However, any candidate could be qualified for a management position, and personality type alone should not be the deciding factor. Overall, the studies above indicate that the MBTI is effective in assessing an individual’s characteristics and useful in identifying different career paths that best match a person’s personality and interests.

**Specific aim 2: Surveying UTSA Students Regarding MBTI And Major**

To investigate the relationship between the Myers-Briggs Type Indicator and a student's college major, I surveyed students studying at The University of Texas at San Antonio. I instructed students to take the free Myers-Briggs personality assessment at 16personalities.com and to then complete the survey I created using Google Forms regarding the accuracy of the test. The questions in the survey inquired about participants' current majors, how often they had switched their majors, why they chose their majors, and whether they felt the MBTI was accurate.

**Results**

During my data collection of specific aim 2, I received seventy-two student responses. As shown in **Table 3**, the most common personality type from the students I surveyed was ENFP, which stands for Extraversion Intuition Feeling Perception.

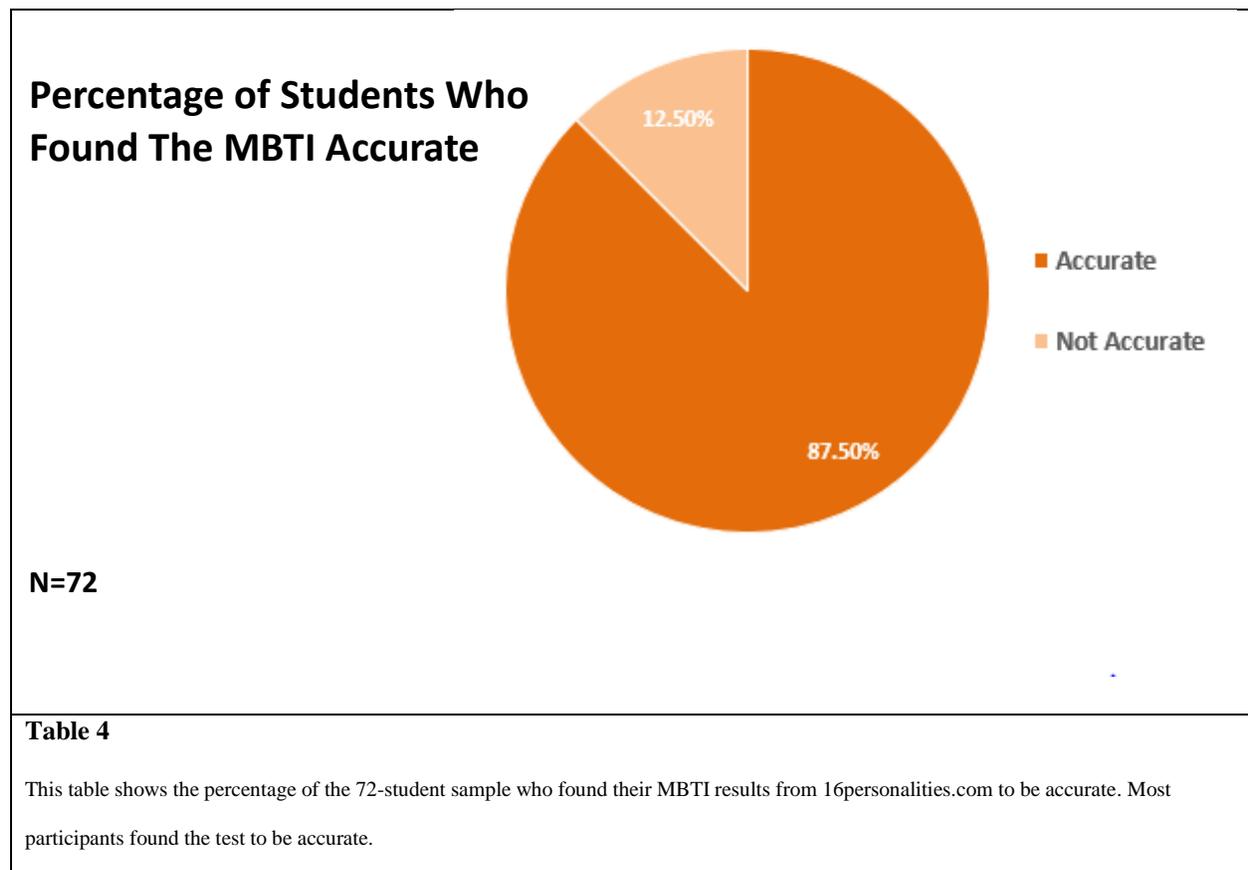


**Table 3**

This table shows the percentage of each personality type present in the 72-student sample. -NFP types were the most common.

According to creators of 16personalities.com, ENFP personality types are "enthusiastic, creative, and sociable free spirits who can always find a reason to smile" ("Personality types", para. 8).

From the students I surveyed, the most common traits were -NFP, which means that these students tend to reflect back on past experiences to perceive possibilities about the future, rely on empathy to make decisions, and have a methodical and organized approach in their academic and personal lives. As shown in **Table 4**, of the 72 students who responded, 87.5% found their results of the personality test to be accurate. This makes the Myers-Briggs Type Indicator an efficient tool for individuals to learn about themselves in a more in-depth manner.



As shown in **Table 5**, the characteristics of different personality types dictated a student’s interest in a particular major. ENTP personality types had majors in actuarial science, economics, architecture, and electrical engineering. These majors rely heavily on data, statistics, and

problem-solving, and these fields are ideal for the ENTP’s analytical skills. ESFJ personality types had majors in biomedical engineering, biology, health, and biochemistry. These majors rely on knowledge of the human body and interaction with both patients or coworkers in the lab. The ESFJ’s strong practical skills are immensely useful in these fields.

Personality Type	Current Majors Within Each Personality Type
INFJ	Cyber Security, Medical Humanities, Biochemistry, Communications, Psychology, Biomedical Engineering
INFP	English, Anthropology, Computer Science, Cyber Security, Mechanical Engineering, Electrical Engineering, Computer Engineering
INTJ	Electrical Engineering, English, Computer Science, Undeclared
INTP	Music Composition, English
ISFJ	Biology, Music Education, Anthropology
ISTJ	Cyber Security
ISFP	Biology, Computer Science, Public Health
ISTP	Electrical Engineering
ENFJ	Biology, Psychology, Medical Humanities, English, Music Education
ENFP	Political Science, Biochemistry, Computer Science, Film, Biology, Music Education, Criminal Justice, Environmental Science, English, Psychology, Computer Engineering, Biology
ENTJ	Information Systems, Modern Language Studies, Kinesiology
ENTP	Actuarial Science, Economics, Electrical Engineering, Architecture
ESTJ	Global Affairs/Political Science, Biomedical Engineering
ESFJ	Biomedical Engineering, Biology, Health, Biochemistry
ESFP	Psychology, Medical Humanities, Computer Science, Music Education, Biology
ESTP	Cyber Security, Cyber Security/Information Systems

**Table 5**

This table shows the current majors of each personality type found in the 72-student sample.

The other collected data showed that 61.1% of participants answered they had never considered changing their current major. 66.7% of participants had never changed their major since entering

college, 26.4% of participants had changed their major once since entering college, and 7.0% of participants had changed their major two or more times since entering college. For choosing their majors, 77.8% of participants said they chose their current major because they found the subject interesting and wanted to work in that field for the rest of their lives. Potential income and job security after graduation were tied for the second most common reason for choosing their current major. In addition, only 38.9% of students confirmed that their high school provided a similar personality assessment. With the near accurate assessment of the MBTI test, more schools should consider administering the test to students before their search for colleges. 43.1% of the participants stated that they would use their test results to help determine their career goals.

### **Discussion**

From my observations, the percentage of students who found the test accurate would be higher if I explained my original findings prior. A common misconception presented with this project is that 'introvert' means 'shy', and several participants stated the test was inaccurate because the test classified them as introverts when they felt they were not shy. I plan on conducting an additional study where I will include a breakdown of the characteristics and what they mean once participants receive their MBTI result.

An issue with my approach towards the assessment was I neglected to define accuracy before surveying participants. The data I collected was from participants' self-reported measures, which relies on participant's honesty. People view themselves differently than how other people see them, and questions in some assessments may be interpreted differently. As a result, participants may be answering how they feel is honest but realistically lacks introspection. In some cases, people may answer a question how they would like to respond to a situation rather than how they realistically respond to a situation, posing a problem when analyzing the data. I

measured the accuracy of the MBTI based on whether each participant felt the MBTI described their traits. Instead of asking ‘Is the MBTI accurate?’, I should have asked more specific questions such as ‘Do the strengths and weaknesses associated with your obtained personality type describe you?’ or ‘Do you feel that the workplace habits associated with your obtained personality type describe you in a work setting?’. These questions would allow me to analyze which parts of the data were accurate without simply asking the participants if they felt the entire MBTI was accurate. Because the MBTI can be used to identify career paths alongside relationships, family life, and overall strengths and weaknesses, I should have only focused on the career portion of the assessment. In many cases, some participants found the MBTI to be mostly accurate except for one or two aspects of their results. For this reason, the percentage of participants who found the test to be inaccurate may have found the test to correctly identify career paths but incorrectly identify family life.

For this project, I used the assessment provided by 16personalities.com, one of the many free personality assessments available online. I chose this type of test for ease of accessibility and zero cost. However, the Myers-Briggs Type Indicator may be better utilized when the official test is administered by a professional certified in the distribution of this assessment. A professional would be equipped to thoroughly explain the participants’ personality types. Furthermore, analyzing the test results with a career counselor may help students further understand how to align their personality type with potential career fields. For a future project, this would be a positive approach.

One of the main critiques of the MBTI that professors and researchers mentioned during my project is that the MBTI is not an efficient test because it lacks predictive validity. This means that unlike other personality assessments, the MBTI cannot predict future behavior.

However, for the purpose and intent of my research, I do not find future behavior to be necessary to consider when choosing a major.

### **Conclusion**

Overall, the Myers-Briggs Type Indicator provided on the website 16personalities.com proved to be useful in assessing an individual's traits. Most of the participants found their results from the test to be accurate, although less than half of the students stated that they would use these results to help decide their future career decisions. This may be because the students surveyed were already happy in the major they had chosen, even if their MBTI result indicated that they would fit better in another field. My work supports that using the MBTI for choosing a college major would be useful for high school students and incoming college freshman being admitted as undeclared. I plan on conducting another research project focusing on these students with the hopes of being able to guide students who may be uncertain with their future career aspirations. Overall, I propose that the MBTI be implemented as a resource for students.

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