**Project Proposal**

The first official IQ tests were created in 1904 by the French psychologist Alfred Binet at the request of the French government. The purpose of these tests was to identify which children could most effectively assimilate new knowledge and incorporate it into their learning, while also identifying and separating children who scored below the average level. This allowed the French government to give special attention to students of high promise who would presumably be the future intellectuals of France. Those who scored below the average mark, however, would be relegated to special needs schools so that the learning disabilities of a few would not hinder the educational process of the majority.

Since the original IQ tests were meant for children, the scoring was done using the ratio of two quantities: mental age and chronological age. The mental age of a person is his or her intellectual age, while the chronological age is, of course, a person’s actual age. The intelligence quotient or IQ was found by dividing the intellectual age by the chronological age, and then multiplying the result by one hundred to achieve a whole number. Thus a person with a mental age of fifteen and a chronological age of twelve would have an IQ of 125.

The difficulty with this style of intelligence testing is that it becomes less informative of a person’s actual abilities as they grow older, since the ratio of mental age to chronological age will more nearly approach unity as mental ability begins to slow its growth around sixteen and maximizes around the age of twenty-five. This is not to say
that a person does not learn after the age of twenty-five, only that a person’s learning
ability is at its maximum at this age. For this reason, intelligence testing in teenagers and
adults requires a slightly different approach to achieve the same ends. These intelligence
tests are written without regard to the test taker’s age so long as they are within the
specified range. Instead, they offer comparative intelligence scores based on the
percentage and difficulty of questions answered correctly when compared to the overall
population.

Since we now wish to discuss the type of questions that would accurately relate to
a person’s intelligence, it would be appropriate to now define the term. Intelligence is
most commonly defined as the capacity for learning, reasoning, understanding, and
similar forms of mental activity; aptitude in grasping truths, relationships, facts,
meanings, etc. Notice that the definition refers to the capacity to learn, not the actual
facts a person does know. For this reason, it is imperative that an intelligence test not
measure what a person has learned throughout his or her education, but rather a person’s
ability to learn. Thus we need to use questions that a person can answer using his or her
natural problem solving and intuitive abilities.

Historically, IQ tests employ a variety of questions including analogies, pictoral
progression problems, mathematical pattern recognition questions, and questions that
require the test taker to pick a word or symbol that does not belong with other given
words or symbols. While each of these question types is very common on IQ tests, only
the mathematical pattern recognition questions make no reference to culturally learned
facts. For instance, analogy questions require a person to find a relation among two or
more words, which that person may or may not have learned in school. For this reason, it
is likely that a person’s level of education would influence his or her performance on such questions. What we are looking for is a class of questions that requires a person to use his or her natural problem solving and intuitive abilities rather than learned facts.

Questions relating to mathematical pattern recognition ability most nearly accomplish this goal since a person’s capacity to understand these patterns is largely innate. This is not to say that a person’s education would not assist him or her with such questions, but rather that these types of questions minimize the influence of a person’s education when compared to innate problem solving skills. This being the case, an intelligence test will be constructed that is composed entirely of questions concerning mathematical pattern recognition for the purpose of more accurately measuring a person’s comparative intelligence. This test will then be administered to a large sample population for the purpose of testing its validity.