
How Personality Affects Literacy Development

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The definition of “literacy” extends much further than its original connotation implies; although the common association is with reading and writing, literacy can mean anything from being able to play and read music to knowing how to use a computer. Consider the definition of intelligence as provided by developmental psychologist Dr. Howard Gardner. Gardner defines intelligence as “the ability to solve problems or to create products that are valued within one or more cultural settings” (Furnham, 2009). In this context, literacy is essentially a synonym for what Gardner refers to as intelligence. As mentioned, literacy can take several different kinds of forms, and Gardner has narrowed down the infinite possibilities of such to eight specific types capable of characterizing any individual’s dominant strengths in any setting. These intelligences include: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalist. It goes without saying that over the course of a lifetime different people will become interested in and hence learn certain skills pertaining to different intelligences. This process of development is essentially the process of an individual becoming literate in a specific subset of intelligence. Therefore, in this context, the term literacy is representative of intelligence type, and the scope of the literacies examined will represent the intelligences defined by Gardner.

Each literacy is characterized by notable traits possessed by the individual. For example, a person with interpersonal literacy is generally able to connect with others well, while a person with natural literacy (pertaining to nature and the outdoors) is able to understand concepts such as the scientific classification of plants or animals. Recently, psychologists and researchers have determined that personality traits are related to approaches an individual may take toward learning (Heinstrom, 2000). These learning styles can in turn influence literacy development and possibly later life outcomes, such as career fields (Shearer and Luzzo, 2009).

The relationship between personality traits, learning styles, and different literacies has received surprisingly little attention from the psychological community in the past. It appears the idea that personality traits do have an impact on these factors is a notion that generally goes unchallenged, and studies that attempt to present any proof or disprove any aspect of these relationships are few and far between. In one such study, psychology Professor Gerhard Blicke (1996) attempts to find the correlation between the Big Five personality traits (extroversion, neuroticism, agreeableness, conscientiousness, and openness) and several learning styles, including two described as elaborative and surface. An individual with an elaborative learning style deeply analyzes material, and retains it for a longer period of time due to the extra cognitive efforts put forth, whereas one with a surface learning style practices rote memorization, learning information until it is no longer needed and then discarding it. Using the NEO Personality Inventory to determine dominant personality and the LIST Inventory to determine preferred learning style, Blicke illustrates that elaborative styles are correlated with openness, while surface styles are correlated with neuroticism; these conclusions make sense given the description of each trait and

style. However, in a similar study conducted by Dr. Jannica Heinström (2000) using the Five-Factor Inventory and the Approaches and Study Skills Inventory, the expected correlation between an elaborate learning style and the openness trait was disproved. I suspect these contrasting results may be due to cultural difference; the participants in Blickle's study were from German institutions, whereas those in Heinström's were from Finland.

Despite the dispute between Blickle and Heinström's findings, the cultural difference suggests that there still is a relationship between learning style and personality traits that has yet to be extensively explored. Under the assumption that learning style does indeed correlate with personality traits, Dr. Adrian Furnham (2009) takes the evaluation of this relationship a step further by researching how both of these factors influence the development of different intelligences. After assessing the eight intelligences of Gardner's Multiple Intelligence Theory along with the Big Five Personality traits and learning styles, Furnham's most significant finding was that musical intelligence strongly correlates with both neuroticism and openness. There also seemed to be a relationship between intrapersonal intelligence and extroversion, conscientiousness, and agreeableness. Linguistic intelligence correlated with a deep learning style and the openness trait; mathematical intelligence correlated with agreeableness and conscientiousness, as well as both deep and achieving learning styles (Furnham, 2009). In a similar but more focused study, psychology professors Cross, Neumeister, and Cassady (2007) concentrated specifically on linguistic and mathematical intelligences displayed in gifted adolescents, and how they relate to isolated traits, rather than overall types, of the Jung typology theory. The Jung typology theory is meant to elicit a personality "type" for each individual, based on the results of a test that measures the dominant one of two polar opposite traits across four different dimensions. These dimensions consist of: extroversion vs. introversion, intuition vs. sensing, thinking vs. feeling, and judging vs. perceiving. The findings of the study linked mathematical and linguistic intelligences significantly with introversion (as opposed to extroversion), and moderately with thinking (as opposed to feeling) and perceiving (as opposed to judging) on a Myers-Briggs Type Indicator (Cross, Neumeister, and Cassady, 2007). Although Furnham assesses the Big Five traits and Cross, Neumeister, and Cassady assess aspects of Carl Jung's typology theory, there are significant similarities between the results. The thinking and perceiving traits correlated with linguistic and mathematical intelligence in the former are similar in character to the description of a deep learning style, found to correlate with both intelligences in Furnham's study.

Though there is not much research available at the current time, it is clear that there exists a triangular relationship between personality traits, learning style, and different literacies. In the long run, what significance do any of these factors have? The development of skill or immense interest in any type of literacy should theoretically be enough to make any individual contemplate using these skills to their advantage. Dr. Luzzo and Dr. Shearer, the developer of the Multiple Intelligences Developmental Assessment Scales (MIDAS), used the MIDAS to illustrate the relationship between multiple intelligences and predictable career paths. With credible evidence of reliability and validity, the test demonstrates the tendency to predict an individual's strengths and weaknesses simply by assessing which intelligences they perform well in (Shearer and Luzzo, 2009). The test results include suggested career paths, which prove through the relationship between personality traits and intelligences to be compatible with the individual's dominant literacy.

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Although the relationship between personality traits, learning styles, and multiple literacies is proven to exist, there is no research that shows how an individual's personality type relates to different literacy development. Personality types define the individual as a whole person instead of by parts, as traits or learning styles do. There are a variety of factors that contribute to one's personality type; while personality traits and learning styles do influence literacy development, they do not act alone. As mentioned before, the Jung typology theory takes into consideration several dimensions of an individual's personality, including but not limited to these two factors. It is my goal to first illustrate the link between Jung's personality types and Gardner's multiple intelligences by observing any trends between the two across a random sample of the population and ultimately attempt to conclude whether personality type is a valid predictor of specific literacy development.

Methods

Hypothesis

It is my hypothesis that the development of personality plays a major factor in determining which literacies an individual will not only surpass expectations in, but also grow a passion for. Furthermore, I believe that by observing patterns between personality types and preferred intelligence areas, it is possible to predict which literacies one will excel in based on personality type. I will also take gender differences into consideration and attempt to illustrate any notable patterns they may cause.

Participants

In total, 30 individuals--15 male and 15 female--participated in this research experiment. The age range was 18-40, with an overall mean age of 19.8. The majority of the participants were college students in the final semester of their freshman year in several different majors from a variety of Florida institutions.

Materials

Jung Typology Test – This 72-item questionnaire measures dominant traits across four different dimensions to determine a four-letter overall personality type. The dimensions are extroversion vs. introversion, intuition vs. sensing, thinking vs. feeling, and judging vs. perceiving. Participants are asked yes or no questions regarding a variety of personal opinions, habits, and beliefs. Participants are then assigned a letter for each dimension to represent their dominant trait. For example, an INFJ personality type would contain the dominant traits of introversion, intuition, feeling, and judging. Likewise, an ESTP would contain the dominant traits of extroversion, sensing, thinking, and perceiving. There are 16 different possible combinations of personality types.

Multiple Intelligences Assessment – This 56-item questionnaire determines the top three out of eight intelligences an individual shows the most strength in from Gardner's Multiple Intelligences Theory. These intelligences include linguistic, logical-mathematical, bodily-kinesthetic, spatial, naturalist, interpersonal, intrapersonal, and musical. Participants read statements regarding activities they may enjoy, tasks they find difficult, or behaviors they find themselves conducting, and must rate how accurately the statements describe themselves on a scale from 1 to 5 (1 being the lowest and 5 being the highest).

Procedure

A mass letter was sent out to several students informing them of the research project and its purpose. Volunteers willingly participated in taking each survey online on their own time. The Jung Typology test was given first to determine personality type, followed by the Multiple Intelligences Assessment. The results from each test were observed by both the participant and the researcher, and then recorded into tables. Repeated patterns were then noted as the strongest visible relationships.

Results/Analysis

After collecting the data from each participant, three tables were drawn to illustrate the overall trends of personality type and intelligence, as well as gender comparisons. Table 1 displays the results from all participants, both male and female. The data is listed by personality type, with a tally mark for each intelligence strength a participant with the corresponding type received.

Table 1: Trends between Personality Type and Multiple Intelligences

Type	Linguistic	Logical-mathematical	Bodily-kinesthetic	Musical	Spatial	Inter-personal (Social)	Intra-personal (Self)	Natural
ENFJ	III		II	IIII	III	IIII	III	II
ENFP	I	I	III	III	II	IIII	III	I
ENTJ			I	I	I	II	I	
ENTP		I		I		I		
ESFJ	I		II		I	III	II	
ESFP								
ESTJ								
ESTP								
INFJ	III			II	I	III	IIII	II
INFP	I			I			I	
INTJ								
INTP								
ISFJ	I	I	I	II	I	II	II	II
ISFP								
ISTJ	I		I					I
ISTP								

Overall, the most significant results showed a strong relationship between ENFJ types and linguistic, musical, spatial, intrapersonal, and interpersonal intelligences. This last relationship especially makes sense given the extroverted nature of ENFJs; since extroverts tend to direct their attention to other people and thrive in social gatherings, a strong correlation with interpersonal, otherwise known as social, intelligence is expected. Surprisingly, ENFJs showed a strong tendency to have high intrapersonal (or self-) intelligence as well. With almost identical results, ENFP types showed strong relationships with musical, interpersonal, and intrapersonal intelligence, but lacked strength in the linguistic and spatial intelligences. The ESFJ type likewise showed strength in

interpersonal intelligence. Given these results, I would conclude that personality type is a good indicator of at least how socially intelligent an individual is.

We see another significant relationship in the INFJs. These types showed strong tendencies toward linguistic, interpersonal, and intrapersonal intelligence. Like the ENFJ and ENFPs, the INFJs not only showed strength in both interpersonal and intrapersonal intelligence, but had a stronger relationship with the intelligence one would predict them to have by their type: intrapersonal self-intelligence. This is expected of INFJs due to their introverted nature; other introverted types also displayed possible strength in intrapersonal intelligence but there was not enough data to confirm it.

A surprising result that Table 1 displays is not only the strengths of certain types, but also a notable weakness; the only intelligence that ENFJs had absolutely no relationship with was logical-mathematical. ENFP, ENTP, and ISFJ were the only types to show any relationship with the logical-mathematical intelligence, and it was a minimal one. However, there were not enough participants of personality types other than ENFJ to successfully conclude the existence of a weakness.

Table 2: Male Results

Type	Linguistic	Logical-mathematical	Bodily-kinesthetic	Musical	Spatial	Inter-personal (Social)	Intra-personal (Self)	Natural
ENFJ			I		II	I	I	I
ENFP		I	III	I	I	III	II	I
ENTJ			I	I	I	II	I	
ENTP		I		I		I		
ESFJ					I	I	I	
ESFP								
ESTJ								
ESTP								
INFJ	I					I	I	
INFP	I			I			I	
INTJ								
INTP								
ISFJ		I	I	I		I	I	I
ISFP								
ISTJ								
ISTP								

When comparing Table 2 (above) and Table 3 (below), the gender differences in intelligence strength become apparent. Males accounted for every relationship with logical-mathematical intelligence, which fits the social profile expected of males today. Females were exceptionally strong in linguistic intelligence, which also fits the biased social profile of female students. However, females also showed much stronger relationships with musical intelligence. Both males and females were equally strong in both interpersonal and intrapersonal intelligences, and showed roughly the same moderate relationship with bodily-kinesthetic and spatial intelligences.

Table 3 Female Results

Type	Linguistic	Logical-mathematical	Bodily-kinesthetic	Musical	Spatial	Inter-personal (Social)	Intra-personal (Self)	Natural
ENFJ	III		I	III	I	III	II	I
ENFP	I			II	I	I	I	
ENTJ								
ENTP								
ESFJ	I		II			II	I	
ESFP								
ESTJ								
ESTP								
INFJ	II			II	I	II	III	II
INFP								
INTJ								
INTP								
ISFJ	I			I		I	II	I
ISFP								
ISTJ	I		I					I
ISTP								

Discussion

Limitations

This study attempted to prove the relationship between personality types and different literacies. Although many of the results of this study support such relationships, there is not enough data to conclude or disprove their existence. First of all, since the random sample of participants was limited to 30 people, the results were not representative of the population as a whole. By looking at the tables, you can see that not every personality type was tested. More accurate and valid results could be achieved if, for example, a researcher predetermined the participants' personality types and tested an equal number of each type.

Furthermore, since the results of the personality types were uncontrolled, some types naturally obtained more results than others; ENFJ types accounted for the most results, and ENFPs followed closely with only one less participant. The majority of participants (19 out of 30) happened by chance to be extroverts, and most of the introverts were either INFJ or ISFJ with only two exceptions. Therefore, it is impossible to successfully conclude or disprove the existence of a relationship when comparing results, as very few types contained the same amount of participants. Thus, the data in this study is more of an implication of relationships between personality types and different literacies, rather than evidence.

Future Topics

As mentioned above, more accurate studies to improve the reliability and validity of this data could easily be done by obtaining a larger and more representative sample. However, the results of this study present several opportunities for new research; for example, looking at the comparison regarding gender differences between Table 2 and Table 3, one can see the general tendency of males and females to fit the social profiles they have been given in school (i.e. males excel in logical-mathematical intelligence and women in linguistic). Linguistic and mathematical intelligence are the two correlated with general intelligence, such as that seen in academic success (Furnham, 2009). It is uncanny how these two intelligences are the two that elicit such notable contrast in gender comparison; perhaps this suggests that the gender-based social expectations put on students originate in academic environments.

Another interesting possibility that this study opens up could test the psychological principles behind the age-old saying, "Birds of a feather flock together." When looking at the data in Table 1, it is apparent that the vast majority of participants happened to be ENFJ and ENFP types. One might question whether this is due to chance, or if it is because of an underlying psychological principle at work; did most of the participants end up being extroverts of the same or similar type as the researcher by chance or by nature? Would the participants possibly have been more inclined to be of the introverted types had the researcher been an introvert?

Still more topics can be addressed with the data from this study by asking the question: Why? While this is an experimental study that focuses on qualitative, self-reported data from surveys, a researcher may wish to investigate the relationships these data imply via more elaborate case studies. Such studies could determine why these relationships are formed, in addition to supporting their existence.

Conclusion

Overall, the results of this study support the relationship between personality types and different literacies, yet the sample is neither large nor representative enough to conclude their existence. More accurate studies need to be done to prove the links between types and intelligences, as well as to support the ones already suggested by the data in this study. This could be done by obtaining a more representative sample of the population, or controlling the number of individuals representing each personality type. I believe that the results of my study raise another question regarding the gender differences noted: are these gender-based patterns the result of social profiling? The patterns noted in my results suggest that the genders tend to exhibit strength in the literacies generally expected of them. Further research, most likely case studies, could possibly determine whether this is coincidence or not, and could even test the psychological theory regarding how expectations expect life outcomes.

Works Cited

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