Omega Graduate School

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SR 958-42

Research Design and Methodology II

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**Assignment #3 – Essay**

For Core 4, continue analyzing the fictional study “Religiosity and Social Behavior in a Diverse Community.” In a 7-10 page essay, conduct a comprehensive analysis of research design elements related to quasi-experimental vs. Correlational designs. Additionally, reflet on how these concepts apply to your dissertation research idea or proposal using the following specific criteria:

1. **Introduction**-Compose an overview of the sections of this assignment and justify why they are important for research design and methodology in dissertation research.
2. **Design Differentiation** (1 page)- Explain quasi-experimental and correlational research designs’ key characteristics, strengths, and limitations. Use real-world examples to illustrate their application in research.
3. **Valid Instruments** (1-page) -Discuss the importance of selecting valid research instruments and examining variables and subscales within the research design. Provide examples of how instrument validity and reliability impact research outcomes. Find, describe, and cite at least one validated instrument that could measure the dependent variables of the fictional study (religiosity, social justice, social cohesion).
4. **Hypothesis Formulation** (1 page)- Compose appropriately formulated hypotheses based on research questions. Analyze the role of hypotheses in guiding research and the distinction between null and alternative hypotheses. Utilize examples from published research to illustrate effective hypothesis formulation.
5. **Evaluation of Null and Alterative Hypotheses** (I page) – Evaluate the difference between null and alternative hypotheses and the criteria for rejecting the null hypothesis. Discuss the significance of hypothesis testing in research and potential errors associated with hypothesis testing. Provide examples from published studies to illustrate instances where null hypotheses were appropriately rejected or retained.
6. **Literature Review Structure** (2-3 pages)- Reflect on the purpose and structure of a dissertation literature review. Analyze its critical role in the research process, its connection to problem formulation and research design, and the typical components and organization of literature review in a dissertation. Provide examples of effective literature review from published dissertations.
7. **Reflection on Personal Dissertation Idea** (1-2 pages). Apply the concepts and insights from the analysis to your dissertation research idea. Discuss how understanding research design, hypothesis formulation, and literature review structures can inform and improve your research plans.

**1**.**Introduction**.This assignment provides a real opportunity for one to take a second look at the working definitions and applications of what research “design” and “methodology” are all about just prior to my wading into a major scholarly research of my own. A clear understanding of these two terms is especially vital, since one of the two terms, placed on the table, here, is incidentally, the research design that I have chosen for my upcoming dissertation. Quasi-experimental and correlational research designs are among the most commonly used scholarly research designs, but they are difficult things to pin down and explain because they are not concrete things, they are abstractions. And as such, it would be helpful if one could take the effort to engage in an explanation that addresses the extent to which the abstraction to be explained is shown to be congruent to some other well know thing, while also being shown to be incongruous to the same thing, or some other thing. So, the question is asked, what is a “quasi-experimental” research design? What comes first to mind is that it is, in a number of ways, that same very type of research design which is, at once, not completely what one would refer in textbook fashion as “experimental,” while being, in other important ways, precisely what an experimental design is.

In the case of a “correlational” research design, we might want to apply the good old reading-teacher technique known as the “close format” by removing from the word, the first syllable, “cor.” What is left, then, is the word, “relational.” Thus, if we say that a correlational research design, is one in which the goal is to determine the “causal relationship” between the two variables in a hypothesis, that would be quite sufficient. Since, in such a research design, we are relying primarily on the measurable effect that the behavior of one variable has on the other, it is natural for such a research design to be employed, either under the egis of a “quantitative” or “mixed methodology,” but certainly never under the heading of a “qualitative” (non-quantifiable) method of research.

All professors of research stress the need to use “valid instruments” in scholarly research. When some talk of “valid” research instruments, they tend to promote the idea that valid instruments fall only within the established norm—standard instruments such as “Pearson Product Moment,” “OIS,” “PPV,” etc. But, as it appears, some experts are saying that the “validity” of a research instrument depends upon whether or not it is successful at measuring data. In which case, an instrument that is developed in, and for, a specific piece of research, on the fly, is referred to as “valid” simply because of its effectiveness in producing the quantitative result. To me, this approach, when serves up, provides that sweet succulent taste of “pragmatism,” (James, 1975) with that veritable William James flavor.

Then, too, some researchers, like my friend, Ogundimu, use what they refer to as, “research arguments/questions” (p.14) as a tool from which the “hypothesis” is derived. Although this approach in the pen ultimo is touted plentifully enough by research professors, many researchers appear to use, either “research questions,” in lieu of conventional hypotheses, or, conventional hypotheses, by themselves. Further, looking at a whole cross-section of scholarly research, I have gotten the impression that, even though researchers tend to use several hypotheses, they only seem to conduct the hypothesis test in connection with one, the “primary” hypothesis. Therefore, once this primary hypothesis is formulated, a null hypothesis, which is the “inverse” of the primary, is formulated and tested to determine the amount, or the extent to which there are errors in the sampling.

As a result, while the primary hypothesis is actually the central theory about the probable existence of a certain problem, and what the probable fix for it might be, the researcher has to answer the call to determine whether there is a large enough body of expert opinions on the topical issues related to the problem that gave rise to the dissertation. With that, the researcher will want to collect pertinent pieces from that body of literature, with all its varied expert opinions, and then, review them.

**2**. **Design Differentiation**. Although the “experimental” research design appears to be more aptly suited to that type of research often conducted in the natural sciences, it is also used in the social sciences as well as, and in research done, in other fields not within the frame of the natural sciences. When we hear someone say the term, “quasi-experimental design,” we are inclined to think of it as a sort of experimental research design that does not quite measure up—a kind of pseudo experimental research design that does not possess the vital defining features of the traditional experimental research design.

Gibbons (1997) writes that the quasi-experimental research design is mostly used as a vehicle for interventional studies where the causal relationship between the independent and dependent variables is a result of the manipulation of the independent variable. Throughout this process, the variables are arranged into two or more groups in ways that are consistent with the experimental aspect in the nature of this research design. To that end, two groups of the variables are organized into a “treatment” group and a “non-treatment” (placebo) group, while “[t]he predictive outcome is the dependent variable” (Gibbons, 1997).

Morgan (2000) tells that due to the fact that participants are randomly selected when using the traditional “experimental design,” the chance of bias is reduced considerably. In that kind of research, both the placebo group and the treatment group are supposedly ideal representatives of the population. In contrast, those who are picked to participate in the “quasi-experimental study” are not randomly selected; they are selected on the basis of predetermined criteria and qualifications. As a result, in this kind of experimental design, where some participants are given the treatment and others, the placebo, both groups of participants sometimes wind up not belonging to the targeted population, at all (Morgan, 2000).

In one respect, the quasi-experimental design, unlike the traditional experimental design, is advantageous because it includes “pre and post-test” components. Further, in studies that can only be conducted through some type of experiment, but that require that the participants be screened, a qualifying test might be needed to certify that the participants have met the prescribed conditions. In this situation, the quasi-experimental design is ideal (Morgan, 2000).

The trial of a case in a criminal court is a perfect example of this. In a criminal court case, the would-be participants (the potential jurors) are, first, picked because they meet the basic qualification as peers of the accused, living in, and around, the same community as he or she who happens to be on trial. The would-be participants, having met those conditions in the first phase of the qualifying process, are given the “pre-test” (Vader) which helps the court (the researcher) to determine whether these participants qualify, in the end, to participate (to become jurors). Once selected as participants (as jurors), the package of evidence (the independent variable(s)), is delivered (administered) to the jury for them to unwrap. The prosecutor’s presentation of the evidence (the independent variables—the treatment) is administered to the group (the jury). Following that, the defense, then, administers the counter narrative (the placebo) to the same participants (the jury).

Technically, the job of the defense, in delivering the counter-narrative (the placebo), is to sow seeds of doubt in the minds of the participants (the minds of the jurors) as to whether the prosecutor’s story (the set of independent variables) is, wholly or partially, sound enough for the participants (the jury) to be able to effect a verdict (the dependent variable) that is measurable in terms of the percentage of jurors who acquiesce. In most states, the verdict in criminal cases require a 100% agreement among the twelve jurors.

In a typical criminal court trial, however, only a single group of participants (the jury) is administered both the “treatment” and the “placebo”. That fact does not make such research designs any less a “quasi-experiment”. Instead, it just makes it one of the several types of quasi-experiments that exists with variation.

When the court (the researcher) imposes legal parameters on what is to be considered during the deliberation, as well as initiates the deliberation, itself, the court is, in effect, administering a “post-test” to the participants (the jurors). Then, by so deliberating (taking the test), based on both the prosecutor’s and the defense’ narrative and counter-narrative (the treatment, viz., independent variables), respectively, each of the participants’ (the jurors) reaction to the treatment is to reach a verdict (the dependent variable) upon which the prescribed percentage of jurors agree.

As one would expect, the “experimental” and “quasi-experimental” research designs are not the only research designs that may be chosen from a least nine or ten different types. The correlational research design is yet another of the more popular types of the research designs. It is almost certain that no one would question the claim that the “correlational” research design is utilized across disciplines, even more so than either of the two research designs mentioned above (Continued in Section #3 below).

**3**. **Valid Instrument**. Before one can select a valid instrument and “[p]rovide examples of how. . .[ its] validity and reliability impact research outcomes” (Philipi, 2020), one should, first, answer the question of, “What is meant by a valid instrument?” According to Christian Phillipi, there is a number of different reasons why researchers casually toss around the adjective “valid” in their effort to certify the effectiveness of one research instrument over the next. He says that since Kelley’s coinage of the term, “valid instrument,” it has become that common expression within the researcher’s vernacular that describes either the standard research instruments or any of a myriad of research instruments that has gained validity primarily because of its effectiveness in a particular piece of research. Yet, the common consensus clearly supports the philosophy that, while validity or invalidity of an instrument is the way of describing the aptness of the instrument to the specific piece of research at hand, it always comes down to whether the researcher’s use of a particular instrument “has not only research consequences, but also policy implications” (Angner 2011b). Among other things, “Causation—and its close kin, correlation—have also been used to define validity” (Borsboom, 2005; Borsboom et al, 2004).

Likewise, in order for one to find and describe a validated instrument that could be used to measure dependent variables, it is also necessary to know what a “dependent variable” is. Kendra Cherry (2024) explains that a dependent variable is the measure representing the change that has occurred in the participant because of something done to him or her. In the same vein, the thing done to, or administered to the participant is the “independent variable”. And so, mathematically speaking, the independent and the dependent variables are locked together not only as a “relation”—in a “one to one correspondence”—but as a “function”.

In the fictional study, introduced in Statistics III, unlike that in this assignment, “Religiosity” is paired broadly with “Social Behaviors” in a “functional” relation between independent variable and dependent variable, respectively. In this relationship, it does make sense that the extent of one’s religiosity would have an effect on one’s “Social Justice Attitude” score as well as one’s “Social Cohesion” score because they are both forms of Social Behaviors. Clearly, both Social Justice Attitudes and Social Cohesion are dependent variables, splintered off the primary dependent variable—Social Behaviors.

Within the Fictional Study, the researcher’s obvious object should be to determine the extent to which a person’s religiosity “affects” his or her social behaviors. With that in mind, the researcher would want to find out what the strength of the causal relationship between the independent variable (x) and the dependent variable (y) is. To do that, the researcher would need to find out whether there is any correlation between “Religiosity” and “Social Justice Attitudes” and then, “Religiosity” and “Social Cohesiveness”. By that fact, the valid instrument best suited to this would certainly have to be Pearson r.

In using the Pearson Product Moment as the validated instrument, the “correlation coefficient” for the first pairing of the independent and dependent variables turns out to be fairly high in respect to social science research at r = 0.76393. Meanwhile, the second pairing is r = 0.7568.

**4**. **Hypothesis Formulation**. In an unauthored paper published by uca.edu. (2013), the point is made that the essentials of a good hypothesis boils down to a distinct “rationale. . . and a clear description of the relationship between the variables of interest . . . based on existing information” (p. 5). The researcher, Amaya McDonald (2023) posed the question of “Why are so few Black men teachers in New York City public schools” (McDonald, 2023)? Upon that, it is reasonable to conclude that such concern over the fact that there is just a dearth of male teachers of African descent in New York City public schools is indicative of the notion that the shortage of teachers from this particular demography (Black male teachers) will inevitably impede the flow of education through the education-delivery pipeline to students of the demography—Black male students (“See Our Truth,”(2017.).

 The uca.edu paper (2013) further suggests that there are at least two examples of effective hypotheses writing. One type of hypotheses the paper describes is what I characterize as an “implication.” The example of the “implication,” presented in the uca.edu paper, is, “If a student drops her books in a crowded student center on campus, then the student will be less likely to receive help than if only a few people are in the student center.” The other form, obtained from the same source, states that, “In the case of murder, mock jury will be more likely to convict a black defendant than a white defendant” (uca.edu).

Notably, the first (H1) of these two hypotheses is written in the “subjunctive mood” and the second (H2), in the “indicative mood.” It maybe that the most direct way of explaining how the “indicative mood” works is to say simply that it is a straight-forward expression of an opinion or theory. The paper took the effort to differentiate between a good hypothesis and a bad one. Both of these examples, taken from a list of “good” hypotheses presented in the uca.edu paper, although in two different grammatical forms, bear all the essential qualities of good hypotheses.

The paper says that among the essential “qualities” that should be present in a good hypothesis are its possession of the two main types of variables, a “functional relationship” between them, and the sense that the hypothesis, as a whole, is making a prediction (uca.edu). Although both of the hypotheses appear to possess the essential qualities, the second hypothesis (H2), unlike the first (H1), does not seem to immediately grab the reader as a prediction in the way that the first, written in the “subjunctive mood,” does.

The first (H1) of the two hypotheses, taken verbatim from uca.edu, as written in the “subjunctive mood,” is conspicuously presented in a form that immediately strikes you as a prediction coming out of the effect an independent variable is having on a depend variable. And, as such, the use of the “If. . . then-construction” unveils an instant recognizable causal relationship which projects, at once, a more lucid image of the relationship between the variables than that in the hypothesis (H2) written in the “indicative mood.”

The popular definition of “hypothesis” as an “intelligent guess”—which I believe would probably be more effectively described as a “predictive surmise”—is immediately evident when the hypothesis is written in the “subjunctive mood.” To that end, I personally think that the subjunctive form of a hypothesis is probably a more practical way of stating the hypothesis than when it is written in the “indicative mood.”

 My reasoning is that the “If. . . then-construction” brings the hypothesis more closely into alignment with that kind of mathematical logic which comes under the label of an “implication.” Other than that, there is actually no real difference in whether or not the hypothesis is presented in the “subjunctive mood” or “indicative mood.”

In each of the two examples (H1 and H2), there is an independent variable which, in a way, closely resembles a situation in which one head (independent variable) belongs to two separate bodies (dependent variables). In effect, there As is a single independent variable that is operating as the causative agent for each of the two physically separate, though functionally related (theories) hypotheses. In this set up, the effect predicted (on the dependent variable) may be split into two different outcomes— two dependent variables (uca.edu, 2019).

Here, we may choose to break up the second of the two hypotheses from uca.edu. (2019), in order to illustrate the point. Quoting directly, the uca.edu paper, exemplifying this, states that, “In the case of murder, mock jury will be more likely to convict a black defendant than a white defendant” (uca.edu). One possible sub-hypothesis that could be splintered off from that original hypothesis could be: “In the case of murder, mock jury is more likely to convict a defendant who is Black.” A second sub-hypothesis could read, “In the case of murder, mock jury is less likely to convict a defendant who is White.”

On the next tier of the discussion about the nature of the hypothesis, the question is asked, what is the difference between the alternative hypothesis (Ha) and the null hypothesis (H0)? The alternative hypothesis (Ha) and the null hypothesis (H0), together, contain all the same essential elements that are shown above to be characteristic of a well-structured hypothesis. We say, “alternative hypothesis,” because, in so saying, we are making a distinction between the research hypothesis Ha, and its exact inverse form, H0.

While the null hypothesis (H0) is utilized only at the inception of the study for the purpose of determining, by default, whether or not the alternative hypothesis (Ha) has validity, Ha will remain the driving force behind the main thrust of the research activity. The object is to perform a test on what the research hypothesis is not, in order to determine whether to proceed with what the hypothesis is. If, as a result of the test, H0 is rejected, then, Ha is automatically validated. And so, in such a case, the researcher may proceed with a pretty high level of “confidence.”

**5**. **Evaluation of H0 and Ha**. Whenever the researcher performs a hypothesis-test, he is performing a test on the null hypothesis (H0). If, in the process of conducting the test, the p-value turns out to be error free, the p-value will be said to have “statistical significance.” And, as such, it will have begun its work by inspiring, either a high or low level of “confidence” as to whether H0 or Ha will be viable. Generally speaking, should the p-value fall at, or, below the settled watermark for that particular type of research (less than or equal to 0.01, 0.02, or 0.05), the null hypothesis will be rejected, and the p-value, once converted to percent, will, thus, be subtracted from a hundred percent so that the researcher will feel a high level of “confidence” as he or she defers to the Ha, going forward. In such a situation, the level of “confidence,” written in a probability form, will give the statistician the green light to proceed with the alternative hypothesis (Ha). With that, the extent of the relationship between the two interacting elements within the alternative hypothesis (Ha) —the independent and dependent variables—will continue to be the driving force in the hypothenuse. So, whenever statisticians speak of the relationship between these two variables in the hypothesis, they are speaking of a kind of “resultant” effect of the independent variable upon the dependent variable. Perhaps the best, most concise way of describing the nature of these two variables, and the way they interact with each other, may once again, be a mathematical one.

In order to fully appreciate the nature of the independent and dependent variables, in their respective roles as the vital essence of the hypothesis, and hence, the essence of the research, one need, first, to acknowledge the importance of the convention which assigns the “linear substitution” of the Cartesian variables, x and y to the independent and dependent variables, in respective order. As such, when the statistician utilizes the x and y variables as substitutes for the “independent” and “dependent” variables in his “datapoints,” he is actually registering his recognition of a certain algebraic convention. And, in so doing, he is taking licence to do algorithmic manipulations of statistical formulas and graphic illustrations from the vantage point of “ordered pairs” within the Cartesian plane.

So, to say simply that the independent variable (x) and dependent variable (y) are at the heart of the research, wherein y is the “function” of x, is to describe, in a reasonably laconic way that a hypothesis is in its internal dynamics, a theoretical relationship between the two variables at work. As Hale and Carlson (2016) put it, in the absence of such a ". . . .functional relationship between x and y, neither the null hypothesis (H0) nor the alternative hypothesis (Ha) could be viable” (Hale & Carlson). What this means is that some of the most powerful statistical instruments that have evolved, over the years, including the “Pearson Product Moment,” could not be brought into play if either the independent variable or the dependent variable was absent from the hypothesis (Hale & Carlson, 2016).

 As one concentrates one’s focus on one of the typical American public school system like New York City Department of Education (DOE), one finds it perfectly normal that almost any of its “regular” public schools, picked out of a hat, would be decked out with scanty little clusters of Black teachers, whose wee numbers were nearly always swallowed up by enormous crowds of their White counterparts, moving about in hallways and classrooms that were filled almost entirely with students of Color—Blacks and Hispanics students. The frightening truth is that the hiring-retention malady, that has become well-nigh rampant over the boroughs of the City of New York, is pretty much reflective of the pandemic that is raging throughout the State of New York.

 Even in the best of school districts across the State of New York, in respect to hiring-retention practices, when it comes to qualified teachers of color, it seems, at best, that those who are in charge are little moved to hire and retain teachers with a sensitivity to moral and economic imperatives. These more enlightened school systems across the state, including “. . . . all New York City school districts—employed 3 times as many White teachers as teachers of color, 7 times as many White teachers as Black . . . teachers, and 8 times as many White teachers as Hispanic or Latino teachers” (NYSED data).

One is inclined to think that the hiring-retention practices of both the State and City of New York are coming out of a belief system which promotes the idea that in being careful to seek out and keep in place the best qualified teachers, attention has to be paid to the mistaken notion that teachers of color just do not make the cut. Ultimately, it goes without saying that a successful teaching-force is one whose students succeed. And a good part of student-success requires that teachers who are hired and retained include an ample supply of those who match the student population in respect to demography, if for no other reason than to answer the roll call. One can see how this practical principle fits tidily into John Milton’s “Sonnet 26” where he writes that, “They also serve who only stand and wait.”

To this, we cannot deny the implication that the lopsided teacher/student ratio, created by New York State and City hiring-retention practices, in respect to race, is that enormously powerful, though damning independent variable (x) that is hard at work. On the y-side of the equation, where that scanty presence of Black teacher-role-models is barely visible against the large backdrop of Black children, who, almost always end up on a trajectory that neither they, nor anyone else expect to lead into a post-secondary career in pedagogy, or in some other specialization directed toward one of the professions—rather than in some rough menial occupation—the dependent variable (y) tells the story of a system that has failed woefully to build a pool of Black teachers from which to draw. If these critical career choices that factor into the making of happy future selves come from the effect that the K-12 education has on these children, the outcome is the failure of people in the Black community to succeed. The question is, are the best of these choices being made by ever-increasing numbers of White children against an ever-shrinking number of Black ones?

Across New York State, during school-year 2016-’17, special college programs for teacher-preparation chalked up a total of 40,000 students amounting to 3% of college undergraduates. White and multi-racial students made up 3.5%, Blacks or African Americans were 2%, Hispanics or Latinos were 5%, and Asians or Hawaiian/Pacific Islanders was 1% (NYSED).

First and foremost, the fact that Black students are "black" is unalterable. But what the NYC DOE is able to alter, but does not, is the percentage of teachers of color whom it could bring in and retain to teach and inspire students of color. Thompson (1999) makes the surmise that, as a result of his work with Black and Hispanic twelfth graders who, by and large, did not have the benefit of being influenced by a large enough cadre of teacher- role-models who look more like them, they tended not to elect to go to college, or, if they did, they tended not to select a major on their college applications that could translate into a profession related to education. Thompson found that many of these students tended to make non-major choices, such as an “undeclared major.” He notes that many of these high school leavers wound up dropping-out of college in the short term. So, in effect, the system, in turn, has been failing to inject that much needed dose of fresh additional supply of graduates of color to replenish the dwindling pool and, thus, counteract the hemorrhaging of teachers of color (Thompson, 1999, pp.53-55). The matter, then, is could it be that somewhere out there exists a rising flood of academic literature quietly working its way through the problem on how to answer this pressing questions about the dwindling supply of Black and Hispanic teachers.

In regard to the test at hand, it is clear that the probability of the p-value has reached its assigned mark, and in turn, would cause the probability of all that could boost the viability of the null hypothesis to freeze up at the “statistical significant” point where the p-value had been initially assigned. Here, the probability that the p-value is stuck at 0.05 (depending on the research discipline) signifies that the null hypothesis has reached the margin of rejection and cannot encroach further beyond into the area under the curve so as not to be rejected.

Against that backdrop, the researcher is handed a hefty dose of confidence at 95% probability, in favor of the “alternative hypothesis” upon "rejection" of the null hypothesis. Looking at it in a roundabout kind of way, we could say that this is a high probability that the null hypothesis, H0, is not viable, which is tantamount to saying, in a fact, it is equivocal to the high probability that what is not H0 is viable. So, indeed, the conversion of the p-value to a 5% probability is, by default, endorsing the viability of the alternative hypothesis (Ha).

When statisticians consider the term, “statistically significant,” in their discussion of hypothesis testing, the force of that consideration fixes the level of “confidence” to the marginal level of acceptance that the hypothetical event very probably exists, since the difference between a one hundred percent probability and the statistically significant p-value supports the likelihood of its viability. With that, the researcher is always itching to get to that place where he can say that the null hypothesis (H0) is "rejected," and that it is fairly reasonable (highly probable) to “accept” the “alternative hypothesis” (Ha) at that margin.

Hale and Carlson (2016) insist that, in statistical parlance, words like, “certainty,” "accepted," "correct," and "true," usually imply an outcome approaching perfection that is rarely possible. In these words, there is an implicit suggestion that the reality of an event is absolute. They claim that statisticians tend to reject the notion of “absolute truth,” while being inclined to speak of “probable truth” (Hale & Carlson, 2016).

So, if, for example, a hypothesis states that, "A woman is pregnant if she has had an ultrasound that reveals that she is carrying a live fetus," the statistician would likely go ahead and theorize that the woman who is confirmed by ultrasound to be carrying a live fetus is probably 99% pregnant. The level of “confidence” in that probable event would be an almost "absolute certainty." And, at the same time, the null hypothesis, which is the inverse of the alternative hypothesis above, would seem to guarantee that the null hypothesis could be an "absolute impossibility," which would mean, implicitly, that the p < 0.0 1 does not even elevate the null hypothesis back above the range of statistical significance ($∂-value) $that already assures the rejection. The point is that if the p-value is set initially at p $\leq $ 0.0 1, as it is in this case, the statistical significance or the $∂-value$ would be p $\leq $ $0.0 1$. With that level of statistical significance, the rejection of the null hypothesis would be guaranteed, and the p-value could wind up being 0 or less. Since we do know that a probability of 0 is an impossibility, the temptation is for us to assume that, in this situation, with a highly probable pregnancy based on ultrasound, H0 would be guaranteed a significance level of just about 0%, and the null hypothesis would naturally be rejected in favor the certainty of rejecting H0 for Ha (Hale & Carlson, 2016).

 Of course, two hundred years ago, before the existence of ultrasound, a woman with a large abdominal protuberance would very likely be considered pregnant by at least 98% of those who saw her. If it were hypothesized that “Women of child-bearing age with large abdominal protuberances are not pregnant” (H0), the p-value assigned might very probably be less than or equal to 0.02, a “statistical significance” of 2% or less, with a level of “confidence” of about 98% or greater. Such a p-value would probably be based on the number of younger women in the sample with cancerous and the medically known non-malignant growths. Inversely, then, at such a high percentage of “confidence,” it would have been a fairly “intelligent guess” to assume that "Women of child-bearing age with large abdominal protuberances are pregnant” (Ha).

What appears to be a pregnancy in the absence of ultra-modern imaging diagnostic systems, the midwife or obstetrician is the one who would have made the diagnosis as to whether the average woman who is “showing” is actually carrying a live fetus. Back in those days, highly skilled midwives were able to diagnose non-pregnancies of many women who were “showing” apparent pregnancies. These diagnoses would have fully justified the p$ \leq $ 0.02.

But in a troublingly high percentage of cases, there are women of child-bearing age, who, upon clinical examination, are found to have “stone pregnancies.” Ross et al (2008) report that “[t]here has been a 52% increase in stone-related hospital admissions of female patients” (Lieke et al, 2006, pp. 702-’04; Ross et al., 2008). Upon Strop et al’s claim that “[o]verall, pregnant women are not at higher risk of stone formation compared with non-pregnant women of similar age and demographics” (Strope et al., 2010), it is reasonable to conclude that a large enough number of younger women, showing abdominal protuberances, do not only include “stone pregnancies” with live gestational fetuses, but also “stones protuberances” without gestational fetuses.

Additionally, there is also the incidences of “phantom pregnancy”. These are situations in which women of child-bearing age are “showing” but clinical examinations reveal the absence of any form of a live fetus.

My late mother, a British trained “Certified Midwife,” once explained to me that phantom pregnancies are the product of an overwhelming desire of some women who want to have children, even though they cannot. Back then, she explained, that the physical appearance of pregnancy in these women is entirely psychosomatic. She said that, in treating the disease, a certain injection had to be administered to the patient. Once administered, the apparent abdominal protuberances would suddenly be deflated.

What this means is that the null hypothesis, “Women of child-bearing age with large abdominal protuberances are not pregnant,” having a p-value of 0.02 or less, would actually have a p-value that was even much higher than what is observed when abdominal swelling caused by kidney stones and phantom pregnancies are added to the known exceptions of malignant and non-malignant tumors.

With this, the real confidence level would actually be much lower than it appears when the researcher’s common knowledge about female abdominal protuberance, combined with the empirical observation of samples drawn from the population does not cover anything close to the full range of the realities out there. In this situation, the 98% level of confidence, then, would actually be false. This is typically a “false positive” or a Type I Error. In other words, what you see empirically is not always what you get. The exact reverse of this is referred to as a “false negative,” or a Type II Error. Can you imagine how much more these two errors would appear in those times when ultrasound, etc. was not among the diagnostic tools in the medical kit?

 If one were to shade the entire area under the normal distribution curve, immediately following the female’s ultrasound, today, where the confidence level is a 100% probability, it would appear to be completely filled in. Implicitly, though, one might want to say that p= 0. Yet, responding, thus, to that situation would not be completely true since the bell curve is actually “asymptotic.” In this situation, the report would state that the null hypothesis (H0) is automatically “rejected" without the need to further state that the probability taken from a statistically significance of p$\leq $ 0. 0 and the confidence level (with the area under the bell curve appearing to be completely shaded) is a "certainty."

 If the question is asked, "What is the p-value in a situation of absolute certainty?" We could not say p = 0. Neither could we suggest an interval that seems to be the logical mathematical conclusion, 0 $\geq $ p$\geq $0. For, since the normal distribution curve is an “asymptote,” we would have to conclude that p = { } is a "null set" or an "empty set." So, while we are forced to admit that there is such a thing as an “absolute certainty,” out there somewhere, and perhaps admit the truth against the seeming absurdity with the confidence of there being a "God", at 100% probability, statisticians would tend to put on the breaks at 99.73%, or thereabout. What we do know is that when the p-value is less than or equal to 0.05, or has a statistical significance of 5% or less, we are saying that the shaded area would be at least 95%, which should provide plenty of “confidence.” The collinearity between the 0.05 or less p-value, the 5% significance level, and the 95% or greater level of confidence in the viability of Ha, would be right at the second standard deviation, guaranteeing a rejection of the null hypothesis (H0).

 Since the object is to "reject" or "not reject" the null hypothesis, when a p-value of 0.05 is assigned, we would say that we have a rejection of the null hypothesis (H0) rather than an acceptance of the alternative hypothesis (Ha). What this means is that by "default," the alternative hypothesis, being "not rejected"—is viable.

 Likewise, a p-value of 0.03 with a probable significance, starting at 3% or less, would be left with a 97%, shaded area under the curve, leaving just the tails tapering off into, God knows where. With that confidence level of 97% probability, the significance level would be very nearly “absolute rejection,” approaching three standard deviations to the right of the mean for the positive tail.

 Of course, care must be taken to ensure that the test used is the one most suited to the study at hand. The reason why we need to take such special care in the test selection is that we have to be sure that the p-value we obtain is the right fit. The question is asked, how do we then determine what a suitable p-value is? Hale & Carlson tell us that "The p-value is the probability of a specific statistical model that a statistical summary of the data (i.e., the sample mean difference between two compared groups) would be equal to, or more extreme than its observed value" (Hale & Carlson, 2016).

 Once we assume that the researcher has done his due diligence and has arrived at the initially identified p-value of 0.02, in respect to the number of Black high school seniors who entered teaching as the career goal on their college application are decreasing, we are ready to run the test. However, the researcher now has the four pieces needed to satisfy the outcome of the test: (1) the null hypothesis (2) the alternative hypothesis (3) the significance level, and (4) the p-value.

Obviously, every sample has a mean (an x-bar) although the mean of the sample may, by chance, be the same as the population mean ($μ$). Although this is quite possibility, it is very improbable. The question to be asked is what is the range in which the true value lies when there is a high probability of significance? The range is that region in which both the mean of the sample and the population mean lie. In this case, this region which is called the "confidence interval" will have a high probability. So, if an effect is significant, all the values in the confidence interval will be on the same side of the mean—either positive or negative.

**6**. **Literature Review Structure**. My friend and colleague, Charles Ogundimu, submitted a dissertation to his committee at Columbia University, in 2014. His dissertation was entitled, “Does the Mode of Entry into Teaching Matter in Teacher Retention, etc.?” In it, Chapter II begins with an Introductory paragraph as the first part of his Literature Review. The central focus of that first paragraph seems bent on providing the historical background as the backdrop for the body of the Literature Review portion, as well as the referent to the rest of the dissertation, in the main, also, for accentuating the rationale for the Literature Review, itself.

The historical background he provides, from the inception forward, points to what he recalls as being a teacher-surplus, in the 1970s that triggered widespread layoffs, and in turn, curled back upon itself into a demand-supply interaction, resembling the “Cobweb Theory” in economics, as it comes full circle to a pre-1970s acute teacher shortage, thereafter. He, then, calls attention to the famous 1981 “A Nation at Risk” publication, and its outcry that the educational system should turn its attention to the urgency for the United States to sharpen its competitive edge in the industrial world of rapidly advancing technology by teaching mathematics and science across the curricula. Thus, the connection between the title of the dissertation, and the promise, going forward into the body of the Literature Review was made. And there it was, the rationale for the dissertation as a whole.

Throughout the introduction of this Literature Review, Charles Ogundimu had cited a pretty good chunk of sources. Although Columbia University allows the use of sources dated up to ten years prior to one’s dissertation research, only three sources—Loeb & Darling-Hammond, 2005; Boyd et al, 2005; Clotfelter et al, 2004—satisfied the ten-year criterion. So, Charles closed the introduction of the Literature Review by stating that “one significant limitation is that many of these studies are dated” (Ogundimu, 2014, p. 17).

Next, Charles begins to tackle the body of the Literature Review segment by setting it off with a Level 2 Heading in the form of the interrogative: “Who teaches and Why.” Out of this second phase of the Review, from a fresh new set of articles, books, and other sources, the historical background is expanded in a manner that appears, at first, to be gradually merging into a discussion on the percentages of candidates by ethnicity, class, and race, etc. These demographical characteristics appear to play an important part in either aiding or hindering prospective teachers in their effort to meet the requirements needed to become full-fledged teachers.

By that point in the Literature Review, there had set up a continuous flow of the historical basis, from the Lit Review-introductory segment, into the body of the Lit Review. But, in the end, there is only the suggestion that the interrogative-heading, which kicked off the body segment, does not only address the question of why some people make it in the teaching profession, but why some just cannot make the cut, at all.

Under the second Level 2 Heading—not in the interrogative form as the first, but in the form of a phrase—he writes: “The Impact of Working Conditions And Job Characteristics on Teacher Mobility.” What he had set up, here, was a graduated transition of the historical segment into the rest of the Literature Review. The obvious purpose of this treatment was that he was, in effect, beginning to answer the question posed in the thesis of his dissertation—the question about the ongoing shrinkage of the teacher-supply curve. The main difference between the substance that came under the two headings was that, at last, he had begun to deal with the teacher-shortage that was being viewed as the function of the working conditions in the schoolhouse, the school community, whatever larger American societal thinking that crept quietly in, together with whatever habits the school children brought with them from home.

Here, he began by paraphrasing Lortie’s and Tyack’s position that, “Historically in the United States, teaching was not perceived by the pubic to be a ‘real’ profession until the1950s” (Lortie,1975; Tyack,1974). Teaching, he claims, was generally seen by the male population to be a side-gig. While women saw it as their pre-marital or pre-motherhood job, or the job of females who had resigned themselves to spinsterhood. With that, he goes on to show that as the social climate had changed and the concept of a union-shop in the workplace had become commonplace, in the latter half of the 20th century, the faculty lounge had also become the teachers’ meeting place with their shop steward, while teaching had begun to transform into a well-respected profession, in earnest ( ). Yet, in face of the rising level of respectability that those in the teaching profession were beginning to enjoy, many outsiders still had not been able to grasp the level of difficulty faced by green, inexperienced teachers who were struggling in their effort to impart content while blending it with the cross grain of learning styles and the unique multi-social admixture of a full classroom of students, especially those living in urban settings.

Ogundimu referenced a piece of research from Public Agenda (2000) in which it was found that many new teachers, as well as prospective candidates, aspiring for entry into the profession, tended to struggle, not only with what they perceived to be their inability to teach students in disadvantaged categories, as those mentioned above, but also under conditions intrinsic in the nature of school governance, together with a concern over salary disparities, and hiring practices. In the research, 664 public school teachers and 250 private school teachers were interviewed. Up to that point, these participants had taught five years or less. And a high percentage of them felt that teaching was more demanding than most professions, and that to be a teacher, one needed to have a “sense of calling.”

Research done with a focus group of private school teachers, in Westchester County, New York, expressed their desire to switch from private school instruction to that of public school for a salary boost. When asked whether they would do so by transferring to the New York City public school system for higher pay, they said they would not. In reacting to that, Ogundimu points to other research across the nation that are consistent with this study. He sums it up by saying that there is “. . .strong evidence that white teachers are more likely to leave a school as the enrolment of black and Hispanic students increase” (Ogunjdimu, 2014, p.23).

Further, these working conditions of the school environment that are perceived by teachers as inconducive to instruction appear to factor heavily into teacher quit-transfer decisions. When all the calculations on how teachers’ perception of the inaptness of the conditions that new and inexperienced teachers encounter were factored into the quit-transfer equation, NYC teacher-turnover rate of 35% far out-did that of schools in other areas at an average of 29%.

This third Level 2 Heading continues to expand the seamless connection between the purpose of the dissertation etched both in the thesis and the title by way of the phrase: “Teacher Quality, Student Learning, and Learning Outcomes.” In it, Ogundimu references Ballou et al’s. (2004) point that student-performance rests, to a great extent, upon excellent instruction. Unfortunately, school districts across the nation are failing the practicum which is summed up in the adage, “Put your money where your mouth is!”

 Inner cities appear most likely to be breeding grounds for student-failures and the inner city seems to swell with learning-handicapping ailments aplenty. Ogundimu relies upon numerous sources that operate in support of the teacher-quality side of his explanation why such anti-learning elements are localized to the urbanite heart of America cities. He says that “socially disadvantaged, inner-city schools . . . are disproportionately populated by low quality, ineffective teachers . . .” (Ogundime,2014, p. 25). And, in so saying, he has further expanded the radius of his theory on the vicious cycle of teacher-quittance.

He buttresses his argument with NCES’s statistics which says that, in the span of time between October 2004 and October 2005, the evidence of the problem clearly nested in the statistics which says that Blacks and Hispanics consistently have the highest dropout rates. When he compared the stats by race, he found that Blacks, Hispanics, Whites, and Asians/Pacific Islanders have dropout rates of 7.3%, 5.0%, 2.8%, and 1.6%, respectively (NCES).

In this, Ogundimu appears to be suggesting that the order of the drop-out rate seems perfectly consistent with the distribution of socio-economic conditions, ill-health, and so forth according to race. To my thinking, his documentation of the fact that Black children lead the negative charge is likely another way of unraveling the facts, by example, the meaning of the term, “disadvantaged” in connection with where the rupture in the teacher-pipeline is doing the most damage.

At length, Ogundimu introduces the steps that NYC DOE claimed to have been taking to cultivate a larger crop of quality teachers that were most likely to be fit for service over the long haul. Ogundimu’s research was geared toward determining whether how teachers are recruited has anything to do with teacher-quality and longevity in the job. He introduced various types of in-service teachers who were specially picked and harvested with the expectation that they would mature to a point of fullness that would help them cultivate the desire to want to remain in place over the long term.

He claimed that there was an effort to shift the recruitment strategy away from the old paradigm where the bulk of the public-school teaching force was drawn primarily from teachers who were certified in the traditional way (the NFT). This new strategy was to devise to create a system whereby those whom the DOE saw as less effective old hats, that routinely came in through the traditional channel, would gradually be replaced by newer ones. The plan leaned toward a “displacement principle” whereby “brighter” people would be drawn from the industries, businesses and the content-relevant private sector. Teachers from this source were called the “Teaching Fellows” (TFs). And of course there were those recruited from the Ivy leagues under the classification, “Teach for America” (TFA) ( Ogundimu, 2014, p.25). The fourth Level 2 Heading in his Literature Review was “Aggregate Teacher Supply, Demand, and Turnover.”

Here, Ogundimu introduces this segment as a major gap in the research on teacher retention versus teacher mode of entry into the profession. He writes that while the tension between teacher-retention and the mode of teacher-entry into the profession was real, there was precious little research available in the area. And, as such, he proposed that the two be treated as being complementary to one another. In my thinking, however, their relationship appeared to be more “inverse” than “complementary.”

In 2003, the National Commission of Teaching and America’s Future (NCTAF) and the National Education Association (NEA) reported that of America’s 155.3 million person workforce, only 4% (6.2 million) were teachers. This was the largest teacher-workforce to date (NCTAF & NEA, 2003). And in addition to the enormous number of teachers in the labor market, then, there was a constant mobilization of teachers from school to school and from school district to school district. Many of the positions in the vacated schools and districts remained unfilled by qualified teachers to the tune of approximately 90,100 vacancies between the 2000 to 2001 school year (NEA, 2003).

Ogundimu cites Ingersoll’s (2002, 2004) comparative statistics between teaching and other professions. He reported that in 1998, the annual turnover rate in non-teaching professions was 11% compared with the approximate teacher-turnover rate of 15.7%, in the 2000 to 2001 school year. In reference to the School And Staffing Survey (SASS) together with the Teacher Follow-up Survey (TFS), Ingersoll showed a steadily increasing trend in the rate at which one-year to five-year teachers tended to give up on the profession (Ingersoll, 2003, 2004; Ogundimu, 2014) .

He says that Hanusek et al, (2004) found that, in the 1990s, male teachers of “general education” were more likely to remain at their school and continue on the job than female teachers of the same category over the long haul. At the same time, he refers to Luekens et al. (2004) report which claims that “special education” teachers of the same period were more likely to leave the job than those in general education. Then, he said that Johnson et al (2005) found that minorities were not as likely as White teachers to give up teaching. With that, Ogundimu went on to say that, having examined these category of teachers who are most likely to chuck teaching aside for some other profession, he was ready to shine the light more directly on the relationship in New York City DOE between hiring practices and teacher-loss. For him, the primary consideration was to balance the mode of entry and departure between the traditionally certified teachers (he calls the NTFs) and the Teaching Fellows (TFs) in New York City Department of Education (NYC DOE).

The fifth Level 2 Heading is “The Cost of Teacher Turnover.” It goes without saying that high teacher turnover translates into an increase in teacher cost. He says that there is a tremendous amount of research that supports the position “. . . . that teacher quality is a highly reliable predictor of student achievement” (Aaronson et al., 2007; Ballou et al., 2005; Bock et al., 1996; Jordan et al.,1997; Nye et al. (2004); Prince et al., 2007; Rivkin et al., 2005; Rockoff, 2004; Roan et al., 2002; Sanders, 2000; and Sanders and Rivers, 1996).

Because some schools and school districts have such difficulty in retaining their teachers, the cost of maintaining quality instruction in those schools and districts is very nearly impossible. The enormous financial burden that is lugged along by some schools, as a result of their inordinately high teacher turnover rates, is normally noticeable in eight areas of critical need, according to Ogundimu. The eight aeras are “teacher recruitment, special incentives, administrative processing, training for new hires, training for first-time teachers, training for all teachers, learning curves, and transfers” (Ogundimu, 2014, p. 33).

From this point forward, the three remaining Level 2 Headings continue the expansion of the selected portion of the research material unto the platform from which the purpose for the dissertation is framed. With that, this Literature Review is directed at exercising the freedom to do the job of foreshadowing how the central thesis of the discourse will continue its development over Chapters III through V to its logical conclusion.

Coming out of the larger body of research consulted by Ogundimu, a significant gap that justifies the for this research (the rationale) was identified. In respect to this gap, he states that “teacher quit-transfer rate appears to be a function of the hiring practice,” and as such, he expected that an inevitable domino effect should carry over into students’ success or failure. Also, by narrowing down his target population to the PTF and TF teachers of the City of New York, Ogundimu has imposed an important limit on the breadth of his dissertation in Chapter II.

An important point of note is that I had taught with Charles Ogundimu in the same academic-vocational high school, in the South Bronx, for approximately eight years. He came to the school during the mid-nineteen nineties, working under a business licence before acquiring his mathematics licence as well, and making the switch into our Math-Science Department.

After four years or so, Charles took an assistant principal position at a competing trade high school. Three years later, he switched to the position of principal at a high school in Queens, New York City where he did some truly innovative things. He eventually took early retirement, four or five years ago, and has since been teaching at Pace University in New York City.

So, there is no surprise for me as I watch the direction Charles had taken in his Literature Review, and hence, in his dissertation. There, one gets to see up close Charles Ogundimu’s professional growth and transformation from a business education background in context with the cauldron of research that has bubbled up and boiling over into an important piece of research. From the vantage point of my metaphorical front row seat, within earshot of the revelatory conversation between title and thesis in Ogundimu’s dissertation, I am able to appreciate better than most of his reader from whence Charles had come with his fitting sensitivity to the macroeconomic angle of management in his Literature Review as it pertains to the labor factor side of production, where education is the commodity.

**7**. **Reflection on Personal Dissertation Idea**. Although it may seem that research which has any meaningful purpose or significance always begins with a research question, it does not. If the research question is the fount out of which springs the hypothesis—the theory— then, what is it that gives rise to the research question? Oftentimes, the seed out of which springs the research question may be some pressing issue or problem of concern that the researcher has been tossing around in his head at work, or in his discipline, or in his life.

Even though it is possible that a cardiologist might choose to do research on a problem that appears to exist in the structural engineering of multi-storied buildings, it is more likely than not that the person who chooses to do research in this area would be someone with interest in, or having some involvement in the field. The Ogundimu thesis statement appears to be the very first sentence under the heading, “Purpose” (p. 7). There he writes, “The purpose of my dissertation is to critically examine and compare the retention of beginning teachers from the [None Teaching Fellows Program] in NYC [Teaching Fellows] (TFs) with the retention of teachers who entered teaching in New York City through the traditional route” (Ogundimu, 2014, p. 7).

 Looking at the Ogundimu primary research hypothesis, one sees how perfectly nested the “problem statement” is in both his discipline as an educator and his work background as a school administrator. From the earliest pages of his research, the reader is gradual brought into the realization that the quit-transfer issue with teachers was a problem of ongoing concern to him in his position as school administrator. His background in business education appeared also to have been one of the main stabilizing props behind his emerging theory that one of the probable causes of the problem may well have something to do with the teacher’s mode of entry into the profession. And, from within that framework, his research would gradually bring out purpose and rationale as it communicated in a voice that showed a cultivated facility with the language of economics. For, his was a language that constantly made reference to the interdependence of two of the three factors of production (labor and capital) and how the interplay between the supply-demand curve impacts the teacher turnover rate. Evidently, working as an assistant principal and principal, Ogundimu had to have confronted the nagging problem of teacher turnover. That was obviously a sufficient driver that lead into “probable causes” (the question(s) generating a primary hypothesis), and the questions of what possible ways might there be to tamp it down (the treatment), and why (the rationale)?

So, as the “problem statement” emerges from the situational concerns within the would-be researcher’s training and, or, on-the-job issues, paving the way for the emergence of the purpose, the first question that arises should be, “Have any experts been looking at this problem with a critical eye?” Immediately upon the researcher’s answer to this question there should appear an imperative, urging him or her to locate and investigate whether or not there is a sufficiently large bulk of opinions on the problem, and whether the researcher’s theory about it fits tidily into any of the gaps in that body of literature out there.

PURPOSE

The purpose of this dissertation is to conduct a critical examination of the combined effect of the school desegregation and Title VII Laws in the education of children of African descent in the New York City public school culture. This study will provide a close-up look at why Brown v. Board of Education was necessary and where it fell short as seen in in its application to the New York City public school system seventy years after its passage. Although the broader implication of Brown was to lift all children together in our multi-ethnic, multi-racial society to the highest place of promise, this study will be centered primarily in Brown’s successes and failures in bringing along children of African descent to share in the promise of America as mirrored in the example of New York City’s Department of Education (DOE). And, as such, the study will investigate several topical issues about the education of Black children in the aftermath of Brown. Among them is the question about the quit-displacement rates of Black teachers in the NYC public school system as contrasted and compared with those rates for teachers belonging to other racial groups, especially White teachers (Alliance for Excellent Education, 2005; Boe et al., 2008. In addition, there are those other burning questions growing out of that in the pen ultimo. There is the question concerning the high failure rate of Black male students on New York State Regents Examinations and other standardized tests; the question about the ever-shrinking pool of the City’s DOE teachers of African descent (Ogundimu, 2014, p.17; Kirby et al., 1999); and the low admission rate of NYC Black high school graduates into college (Ogundimu, 2014, p. 18; HS&B,1992).

RATIONALE

The 1954 school desegregation decision, as a stand-alone law, has continued to be an important part of the effort by the judicial branch, at the highest level, to move the needle toward the fulfilment of America’s long-held promise to transform itself into a haven of enlightenment to be shared by all regardless of racial, ethnic, or religious differences (The Bill of Rights, of 1789). In Brown v. Board of Education, the Supreme Court of the United States had, in theory, at least, closed the doors of schools receiving government funds for the education of children of color. Today, looking back, it has become clear to me that the unanimous ruling of the justices, in the Brown decision, may well have been achieved without full awareness of the fact that, in closing the doors of the school buildings that housed the little colored children, it had, in effect, slammed the American school doors in the faces of teachers of color. Simply put, Brown did not go far enough.

 A decade after the Brown decision, a law was passed (Title VII of the Civil Rights Act of 1964; amended in vol.42, US Code. SEC. 2000e-2. [section 703]) that provided that vital missing piece which should have snapped right in place to optimize Brown. To me, there is a natural connection between the 1954 school desegregation decision and the 1964 equal employment law. Although, apparently unintentional, the latter law seems perfectly positioned to serve as the much-needed addendum that could help Brown achieve its ultimate objective of equal education in this extremely demographically diverse American society.

 By applying Title VII to education, there would obviously be some assurance that Black teachers, like their little Black students who had been sitting next to little White children in the same classrooms, since Brown, could no longer be denied a place at the table with their White counterparts, in faculty lounges, when they grow up. Even so, the failure of school systems to consistently enforce both laws, separately, or in tandem, meant that the inspirational influence of Black teachers upon Black children remained woefully lacking. Over the last sixty years, since the passage of Title VII, a considerable body of literature has sprung up out of the failure of school districts across America to help Black children realize the American promise of access to a teaching force that looks more like them. But few, to none, of that literature has been addressing the need for government and, or school official intervention in its effort to cement the bond between Brown and Title VII, in really practical terms. And thus, there is that nagging question swirling in the head of the little Black child—“Why Doesn’t My Teacher Look Like Me?.”

 From the time of the Brown decision and the passage of Title VII, until today, there has been a considerable amount of research about the diminishing presence of the already disproportionately few Black teachers in the American classroom together with its negative effect on the achievements of Black children. Despite that, there is very little research in respect to the reasons for the rapidly shrinking presence of Black teachers and the drying-up of the pool from which those teachers are pulled. Foremost among the several reasons for the rapidly diminishing presence of Black teachers appears to be a wanton disinclination of the nation’s public-school systems to work toward forging that critical bond between Brown and Title VII in their effort to answer the Black child’s question of, “Why Doesn’t My Teacher Look Like Me?”

The New York City DOE, the nation’s largest public school system, with an approximate student-body of 1.1 million, housed in more than 1,700 schools (Chen, 2023), is the prime offender in its seeming willful disinterest in desegregating the schools and maintaining an ample presence of Black teachers, enough to help Black children grow (Chen, 2023). Yet, while many researchers may have something to say about segregated schools as a thing by itself without seriously considering the part played by the insufficiency of Black teachers, almost no one has an opinion on the question of “Why are Brown and Title VII not being applied in tandem?” My recognition of this gap in the body of the research, having to do with the adverse effect from the failure of school systems to forge the two laws together, in practice, is my rationale for writing this dissertation.

HYPOTHESES

Under the Level 1 Heading entitled, “WORKING HYPOTHESES,” Ogundimu (2014) writes that his “… [Since his] working hypotheses are directly linked to the rationale for … [his] study….[His] rationale can be categorized into four distinct arguments/questions.” He lists five arguments (viz., questions) that give rise to five respective hypotheses, the first of which, is “the proponents’ conventional wisdom arguments.” Simply put, this is about the need for the researcher to review the body of literature amassed by experts in the field.

So, by using the Ogundimu approach as a template for my dissertation, I ask the following arguments/questions:

1. In what way has Brown contribute to the shortage of Black teachers in the integrated classroom?
2. Is there a negative impact on the extrinsic motivation of Black children who are taught only, or mostly, by White teachers?
3. Does the shortage of Black male teachers factor into the academic failure and disciplinary problems of Black boys?
4. Does the shortage of Black teachers in the classrooms affect the college enrolment rate of Black students?
5. What are the factors that have been contributing to the decline of the New York City Black teacher population?

Hypotheses:

1. If Brown v. Board of Education is not enforced in conjunction with Title VII (SEC. 2000e-2. [Section 703]) by NYC DOE, then, the overall success of the Black student population in the city will fall behind.
2. When New York City public school with large student-population of African descent has 10% or less Black teacher-role models, K-12, the college enrolment rate of Blacks high school graduates decreases.
3. New York City’s Black male public-school students who are taught by few, or no Black male teachers, (K-12), perform poorly on the New York State Regents

examinations.

1. If NYC DOE’s teacher hiring-retention practices result in a disproportionate drop in the city’s Black or African American teacher-population, then, Black or African American students will not be motivation to pursue a career in education or other academic based professions.
2. If the New York City public school children of African descent have had few or no Black teachers, K-12, then, the pool of qualified Black teachers will dry up.

 In the Ogundimu Literature Review, the first two pages, begin with a half page introductory paragraph mostly about the history of the problem. For example, it began with the words, “In the 1970s.” And about midway of the second page, he introduced the first subheading with a Level 2 Heading, “Who Teacher and Why?” This was still basically background information during the 1990s. After the next four pages, he inserted another Level 2 Heading, “The Impact of Working Conditions and Job Characteristics on Teacher Mobility.” Again, this was all about placing the problem in a historical context through 1950 to 2000.

Chapter II

LITERATURE REVIEW

There can be no intelligent discourse about school segregation and all its various forms of expression in American society today, if one does not, first, examine how the abolition of slavery in Massachusetts had splintered into 14th Amendment issues related to the specific problems that posed by the effort to educate former slave-children that inevitably prompts the questions, who sits beside whom in the classroom and who teaches whom, in terms of race and ethnicity. Court Records (1849) indicate that, in 1780, the abolition of slavery in the Commonwealth of Massachusetts went into effect with not even a single mention of the word, “slavery,” even though the abolition of slavery came about as a result of the constitution, itself (the mass supreme judicial court system). Approximately a year later, two rather earth-shaking writs, related to three separate complaints of maltreatment of slaves by abusive Boston slave-owners, were filed in the Massachusetts Supreme Judicial Court. Questions connected to the constitutionality of the slave owners’ inhumane treatment of “their” slaves, created a seismic shift in the movement toward the abolition of slavery and racial inclusivity in all spheres of Bostonian life (Mass Court System).

All Men are Born Free and Equal

Sometime in 1781, John Cushing (1961) tells us that a Boston slave-owner named Hannah Ashley swung a hot shovel at a young slave girl only to have the girl’s older sister, also a slave, step into the arc of the swing to take the blow. The young lady who had gotten hit, Elizabeth (Bett), was badly burned and chose to run away to the home of one of Mrs. Ashley’s frequent guests, Theodore Sedgwick. John Cushing writes that in May 1781, Sedgwick, himself, a lawyer, filed a “Writ of Replevin” (JPG 38.22 KB) jointly on behalf of Bett and a male slave named Brom, in the Berkshire County Court of Common Pleas. The case was heard in August 1781, in the Great Barrington Court of Common Pleas. In the end, the Court ordered that Bett and Brom be handed over into the custody of the sheriff for final release from ownership of the Ashley’s on the grounds that the plaintiffs were “people, not property” (John Cushing, 1961). Mr. Ashley promptly appealed the decision, but in the intervening months, before the appeal was heard, he came to realize that the decision being rendered in the various parts of a similar matter known as the Quock Walker Case would render his appeal futile (John Cushing, 1961; Melish, 2000; Education Research Center).

John Cushing (1961) writes that between 1781 and 1783, “the principle of judicial review to abolish slavery” was applied to three concatenated cases related to the question of whether one member of society possesses the constitutional right to own another member, and whether such an owner had the right to physically assault the person (a slave) he claims to own. All three of these cases, had to do with one particular slave. And together, the three cases were eventually placed on the record as a single bundle, collectively labelled, the Quock Walker Case (John Cushing, 1961; Education Resource Center: Mass Court System).

In synopsis, the “principle of Judicial review” resulting from the Quock Walker Case, as presented by John Cushing, informs us that, while the newly crafted Constitution of Massachusetts did not speak directly to whether or not the practice of slavery should continue in the new Commonwealth, the central principle of the constitution, John Cushing says, is completely at odds with that of a slave state. In Chief Justice William Cushing’s opinion on the matter (John Cushing, 1961, p. 118),

…[T]hese sentiments [that are favorable to the natural rights of mankind] led the framers of our constitution of government—by which the people of our commonwealth have solemnly bound themselves to each other—to declare that all men are born free and equal; and that every subject is entitled to liberty, and to have it guarded by the laws as well as his life and property….[S]lavery is in my judgment as effectively abolished as it can be by the granting of rights and privileges [in the constitution] wholly incompatible and repugnant to its existence (Edu Resource Center, etc. John Cushing; mass.gov).

 John Cushing (1961) explains that by the very fact that the Court’s decision in this matter was summed up as “the principle of judicial review to abolish slavery,” it had charted a course upon which the abolition of slavery in the Commonwealth of Massachusetts, would automatically sail into the history books. Through this channel, the principles leading to the emancipation of slaves, in that state, were put on track, not as a directly stated imperative of the Massachusetts’ Constitution, but as that single tributary with no other alternate navigable course that could be mapped out in alignment with the path that the Constitution had taken (John Cushing, 1961; Education Resource Center: Mass Court System). This was obviously one of those situations that required some judicial clarity.

In the opinion of many, the framing of the Constitution of the Commonwealth of Massachusetts occurred at a time, and in a climate where it would have been well-nigh ill-fitting for any newly emergent colonial entity, such as Massachusetts, aspiring to become a state of free Englishmen, to also cast itself in the mold of a backward-looking zealot of slavery, fully invested in that attendant “Savage Inequality.” This was the age of “enlightenment-thinking,” and the Constitution of the Commonwealth of Massachusetts may well have been an inspiration for France’s, “The Rights of Man” and the American “Bill of Rights,” the latter of which would, at length, find its way into the United States Constitution (America’s Founding Documents. LOC. archives.gov). But still, whatever the true intent of the framers of the Constitution of the Commonwealth of Massachusetts was concerning slavery, it did appear a bit muffled prior to Chief Justice William Cushing’s rendition of the opinion in the Quock Walker trilogy.

From John Cushing’s (1961) presentation, it is noticeable that In Chief Justice William Cushing’s overall opinion on the matter, in 1783, it does not only appear to show a somewhat left-leaning bias toward the abolitionist sentiment that was running amuck in the City of Boston, at the time, but even in the sentence he had lifted out of the Constitution, as stated in his opinion, is shown to be very tightly sutured to the connective tissue between the Constitution, itself, and the stand that had been taken by the chief justice against slavery (John Cushing,1961). So that, even if one were to choose to lay aside the judge’s apparent bias in favor of the abolition of slavery, his citation from the constitution alone was quite sufficient to make the case that: “…[T]he people of our Commonwealth have solemnly bound themselves to each other—to declare that all men are born free and equal” (John Cushing,1961).

There is, however, a conundrum lurking in the shadows of the words quoted from the constitution. It is the fact that, while a “reasonable person” would be driven by a compunction to infer that, since the constitution requires that all people of Massachusetts be “bound together” as equals (John Cushing, 1961), the judicial mechanism applied did not only outlaw the practice of slavery, but, it placed an onus upon the legislative body and the courts to remain forever poised to tackle the difficult, if not impossible, task of modulating the frequent expression of deeply ingrained racist ideals that had become second nature to many White folk in Massachusetts, at the time. It is thanks mainly to a number of “kinder gentler” policies of the state that the judiciary and the legislature of Massachusetts were able to bend the minds of many of its citizens toward a more humane way of looking at race. Or did it?

Chief Justice William Cushing characterized slavery, in its relationship to the Constitution of Massachusetts, as a practice that was “wholly incompatible and repugnant” (John Cushing, 2018). With the 1783 emancipation of slaves, the question of how should ex-slave-children be schooled had naturally become a front burner-issue, which given time, would definitely ignite a powder keg of resistance from people in the White community.

The book edited by Robert Hall (2002) informs us that the state felt that, with the abolition of slavery, the natural course of action was for Black and White parents to find a way to help their children learn together in the same classrooms, and, to play together on the same playing fields. Yet, there could be no question that most White Bostonians would have already begun to conjure up “unwelcomed” images of their little White children seated next to children, who, a few days earlier, were assigned by “nature” to their rightful place of servitude to their White counterparts of the same age. So, if the quotation from the constitution, “all men are born free and equal” (Robert Hall, 2002; John Cushing, 1961) were to carry any weight, how, then, should the people of Boston balance the attendant principle such as “equal” access to education for Black and White children, alike?

In John Cushing’s view, the state had, all the while, intended for public schools to be integrated, immediately following the abolition of slavery. And when that intention had begun to be more evident, it became crystal clear that the government of Massachusetts did not give any legal consideration on how to deal with White people’s long history of misguided association of the Black complexion with the natural estate of slavery. Would the bulk of White Bostonians be able to relinquish their claim to superhuman status when Black skinned people began to mingle in the public spaces, freely. So, literally, because the government did not anticipate the “harassment” of the Black children in the schools, it did not set up legal provisions to head off the inevitable violent acts against Black children to come, in both emotional and psychological ways (Robert Hall, 2002; John Cushing, 1961)?

How did Racially Segregated Schools Begin?

The moment it became clear that the principles of the Constitution of the Commonwealth had an inbuilt sub-system that automatically required the integration of public schools, without regard to the color or race of the children, the dominos of the, as yet, inescapable questions, began to fall. Should not the law provide, post facto, some means of remediating the lost years of the retarding effect of the enslavement of Black children? Should there not have been a success-stimulus infusion of apportioned doses of Black teachers into the blood stream of the Massachusetts public school districts, as well? Or was there a plan to put in place some kind of, speaking anachronistically, “affirmative action” that would create a readily available pool of teachers who looked more like the slave-children who were being brought into the educational mix? Or, did anyone even see the necessity for the inclusion of Black teachers along with the integration of Black children into the mostly White public-schools? As it appears, to me, there did not even seem to be a thought that the employment of Black teachers was necessary, at the time.

My impression is that the school integrationists of 1780s Massachusetts, would never have considered that there was any need for Black teachers. At any rate, there would certainly not have been a fully ripened harvest of qualified Black teachers to pick from, since the Black population, with the exception of “free-people,” were newly emancipated slaves. Moreover, Neal (2018) suggests that it would be quite infantile to think that as soon as the integration of schools began, the little former slave-children would have been greeted with a welcome mat at the entrance of the schoolhouse; or that they would have just been automatically treated like regular students by White teachers and students alike (Neal 2018, pp. 4-5). Clearly, the law which ordered school integration in Massachusetts, during the mid 1780s, may not have been such a good thing in the absence of strategies to protect the little former slave children and provide pedagogical role models who look like them.

Danns (2015) writes that during much of the latter half of the 1780s, Black parents were having anxiety attacks over reports that their children were being made the unhappy recipients of harsh unrelenting harassment at the “hands” of White teachers and students, alike (Danns, 2015; Robert Hall, 2002; Prelude to Brown). Meanwhile, Upon the abolition of slavery, the judiciary and the state of Massachusetts had decided that racial integration of the “common schools,” in the state, would be the way to guarantee that all children have equal access to education in a safe environment, regardless of race. In Moss’s article, it is brought out that although the law, ordering the integration of schools, applied just as much to the capital City of Boston as it did to the rest of the state, the situation that arose in Boston tended to demand a unique approach. Although the integration of the common schools, following upon the heels of the emancipation of the African slaves was done with the best of intentions, they were done without full consideration of the fact that the abolition of slavery, in itself, would not automatically irradicate the subcutaneous infection of acculturated racism in the attitudes and behaviors of many White residents. Many White Bostonians would obviously remain troubled by the prospect that they were going to have to live together with former slaves and their children in the same public spaces (Danns, 2015, pp. 35-‘6). It seems that in such a climate, the children of former slave would certainly be subjected to the same type of beatings and maltreatment as before, especially in integrated schools.

Was There Physical Abuse of Black Children by Boston’s White Teachers?

Gershoff and Font (2018) report that Black children in American schools had historically been the recipients of summary accusations and unfair punitive actions by educators (Gershoff & Font, 2018). This would be no less true in Boston’s integrated schools of the 1780s. Despite that, though, Hall (Robert Hall, 2002) tells us that the consensus among historians has been that many Black Bostonians of that period had chosen to keep their children out of the integrated schools while also asking the government to provide them with segregated Black schools, because of the “verbal abuse” Black children had to contend with (Robert Hall, 2002; Joanie DiPietro;).

But the claim that the concern of Black parents over the maltreatment of their children was some kind of unspecified race-targeted verbal harassment does not strike me as reason enough for them to build a movement pushing for the creation of segregated Black schools. Looking back at It, in the context of the Black parents’ rejection of the racially integrated schools, as a climate in which the alleged harassment of Black pupils was taking place, one wonders whether there might have been a bit more to the debate, and whether historians and researchers may either have not been completely honest, or that they may have just not been privy to the whole truth.

The question is, has there been any recorded incidents of disciplinary actions by White teachers against Black children which exceeded the levels of punishments by White teachers against White children in intensity and frequency in late eighteenth to mid-nineteenth century Boston? Truly, the answer to that question rest squarely upon the answer to that other question of whether corporal punishment was actually an approved disciplinary practice in the Boston common schools, back then. For, since corporal punishment was permitted by law, there could not have been any debate as to whether there were instances of physical abuse of Black (recently enslaved children) children in a school system that approves the physical abuse of children.

Myra C. Glenn’s (1981) article points to a couple of popular cases about corporal punishment that caused a stir. She writes that in 1831, Mr. Moses Jaquith lodged a formal complaint against a Mayhew Grammar School teacher named William Clough for cruel and inhuman treatment of his son. The complaint stated that the child was whipped viciously for his inability to pronounce a word (Glenn, 1981). This touching story is really about a child who had been whipped mercilessly because he had a speech-impediment that (Glenn, 1981), possible, unbeknownst to Mr. Clough, had made it difficult, if not impossible, for him to pronounce a particular word. What this means is that even though the incident actually occurred without regard to race, the tragedy was that most of those little ex-slave children during those first fifty years after Massachusetts abolish slavery, would not have been able to speak the best English anyway. I would expect that many of Black children in Boston, back in that time, must have been frequently found guilty of verbicide and mispronunciation of a whole slew of words.

Glenn (1987) says that on the eighth day of November 1831, a letter written by the parent of another child appeared in The Boston Gazette. That letter accused the same Mr. Clough of whipping another child severely for a “trivial offense.” As a result, a petition, bearing the signatures of four hundred parents was submitted to the “school-committee (the school board),” requesting the dismissal of Mr. William Clough. The petition was, however, denied (Glenn, 1981, p.395).

Glenn (1987) continues by saying that parents’ activism against “abusive whippings” by teachers was indicative of a wider, more systemic use of brutal corporal punishment as the ultimate instrument by which to curb obstinate undisciplined behavior of children. She writes that eleven years earlier, in 1820, a rash of similar brutal uses of corporal punishment had also stirred reaction from parents in a number of other New England States. Then, there were parents’ demonstrations everywhere. Those parent demonstrations, in reaction to the problem, which are said, by Glenn, to have been historically more prevalent in urban schools than in rural and suburban schools, had really only begun to gather steam between the 1830s and ‘40s. But then, by the middle of the 1850s, the demonstrations had gradually begun to fizz out and slowed down to a crawl, even though the whippings continued (Glenn, 1981).

John R. Vile (2009) tells us that in 1859, a ruling was issued by the Massachusetts Judicial Court on a suit heard under the name of Commonwealth v. Coke (Mass.) (1859). The suit was filed on behalf of an eleven-year-old child named Thomas J. Wall who was in attendance at the Elliott School. According to John Vile, the boy had obstinately resisted the teacher’s demand that he recite the Lord’s Prayer and the Ten Commandments from the King James Bible. The boy was Roman Catholic, and his claim was that he had been instructed by his priest to do such recitations only from the Catholic (Douay Version), not from the King James (Vile, 2023).

The case was heard by judge Main, and his decision was made in favor of the teacher, Mr. William Coke. In writing his opinion, Judge Main first makes reference to a pertinent law. He says that while, the law in the State of Massachusetts requires that children be taught “ ‘the principles of piety, justice, and sacred regard to truth, love to their country [sic], humanity’ and other virtues,” no student should be made to suffer physical, emotional, or psychological injury for choosing to relate to those principles in a manner consistent with his or her religious convictions or beliefs (Vile, 2009). He went on to say that young Thomas Wall’s refusal to recite the biblical text as he was instructed, was, in a manner of speaking, a claim for the right to be treated as a “conscientious objector” of sorts, and that, if his refusal to recite the Bible passage in the version the teacher required were allowed to stand, it would send a message to others students that they, too, may object to reading any religious books they are asked to. Finally, Judge Main concludes that by whipping the boy, the teacher was acting in loco parentis, and apparently had the right to do so (Vile, 2009).

 Perhaps a good reason why the child-beatings persisted in the schools, despite the resistance by parents, was that it had been from the very inception, a practice guided by the Biblical aphorism, “Spare the rod and spoil the child” (Prov. 13:24; 22:15; 23:13), and which, at that time, and since, had been widely accepted as a sacred “divine imperative.” This leads one to wonder how much more problematic might it have been for the fresh new crop of students (former slaves children) who might have come in with some kind of Afro-indigenized version of Christian principles, or, at the very extreme, a thorough grounding in some “strange” African religion.

By using a handful of anecdotes in a straw-poll way of accessing how widespread corporal punishment had to have been during the latter part of the eighteenth century, into the nineteenth century, the door is swung wide open to expose the dark, nether side of that brutal unharnessed system of discipline galloping roughshod through the integrated common schools of that City of Boston, wherein no child could possibly have been exempt. The truth is that in the late 1700s onward, Black parents were withdrawing their children from the integrated common schools in drove on the claim that their children were victims of verbal harassment. Neither have I been able to find research pointing directly to how the physical abuse visited upon White children would also have been visited upon the former slave-children, as one would expect it to. Yet, it seems very unlikely that there was no similar physical abuse of Black children, nor if whippings were administered to Black children, one would expect that it would have been, at the very least, administered proportionately on a per capita basis similar to that administered to White children.

The implication, then, is that in the Boston integrated common schools, from 1783 until roughly around the turn of the century, the Black former slave-children who, had begun to take their seats among the other (White) children, were reporting to have been verbally harassed by White teachers and students, but never reported that they were also subjected to physical beatings. My thinking is that since the best that these Black children could have hoped for, would have been to be treated equally, they would not have been exempt from corporal punishment. That being true, something has to be missing from the reported reason why Black parents were so desperate to remove their children from the integrated common schools of Boston.

Recent research, including that of Gershoff’s and Font’s, indicates that when Massachusetts had finally banned corporal punishment in its public schools, in 1979, it was the second state in the Union to have done so. Therefore, it is reasonable to accept DiPietro argument that everything about the two cases, in 1831 and 1859, suggests that the use of corporal punishment was neither new nor unique to the Mayhew School and the Elliott School, nor to any other integrated school, in the City of Boston, between the eighteenth to the twentieth centuries (DiPietro; Glenn’s, 1981; Vile 2009; Gershoff and Font, 2018).

Joanie DiPietro (Corporal Punishment in Beverly and Cambridge, MA: Just, or just plain (primaryresearch.org)) calls attention to research which reveals that corporal punishment, borrowed from English common law, was felt to be an absolute necessity in the business of student disciplined in America (DiPietro). So, while the whippings at the two schools testify to the dangers of the unchecked power given to teachers to exercise discretion in their use of the whip to curb “undesirable” student behavior, in the eighteenth and nineteenth century, it also exemplifies how the whip had become the instrument for corporal punishment abuses in the final quarter of twentieth century America, all the way back to the early seventeenth century (Glenn, 1981; DiPietro; Gershoff and Font, 2018).

Ostensibly, the growing concern over allegations of harassment of the former slave-children had apparently begun to excite a sense of urgency within the Black community of Boston to set up a safer learning environment than that within the White integrated schools. According to Robert Hall’s (2002) account, the fact that most of the Black parents of Boston had opted to withdraw their children from the mostly White integrated common schools was a big deal (Robert Hall, 2002). One could hardly expect teachers who may have watched in silence or, who may have, themselves, been party to the abuse of some children simply because of race, to also be fair to those children in the matter of grading or in punitive actions.

Researchers such as Gershoff and Font (2018) have already shown that corporal punishment, at any time, would be brutal, and that Black children were the ones most likely to get the proverbial “end of the stick” from the time African slavery had begun in the New England states until it was banned in Massachusetts, in 1979 (Gershoff and Font, 2019). What we do know is that there were no Black teachers or school administrators of color to object to the mistreatment of Black children in real time because there were no Black faculty in the integrated common schools of Boston for at least eighty six years after the emancipation of African slaves in Massachusetts (Robert Hall, 2002 ).

The Unavoidable Necessity: White Teachers, Black Schools.

An Unavoidable Necessity: White Teachers, Black Schools.

Doubtlessly, the most vital tool available to teachers in their “extra-instructional” mission to help stimulate and guide students’ character-development, including the cultivation of sound moral judgment, is that of their being the best suited role-models, in an environment of fairness and justice. But clearly, the chance that these former slave children would have teacher-role-models who resembled their parents in culture and race, in late eighteenth-century Boston, was slim to none.

Lit Review To Be Continued

Collection of data for analysis: Out of a random sample of 60 students, drawn from the population in question, 57 of them did not pick teaching as a career goal?

Null Hypothesis (Ho): "fifty-seven out of 60 Black New York City public school twelfth graders, for whom 20 % or less had Black teachers, did not declare a major other than teaching to be their career goal on their college application."

Alternate Hypothesis (Ha): "57 out of 60 of Black New York City public school twelfth graders, for whom 20 % or less of their high school teachers was Black, declare a major other than teaching to be their career goal on their college application."

Probability (P) Therefore: P(x < 3) = P(x = 0) + P(x = 1) + P(x = 2) +. . . . + P(x + 3)

 Sample mean: µ = np = 60 (0.98) = 58.8

 Standard deviation: $σ$ = $√$np(1--p) = $√$60(0.98)(1- 0.98) $=√$(58.8)(0.02) = $√$1.176 = 1.08

 Using a z score from the standard normal table

 P(x $\leq $ 3) $≈$ P (z $\leq $ x - µ) $≈$ 57 - 58.8 $≈$ P(z $\leq $ - 1.66) = 0.05 ( from the z table). $σ$ = 1.08

So, if it is true that 98% of twelfth graders in the population did not declare a major other than teaching, there should be a probability that there is 2% or less of such students in the finding that shows 57 or more twelfth graders from a random sample of 60 in this population do not select a major other than education on their college application would be significant, and H0 would not be rejected. However, the above finding is not true.

 The finding of the above test shows figures that are near opposite to a non-rejection. Basically, the double negative of the null hypothesis, is saying, in essence, that 57 out of 60 Black twelfth graders pick education as a college major. But the significance level shown in the above null hypothesis test is 0.05 or less for non-rejection. Therefore, it would be false to say that 98% of twelfth graders picked education, when the significance level only provides the probable chance of success for 5% of such students. In this test the null hypothesis is rejected.



 54 57 59 61 63

 -4$σ$ -2$σ$ ($μx) $ 2$σ $ 4$σ$

Finally, my dissertation will follow a correlation design. The two main instruments will be “Pearson r” and “Eta-squared.”

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