

Correlational Study on Students  
Official GED Practice Tests Scores and  
Official GED Test Scores

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A Special Project  
Presented to  
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Heritage University

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FACULTY APPROVAL

Correlational Study on Student's Official GED Practice

Test Scores and Official GED Test Scores

A Master's Special Project

By

Ramon Cardenas

Approved for the Faculty

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## Abstract

The purpose of the project was to identify if a correlation existed between the students Official Pre GED scores and the Official GED scores. Data was gathered from the High School Equivalency Program after students had completed a minimum of 160 hours of class instruction. There were 66 participants with migrant farmworker backgrounds whose math and reading scores were analyzed.

Support for the hypothesis was accepted, which stated there was significant correlation between the Official Pre GED and the Official GED test scores. The researcher was very confident with his results at 99.9%. Results indicate students who pass the Official Pre GED test are more likely to pass the Official GED test. The null hypothesis was rejected at all levels as the study found that both the Official Pre GED exams did have a significant correlation with the Official State GED tests.

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## Chapter 1

### Introduction

#### Background for the Project

Since the 1960's the United States has had problems with high school dropout. Federal and State governments have invested millions of dollars into General Education Development (GED) programs to help the millions of people who were without a high school diploma or a GED. Millions of dollars went to local colleges via state and federal grants for programs like the High School Equivalency Program (HEP) to help the migrant farmworker population obtain their GED by offering free instruction and assessments (GED Testing Services, 2009 pp. 4-6).

According to the Office of Migrant Education (OME) that oversaw all federal programs intended to assist migrant farmworkers in the US, there was a huge disparity in graduation and dropout rates within the migrant farmworker community. The HEP's goal was to assist Farmworkers who did not finish high school and offer them an opportunity to get their GED by providing migrant farmworkers with free bilingual instruction, tutoring classes if needed and financial support by paying for their official GED tests (USDOE, 2012). Another part of the HEP program's goal was to assist migrant farmworkers with career and post-secondary placement. Besides the HEP program the United States Department of Education (USDOE) had many other programs that assisted migrant students and their families' education. Programs such as the Migrant Student Record Data (MSDR) unified and helped identify all migrant students who were recruited for Migrant Education services. The Migrant Student Information System (MSIS) made it easier for migrant recruiters to locate and offer migrant services to migrant families as they

were identified by MSRD recruiters. The MSIS tracked students and transferred their academic and health records as migrant students move to different schools throughout the US (MSDR, 2011).

In spite of high dropout rates efforts to get people their GED increased and in response the number of companies that developed and upgraded GED materials to help students prepare for their GED exams also increased. Materials such as Official GED Practice assessments and study guides were put on the market for all five GED subjects (math, reading, writing, science and social studies). Many companies claimed that their products better prepared students for the official GED exams, companies like GED Testing Service (GTS) were leaders in producing materials that helped prepare students for the official exams. GTS assures that their tests are similar to the official test, making it easier for students to analyze if they are ready (GED Testing Service, 2009, p.4)

The HEP served 125 students located in the South Eastern part of Washington State and used GTS Official GED Practice Tests and other products that helped students in preparation for their GED exams. HEP used the GTS products from 2003 to 2014 and found their products very useful. For this particular study the students who were part of this project were from the 2013-2014 cohort.

### Statement of Problem

The researcher's concern was to identify if the official GED Practice test assessment conducted after 160 hours of class instruction and preparation had any correlation when compared to the students' official GED scores.

### Purpose of Project

The study was designed to see if the Official GED Practice tests and the official GED tests had any significant correlation and to see if it was reasonable to assume that passing the Official Practice GED tests led to passing the Official GED tests.

### Delimitations

The study took place at a HEP located in the Southeastern part of Washington State. The information analyzed was only the HEP program's students which consisted of 91 students served in the 2013/14 school year. All students in the program were classified as a migrant or seasonal farmworker and all were from the Yakima Valley and commuted to the classroom.

### Assumptions

A correlational assessment was made by the researcher that GTS Official GED Practice exams were accurate exams when compared to the state's official GED exams. The researcher analyzed both the Official GED Practice test and Official GED test using Pearson's r Correlational formula. Even though the study was correlational it doesn't represent the general population as these students come from migrant farmworker backgrounds and their educational experiences were different than the general US population. Migrant farmworkers received minimal education due to their migratory and seasonal work patterns and short stay in K-12 schools. The test groups were all migrant or seasonal farmworkers with an average grade level of 9<sup>th</sup> grade.

Another assumption made by the researcher was that with an average of 160 hours of instruction the students would be prepared to pass the official GED exams as long as they obtained a minimum score of 450 points or more per test on their Official GED Practice tests.

### Hypothesis or Research Question

The purpose of this study was to determine if the official GED exams conducted on Migrant Farmworkers who were enrolled in the High School Equivalency Program had a positive correlation on their official pre GED exams after they had completed 160 hours of instruction.

### Null Hypothesis

The researcher assumed that the official GED Practice exams had no positive correlation between the official GED exams. The researcher validated the hypothesis by testing the significance at a greater than or equal to .05%, .01%, and .001%.

### Significance of the Project

The purpose and significance of the project was to determine if the Official GED Practice tests accurately assessed GED students' readiness to take the Official GED exams and pass their test on the first try. If this study proved to have a negative correlation or no change the program would have to reassess their materials and find better assessments to give to their students.

### Procedure

The following procedures were implemented for the purpose of this project:

1. Consent from HEP program

2. Literature reviews and several research studies
3. Review of Official GED Practice tests and official exams
4. Measurement for significance between Official GED Practice exams and Official GED exams were conducted through a correlational study comprised of math and reading scores for the 2013/14 HEP school year
5. After all data was analyzed (practice and official exams) Test for significance was concluded to accept or decline the hypothesis

### Definitions of Terms

Migrant farmworker was defined as a person who leaves his or her home to work in the field of agriculture and follow seasonal harvest patterns of crops to different states or cities to later return to their homes.

### Acronyms

OME. Office of Migrant Education.

HEP. High school Equivalency Program

WSIPP. Washington State Institute for Public Policy

ESL. English as a 2<sup>nd</sup> Language

MEP. Migrant Education Program

MSRTS. Migrant Student Record Transfer System

MERO. Migrant Education Regional Office

MSDR. Migrant Student Data and Recruitment

NCES. National Center for Education Statistics

OSPI. Office of Superintendent of Public Institution

CAMP. College Assistant Migrant Program

MEES. Migrant Education Even Start

USDOE. United States Department of Education

GTS. GED Testing Services

## Chapter 2

### Review of Selected Literature

#### Introduction

The past few decades brought a lot of change to our education system across the nation due to major changes in society such as immigration. They were key items that led to changes within the US Department of Education. Other adaptations to the education system were brought up through lack of employment, poverty, discrimination, crime, and many other reasons in society. Migrant farmworker students who were in the traditional K-12 system had a hard time adapting to the American educational system due to language barriers that were brought through immigration. Even after laws in education changed to better help student's transition into the K-12 system laws such as the No Child Left Behind laws were aimed at making sure all children had the right to a full education. Still many struggled and hundreds of thousands of students every year dropped out of school for various reasons as stated above (Villalobos, 2011, pp. 1-4).

According to General Education Services millions (over 39 million) of people lacked a high school diploma, with education epidemic the USDOE has invested millions of dollars to help educate people and earn at least their GED diploma. The money was funneled to local colleges, universities, and other non-profit organizations in the form of grants. The High School Equivalency Program (HEP) is a federal grant under the Office of Migrant Education that aimed to help the migrant farmworker community due to its high dropout rate and mobility for employment in the agricultural area. The HEP provided free instruction, tutoring supplies, and paid for the cost of the GED exams. The HEP's goal, besides the instruction for GED, was to

help students transition to higher education, career and or military placement (GED Testing Services, 2009, p. 17; USDOE, 2012).

Due to the millions of people without a GED the researcher analyzed literature that helped support his research on how effective GED materials had prepared students for the Official GED exams. Such research was the correlation of GTS Official GED Practice exams and the Official State GED exams. The researcher also analyzed the migrant farmworker population's dropout rate and the schools failure to retain students of migrant backgrounds. In addition the researcher analyzed data that represented statistical numbers representing students with different cultural backgrounds to have a clearer perspective of which students were most in need. Finally the researcher then analyzed data that showed the successes that a GED can do for a person once they obtain it (GED Testing Services, 2009, p.17).

### Migrant Dropout Rate

What is a migrant farmworker? Migrant farmworkers are people who followed crops across the country in the agricultural industry, then later returned to their home state or country. Due to their high mobility students missed school and many often never returned. This pattern created a system where more than fifty percent of migrant students did not graduate.

Migrant students who entered schools with various deficiencies do so at a huge disadvantage over the traditional American students. According to the Washington State Institute for Public Policy (WSIPP), migrant farmworker student lacked proficiency in English language skills, had culture differences, experienced shortages of instructional staff, lack of assessments, limited parental involvement due to language barriers, work, and family circumstances (Poverty,



health, housing, transportation and legal issues, and the inexperience that schools had towards migrant students) (Pennucci, & Hannah, 2007, p. 3).

Due to the high mobility and high dropout rates of migrant farmworkers in the K-12 system the Federal government formed the Migrant Education Program (MEP) in 1966 to better serve migrant students and offer them supportive services that helped them transition into the traditional school system. Services such as ESL (English as a 2<sup>nd</sup> Language), health programs, parent involvement strategies, bilingual staff and other resources helped with the transition of migrant students. Before the MEP was created migrant students graduation rates were close to zero. In 1969 MEP implemented a well needed program to help track migrant students which was the Migrant Student Record Transfer System (MSRTS), this system was designed to help track migrant students as they moved from state to state or city to city. Student's records were updated and transferred to their new school which helped the schools better serve students and connected them with the right resources (Lunon, 1986, p. 1).

According to the Migrant Education Regional Office's (MERO) focus was to enhance "the learning success of migrant students with services designed to promote the advancement of the "whole child" inclusive of home, school and community". The MERO 105 program provided assistance to several districts, such as Benton, Columbia, Franklin, Grant, Kittitas, Klickitat, Walla Walla and Yakima counties in Washington State which served over 16,000 migrant students over 60% of the states migrant population. MERO provided services such as literacy, curriculum, math, administrative services, and parent services to better help the student transition into the traditional education system. Even with these efforts students' retention rates were still below the states average (MERO, 2011).

The Migrant Student Data and Recruitment Office (MSDR) served “as the pulse of records transfer and Identification and Recruitment (I&R) for Washington State’s migrant students”. MSDR served over 32,000 migrant students in the state of Washington and was responsible for the student’s health and educational data transfer as they hosted the MSIS system. Even with the federal government’s implementation of migrant programs the students were still graduating at a pace slightly above 50%. For instance, Yakima School District had enrolled in 2010/11 a total of 3582 migrant students by the end of the year 718 migrant students had withdrawn from their school (MSDR, 2011).

The migrant population had improved, from graduating close to 0% before the federal government’s implementation of the MEP and other migrant services to around 50%. There was still a lot of work that needed to be done, 50% is better than 0%; according to the National Center for Education Statistics (NCES) Latinos nationwide were still one of the groups with the highest dropout rates in the country. The NCES reported that in 2009, Latinos had an Average Freshman Graduation Rate (AFGR) dropout rate of 28.6 percent compared to 19.4 for non-Hispanic White population. Migrant programs helped close the gap; thirty years ago the Latino dropout rate was at 35.2 percent. Even though the gap had gotten closer at 28.6 percent it is unacceptable and the government should keep bridging the gap until it is bridged (Stillwell & Hoffman, 2011).

Being a migrant farmworker was not easy, Migrant farmworker students experienced several barriers that they needed to overcome as they transitioned into the traditional US education system. These barriers included: language, poverty, isolation, cultural and socio-economic clashes, health issues, and limited to no support from parents among many other variables. Research done by Rafael Villalobos (2011) concluded that 62% of migrant students in

Washington State high schools were on track to graduate on time. As stated earlier this number was still very low for migrant students but a lot better than when it was close to 0%. Villalobos' research noted that migrant students were still behind by 8% over traditional high school students in Washington State, the researcher concluded that the gap is slowly closing and migrant students are benefiting from migrant programs established by the federal and state government (p. 15).

### Migrant Student Opportunities/Resources

Migrant student opportunities started when the federal government created the Office of Migrant Education to oversee all migrant grants. The Migrant Education Program as authorized under Part C of Title I of the Elementary and Secondary Education Act of 1965 soon followed. In Washington State MEP allocated Federal funds to the Office of Superintendent of Public Instruction (OSPI) that provided services to students ages three to twenty one who were residents of the state. With these funds OSPI provided services to migrant students throughout the state, some of the services provided by the funds were as followed i.e. (See Appendix A):

- Supplemental academic programs to assist in the achievement of state academic standards
- Instructional training
- Health programs (OSPI, 2012)

The High School Equivalency Program was a beneficial program for migrant students who dropped out of school and could not return for various reasons. HEP provided free instruction and tutoring for students who worked in the agricultural field, fisheries, dairies farms,

and tree planting fields. Students needed at least 75 days of agricultural work within the last two years to qualify for enrollment (USDOE, 2012).

According to research done by Escamilla and Guerrero (2014) indicated that the College Assistant Migrant Program (CAMP) was designed to assist migrant farmworker students who graduated high school or obtained their GED. The CAMP program was initiated in 1972 by the USDOE to assist migrant farmworker students in their transition to college. Migrant farmworker students were already dropping out of high school at an alarming rate of over 50% and the ones who made it to college were faced with similar barriers. Some of those barriers were the sense of belonging, they dint have college role models, they're development of the English language and their writing skills were not complete, college was something new that they dint have a clear understanding of, prioritizing family over education were just a few to mention. The solution to increase migrant student's graduation was CAMP it provided services to migrant student who qualified; they had to be identified through MEP's MSIS system or had to produce work history in agriculture of at least 75 days within the last two years. Once qualified students were eligible to receive assistance in the form of "outreach, counseling, tutoring, skills workshops, financial aid stipends, health services, and housing assistance" for their first year of college. Follow-up services were provided to participants after their first year (pp. 159-161).

In 2002 the US Department of Education (USDOE) formed a new grant called Migrant Education Even Start (MEES). MEES was formed do to the low level of education and the extreme poverty that migrant families lived in, the goal was to improve both parents and children's educational levels for students it was a better opportunity to graduate and for parents a

better chance to improve their employability. This program provided and served both the students and parents with the following services to families that qualified:

- Early childhood services
- Adult literacy or basic education
- Parenting education

MEES was intended to help break the cycle of poverty and illiteracy of migratory agricultural or fishing families by improving the educational opportunities. The focus was to integrate early childhood education, adult literacy or adult basic education, and parenting education into a unified family literacy program (USDOE, 2003).

### Benefits of Having a GED

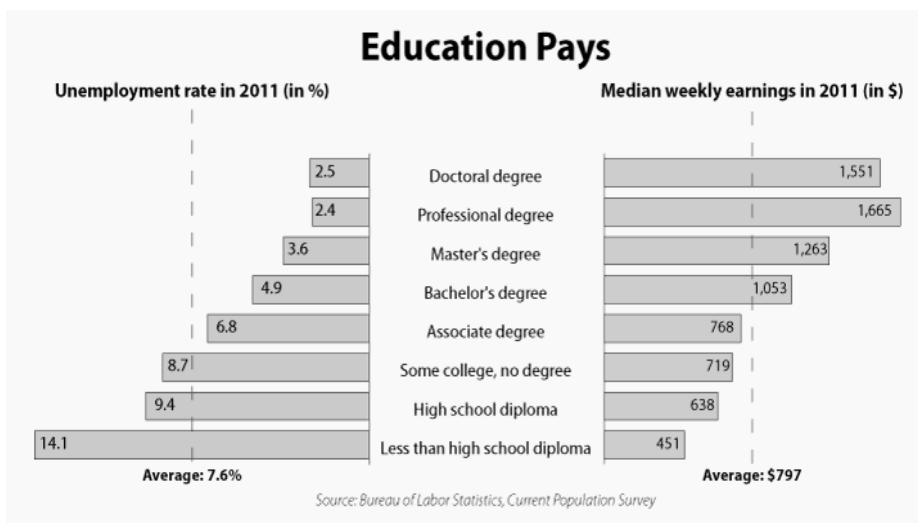
According to the GED Testing Center there were over 39 million people in the United States without a high school diploma or its equivalency (GED). Studies suggested that people without a high school diploma or GED were making 8% to 12% less than those who possessed a diploma. People who obtained a GED were on track to a better path and they received more opportunities to apply for jobs that required a GED. The focus of obtaining a GED was to improve financially by seeking post-secondary education or vocational trainings to improve and establish careers with benefits (GED Testing Services, 2011 p.3; Boesel, Alsalam, & Smith 1998, pp. 66-68).

Research by Golden (2003) says that GED grads who had self-efficacy tended to be more successful in college, do to their determination, “survival skills and/or perseverance to achieve their goal” you just have to want to. For most high school dropout’s college or vocational

trainings seemed a faraway dream to accomplish. A GED can make that dream a little closer over 98% of colleges and universities accepted the GED diploma as an equivalent to the high school diploma. Students who earned a GED automatically qualified for Federal Student Aid to cover some of the cost of attending college or vocational trainings in the form of grants and/or loans. The GED established and certified basic cognitive skills; even though it did not generate them it still opened the door for those who wanted to seek further training and or post-secondary education. Once a person obtained their GED they started seeing benefits they were not able to receive prior to it, such as financial aid, increase in income, jobs with benefits, more job stability, etc. Studies suggested that GED graduates kept up with high school graduates when it came to vocational trainings. The tools were there for student’s success, as colleges had programs that could assist students who needed that extra help (pp.14-16).

In figure 1 provided by the United States Department Labor (USDL) will show the benefits of having a GED but more interestingly dropout students can analyze for themselves the benefits of pursuing further education. Student can see the difference in earnings with further education and also can see that with more education comes lower unemployment rate (2012).

Figure 1



Baycich (2003) concluded that 66% of GED graduates were seeking post-secondary education a sign that showed an increase, times were changing and more dropouts were figuring out that they were not going anywhere without a GED or high school diploma. Even though 66% was a high percentage for those seeking post-secondary education there were still over 39 million people without a GED and of those only about 1% were graduating with their GED diploma. Students saw the incentives right away after receiving a GED, figure 1 illustrated the differences of not having a GED to having one, about \$9000 per year difference (income non GED per year \$21,648, GED graduate \$30,624) and this was just the start for those who obtained their GED (pp. 5-8).

Boulden (2008) concluded that not doing anything to graduate was very expensive; in 2003 457,000 students dropped out of high school of those 41% were not seeking employment of those who were seeking 31% remained unemployed. The burdened communities, states, and our Nation financially. Research done in a large metropolitan areas suggested that the city lost over 3.2 billion dollars in lost revenues. Also take into account that most dropouts received public assistance, had a high rate of substance abuse, and a higher rate of delinquency costing billions of dollars. Even though dropouts came with a variety of barriers the tools were there to guide prospective GED students. GED programs needed to offer more services to help dropouts overcome their barriers. People who had dropped out needed to have a positive structure in place to secure success, such as “having a healthy and positive self-concept, being willing to work hard, remain motivated, and maintain educational aspirations”. As of right now there weren’t many GED programs that had guidance counselors that could assist in the retention and/or recruitment of GED students. HEP was one of the few programs with advisors who focused on recruitment, retention, and career and/or higher education placement (pp. 3-6).

## Summary

Based on research there was support that suggested migrant farmworkers had a higher dropout rate in the k-12 system and with government intervention that lead to a more structured curriculum for migrant farmworker students increased graduation rates. Migrant students came with various deficiencies, such as monolingual, constant moving from school to school, poverty, parents with very little to no education, etc. Programs that came out of the MEP such as the HEP, CAMP, MEES, and others have focused on migrant student populations in which curriculums were developed targeting on migrant students weaknesses in order to help them adjust to the regular K-12 system. For those who did not have the opportunity to receive their high school diploma, a GED is an option to get them the opportunity to take their next step in higher education or a career. Students with a GED or High school diploma had a higher success rate in the job market.



## Chapter 3

### Methodology and Treatment of Data

#### Introduction:

The purpose of the project was to determine the validity and reliability of the Official GED Practice exams conducted by HEP versus the Official GED exams conducted by the State of Washington Testing Center. The researcher sought to investigate whether there was a correlation between the Official GED Practice tests and the Official GED test scores in terms of effectiveness and the validity of the hypothesis.

#### Methodology:

A correlational method was used by the researcher to assess both the Official GED Practice tests and Official GED samples scores from HEP. This method was used to compare both assessments and see if they had any validity to the null hypothesis.

#### Participants:

The participants for this study were comprised of the 2013/14 HEP school year with 94 students enrolled, this group had a mixture of Spanish and English students. The sample analyzed were students who tested officially and graduated with their GED diploma. This group consisted of 78 graduates; out of the 78 only 66 were evaluated the ones who completed 160 hours of instruction. Evaluations were done using Official GED Practice exams and were correlated with their official GED scores. The group consisted of 38 females and 28 males; age range of this group was from 18 years old to 50 years old (average age as a whole was 27 years old), with an average education level of 9<sup>th</sup> grade.

### Instruments:

The researcher used students' math and reading test scores from their Official GED Practice test booklets and compared them with the official GED scores from the Washington State Testing Center to correlate the validity and reliability of the assessments. The researcher also made sure that every student had attended classes for at least 160 hours before being accepted into the sample.

### Design:

The researcher designed the study as a correlational study to see if the Official GED Practice test and the Official State test scores had any degree of correspondence between the two variables. The study focused on HEP where the average education level was around 9<sup>th</sup> grade; HEP evaluated the math and reading Official GED Practice entry exams as a predictor to be accepted to the program. HEP students once enrolled into the program received 160 hours of classroom instruction in a structured class in the afternoon, student attended classes from 6 pm to 10 pm Monday through Friday for two months. Once the 160 hours were completed students would be reassessed with the Official GED Practice exams and for those who obtained 450 points or higher would then be sent to take the Official State test within a few days.

### Procedure:

The researcher first obtained permission from the HEP director in order to begin his research and correlation of the HEP students' data. Once the permission was approved, the researcher then requested 2013/14 HEP school years students' Official GED Practice tests and Official GED scores. In some cases students had a higher level education and did not need 160

hours of preparation, Students who did not enroll for the full 160 hours were eliminated from the study. There were a total of 94 students enrolled that year, and there were 78 graduates, of which 66 of the students completed the full 160 hours needed for completion of the course. After all the data was collected the researcher used and inserted all the data into the stat-Pak and conducted a correlation study using the Pearson r test (Gay, Mills & Airasian, 2009, p. 201).

#### Treatment of Data:

The researcher used the Pearson r test to see if there was any correlation coefficient regarding the HEP students' Official GED Practice tests and official GED test scores. The researcher used the 2013/14 HEP's data for the correlation and validity of the Official GED Practice assessments with the actual state administered Official GED exams. Data was calculated using the Stat-Pak which generated and printed statistical results making it easy to generate the Pearson r test results (Gay, Mills & Airasian, 2009).

#### Summary:

The researcher collected data from July 1<sup>st</sup> 2013 to December, 31<sup>st</sup> 2013 (HEP school year started July 1<sup>st</sup> ended June 30<sup>th</sup>) to determine if there was any correlational coefficient which would demonstrate its validity between the samples scores of the Official GED Practice assessments and the Official GED test scores. The researcher examined students' math and reading scores to determine its validity and reliability of the data collected using Pearson r values to determine its statistical significance and its correlational coefficient.

## Chapter 4

### Analysis of the Data

#### Introduction

With over 39 million Americans without a GED a lot of companies were in competition producing several GED study guides and assessments. HEP decided to use GTS guides and assessments. The purpose of the project was to gather supporting evidence that GTS Official GED Practice assessments and the official GED exams were correlated. The data was collected, and analyzed using the Stat-Pak software to determine if the hypothesis should be accepted or rejected. Pearson r tests were analyzed to determine its correlation coefficient.

#### Description of the Environment

The study took place at a HEP located in the Southeastern part of Washington State. The students in this sample did not graduate from high school and were enrolled at the HEP receiving class instruction to pass their GED exams.

The Southeast HEP was funded to serve 130 students per year in a five year grant cycle. In order to be part of the program students needed to have a farmworker background with at least 75 days worked in agriculture. Students in this sample were from the 2013/14 HEP school year and according the researcher the average education level was of a ninth grader. HEP had two GED instructors teaching all five subjects that needed to be passed by students (Math, Reading, Writing, Social Studies, and Science). A large percentage of the students were Latinos who worked on farms or fruit warehouses within the Yakima County. HEP provided class instruction from 6 pm to 10 pm Monday through Friday and offered GED classes and tutoring year round.

The Official GED Practice assessments were administered by the instructors at the end of two month courses each totaling 160 hour of instruction. Students who passed their Practice GED exams with 450 points or more were sent to take the Official GED exams administered by a state approved examiner at Yakima Valley Community College.

The researcher analyzed the math and reading Official GED Practice tests and Official GED scores to see if there was any correlation between the two exams. HEP used both the math and reading as an indicators of the students success in the classroom. HEP figured that if students reading and math assessments were at a ninth grade level or higher students could graduate with their GED after 160 hours of class instruction.

#### Hypothesis/Research Question

The purpose of this study was to determine if the Official GED exams conducted on Migrant Farmworker students enrolled in the High School Equivalency Program (HEP) would have a positive correlation to the Official GED Practice exams after the students had completed 160 hours of instruction.

#### Null Hypothesis

The null hypothesis stated that the Official GED Practice exams had no positive correlation between the Official GED exams. The researcher found data that supported the hypothesis for both math and reading which stated that Official GED Practice exams had a significant coefficient correlation with the official GED exams. In this study we examined only the math and reading practice and official GED scores.

#### Results of the study

Official GED Practice exams were officially administered by the HEP/GED instructors who timed students in both math and reading. After passing all five Official GED Practice exams students were sent by appointment to the Yakima Valley Community College to take their official exams. The researcher then collected both the Official GED Practice exams and the Official exams from the HEP administrator and analyzed the data as illustrated in Table 1.

The researcher used the Stat-Pak to find the Pearson's r value. After inputting the data into the Stat-Pak, Pearson r was determined at 0.49 in Math and 0.41 in Reading with both at 64 degrees of freedom. Comparative data used were the math and reading scores from the Official GED Practice tests as compared to the Official GED test scores. Scores are illustrated in both figures 2 and 3. Data in reading reflected the sum of X and Y square equal to 16077200. Group X had a mean score of 490.15 and group Y had a mean score of 494.24. As illustrated in figure 2 the results of Pearson's r value for reading were .41 with 64 degrees of freedom.

Data in math was calculated using the Stat-Pak reflected sum of X and Y square equal to 13712200. The mean for group X was 463.18 and the mean for Group Y was 447.58. The results of the Pearson's r value for the math scores was .49 with 64 degrees of freedom as illustrated in figure 3.

Table 1

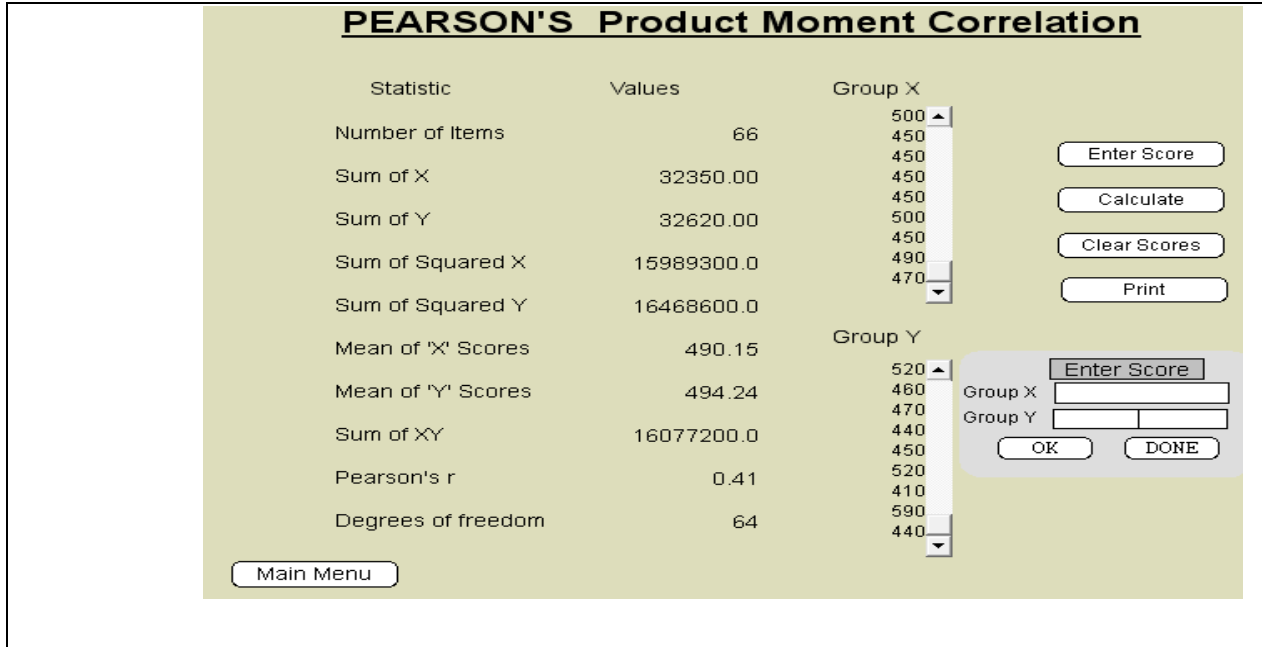
Official GED Practice tests and Official GED Scores

Sample number	Reading official score	Reading Pretest score	Math official score	Math Pretest Score
1	410	530	550	470
2	540	470	450	450
3	450	450	410	450
4	480	500	420	450
5	500	480	460	480
6	450	450	430	450
7	430	450	450	500
8	490	450	480	480
9	430	470	470	450
10	470	480	430	450
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
65	590	490	440	460
66	440	470	470	440

*Note.* A total of 66 HEP GED students were evaluated using their Official Pre GED Test and Official GED Test scores in both math and reading. All students attended the HEP 2013/14 school year and were enrolled for a minimum of 160 hours of instruction. For a complete table 1 refer to Appendix A.

Figure 2

Statistical analysis data using Pearson's r Product Moment Correlation using Stat-Pak



*Note.* Data collected was of the HEP school year (2013/14), data collected from reading using the Official GED Practice exams and Official GED exams scores.

The following formula was used to calculate Pearsons r value:

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{(\sum X^2 - \frac{(\sum X)^2}{N})(\sum Y^2 - \frac{(\sum Y)^2}{N})}}$$

$$r = 16077200.00 - \frac{(32350)(32620)}{66} \div \sqrt{[15989300 - \frac{32350^2}{66}][16468600 - \frac{32620^2}{66}]}$$

r = 0.41



Figure 3

Statistical analysis data using Pearson's r Product Moment Correlation using Stat-Pak

### PEARSON'S Product Moment Correlation

Statistic	Values	Group X	
Number of Items	66	450 ▲	<input type="button" value="Enter Score"/> <input type="button" value="Calculate"/> <input type="button" value="Clear Scores"/> <input type="button" value="Print"/>
Sum of X	30570.00	450	
Sum of Y	29540.00	450	
Sum of Squared X	14206900.0	450	
Sum of Squared Y	13298000.0	460	
Mean of 'X' Scores	463.18	440 ▼	
Mean of 'Y' Scores	447.58		
Sum of XY	13712200.0		
Pearson's r	0.49		
Degrees of freedom	64		

Main Menu

*Note.* Data collected was of the HEP school year (2013/14), data collected from math using the Official GED Practice exams and Official GED exams scores.

The following formula was used to calculate Pearsons r value:

$$r = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sqrt{(\sum X^2 - \frac{(\sum X)^2}{N})(\sum Y^2 - \frac{(\sum Y)^2}{N})}}$$

$$r = 1371220 - \frac{(30570)(29540)}{66} \div \sqrt{\left[14206900 - \frac{30570^2}{66}\right] \left[13298000 - \frac{29540^2}{66}\right]}$$

r = 0.49

After calculating the Pearson's r Product Moment Correlation the researcher provided the values of the correlation coefficient for levels of significance. Pearson's r value was 0.41 in the reading scores and 0.49 in the math scores, (the values were compared at a level of significance of 64 degree of freedom for  $p \geq .05$ ,  $.01$ , and  $.001$  as illustrated in Table 2 and Table 3).

Table 2

Probability for Math Exams

d.f	0.05	0.01	0.001
64	.2500	.3248	.4078

Probability for Reading Exams

Table 3

d.f	0.05	0.01	0.001
64	.2500	.3248	.4078

Findings

The correlational study between the official and practice test scores for math and reading were gathered by the researcher using HEP student's practice and official GED reading and math scores in the 2013/14 HEP school year. Table 1 represented data collected by the researcher analysing HEP students GED scores. Figure 3 and 4 demonstrated the statistical analysis of Pearson's r value for both math and reading test scores. Finally Table 2 and Table 3 examined the probability of the correlation coefficient levels at  $.05$ ,  $.01$ , and  $.001$  at 64 degrees of freedom.

The null hypothesis stated that there was no significant correlation between the Official GED Practice tests and the Official GED test scores administered to the HEP GED students. Pearson's r correlation for reading was .41 and .49 for math at 64 degrees of freedom, meaning that null hypothesis was rejected at 95%, 99% and 99.9% for both reading and math levels. Support for the hypothesis accepted which stated that there was a positive coefficient correlation between the Official GED and the Official GED Practice tests administered to HEP students. Support for the hypothesis was found at 95%, 99% and 99.9% levels, according to the data collected there was a correlation between both the Official GED Practice tests and the Official GED tests scores.

### Discussion

The purpose of this correlational study was to determine whether HEP GED students were accurately evaluated when being prepared to take the official GED exams. Students were told that if they scored 450 points on the practice test after completing 160 hours of class instruction they would have a very good chance of passing each GED test and graduate. According to the data both practice tests and official GED tests had a significance value at 0.001 or 99.9% confident level meaning that the chances of finding a correlation this large simply by chance is less than 1 in 1000. With these results HEP staff should feel confident when examining student's practice scores and making decisions to send a student to take the official exams (Gay, Mills & Airasian, 2009, p. 317).

### Summary

The research was based on 66 students enrolled in HEP, these students received 160 hours of GED preparation during the 2013/2014 school year. Students were chosen to take the

official GED exam after obtaining 450 points per test or better, this number was chosen because 450 points was the average of the 2250 points needed to obtain their GED diploma.

The author hypothesized that if students passed GTS Official GED Practice Test with 450 points or higher the students would pass the Official State GED tests. For the purpose of this study, the researcher only analysed the math and reading scores of students who completed the 160 hours of required instruction.

The study's focus was to find if there was a statistically significant correlation between the Official GED exam and the Official GED Practice test. According the results from the Stat-Pak Pearson's r value there was a coefficient correlation between the two tests. For reading Pearson's r value was at .41 and for math it was at .49 accepting the hypothesis and confirming that there was a significant relationship between the two tests. The results also confirmed that there was significant correlation at .05, .01, and .001, meaning that finding this correlation by chance was less than 1/1000. Therefore the researcher felt confident that there was a relation between the two tests. Therefore, the hypothesis was supported and accepted and the null hypothesis was rejected at all levels (Gay, Mills & Airasian, 2009, p. 317).

## Chapter 5

### Summary, Conclusions, and Recommendations

#### Introductions

According to the GED Testing Center the United States high school dropout rate has been consistent for decades and as of now there are over 39 million Americans without a high school diploma or GED. For decades the government has diverted a lot of money in the form of grants to colleges and non-profit organizations to help people get their GED. Studies have shown that minorities and low income students have a higher dropout rate, for the purpose of this study the researcher chose to examine a federally funded program aimed at helping migrant farmworkers who dropped out of high school obtain their GED (GED Testing Services, 2009, p. 17).

The purpose of this project was to identify if there was a coefficient correlation between the Official GED Practice tests conducted by the HEP and the Official GED test conducted by a Certified State GED examiner. The researcher examined just the reading and math practice GED tests and official GED tests to prove his hypothesis. The researcher wanted to make sure that GTS Official GED Practice tests were the right assessments for HEP students, the program wanted to make sure that the practice tests gave an accurate indication that would reflect the official GED exams.

#### Summary

The researcher examined if there was a coefficient correlation between the Official GED Practice tests and the Official GED test that the HEP students took. The researcher took data

from 66 HEP students who had completed 160 hour of GED preparation, and examined both their practice GED test and official tests.

The HEP students all had a migrant farmworker background or were immediate family members of those who worked in agriculture. Most HEP students had an education level of a ninth grader, and needed intensive GED preparation in order to pass the Official GED Practice tests. That's why it was important for the researcher to find out if the Official Practice GED tests had a coefficient correlation with the Official GED tests.

To find out if there was a significant correlation between the two tests the researcher entered the student's practice and official tests into the Stat-Pak to calculate the Pearson's r value for both math and reading. The Stat-Pak showed Pearson's r value for math at .49 and .41 for reading with both at 64 degrees of freedom. Figures 2 and 3 confirmed the acceptance of the hypothesis which stated that a significant correlation existed between the Official GED Practice tests and the Official GED test, the hypothesis was accepted at .05, .01, and .001 correlation coefficient levels. As a result the null hypothesis was rejected which stated that there was no significant correlation between the Official GED Practice test scores and the Official GED test scores administered to the HEP GED students, the null hypothesis was rejected at 95%, 99%, and 99.9% confidence levels.

### Conclusions

The HEP now has statistical data that proves that there is significant correlation between the Official GED Practice tests and the Official GED tests. This creates confidence that the HEP is using assessments that reflect the official GED tests, and that students are being prepared and evaluated with accuracy.

Data in Table 1 as shown in chapter four reflected students Official GED Practice tests scores administered by the HEP with the Official GED test scores administered by the State of Washington. The data was then calculated for Pearson's r value for both the math and reading scores as demonstrated in both Figure 2 and 3. The results of both math and reading scores through the Pearson's r value are reflected in Table 2 and Table 3. The results rejected the null hypothesis and accepted the hypothesis at all levels of correlation coefficient, establishing a high level of confidence at 99.9%. For further review of these tables reference the table of contents list of tables for page reference.

Students who receive 160 hours of GED preparation and pass their Official GED Practice tests with 450 points or higher should be confident that they will also pass the Official GED test. The HEP will keep on using GTS Official GED Practice assessments to assure students that they are receiving tests that reflect the Official GED tests.

### Recommendations

With over 39 million American's without a high school diploma or a GED the government has been funding GED programs to help those who need their GED Diploma. With so many people private companies are constantly developing GED materials to better prepare students to pass their GED tests. It is important to know which GED materials better reflect the Official GED exams (GED Testing Services, 2009, p. 17).

The study indicates HEP is using assessments that reflect the Official GED exams. It is important to know the Official GED Practice tests have a positive correlation with the Official GED tests, creating confidence in both students and HEP staff when it comes to taking the Official GED exams.

The study only examined math and reading scores, the researcher recommends that all five subjects math, reading, science, social studies, and writing be analysed to better assess GED tests and to create a solid curriculum that reflects the official GED exams.

As of January 1<sup>st</sup> of 2014 the GED was nationally restructured and GED exams have been changed, and new assessments to the change are minimal as companies have not produced many materials that reflect the new Official GED tests. It is going to be very important for programs to find materials that will reflect the new Official GED tests, and new research will be needed to see if there is a correlation between the new Official GED Practice tests and the Official GED tests.



## References

- Baycich, D. (2003). Non-academic challenges faced by GED scholars: A Report of the GED scholars initiative. *Adult Learning, 14* (3). 11-13.
- Boesel, D., Alsalam, N., & Smith, T.M. (1998). Educational and labor market Performance of GED recipients. *National Library of Education*. Retrieved From <http://eric.ed.gov.libdb.heritage.edu/?q=David+Boesel&id=ED416383>
- Boulden, W.T (2008). Evaluation of the advancing young adult learning project. *Adult Basic Education and Literacy Journal, 2* (1). 3-12.
- Bureau of Labor Statistics. (2012). *Employment projections*. Retrieved from the United States Department of Labor: [http://www.bls.gov/emp/ep\\_chart\\_001.htm](http://www.bls.gov/emp/ep_chart_001.htm)
- Escamilla, A., Guerrero, N. (2014) An investigation of the factors contributing to successful completion of undergraduate degrees by the students enrolled in the college assistance migrant program. *Journal of Hispanic Higher Education*.  
DOI: 10.1177/1538192714527314
- Gay, L., Mills, E., & Airasian, P. (2006) *Educational research: Competencies for analysis and applications* (8<sup>th</sup> Ed). Saddle River, NJ: Pearson Prentice Hall Publishing.
- GED Testing Services. (2009). *Preparation for and performance on the GED test*. Washington, DC: Author
- GED Testing Services. (2011). *2011 Annual statistical report on the GED test*. Washington, DC: Author
- GED Testing Services. (2001). *Tests of general educational development*. Washington, DC: Steck-Vaughn Publishing Company.
- Golden, S. (2003). Self-efficacy: How does it influence academic success? *Adult Learning, 14*

(3). 14-16. DOI: 10.1177/104515950301400305

Lunon, J.K., (1986). *Migrant student record transfer system: What is it and who uses it?*

Retrieved from <http://files.eric.ed.gov/libdb/heritage.edu/fulltext/ED286700.pdf>

Migrant Student Data and Recruitment Office (2011). Enrollment Comparison Summary School Year 2010-2011. Retrieved November 5<sup>th</sup>, 2012, From Washington State Migrant Student Data and Recruitment website:

<https://www.msdr.org/reportsmaps/end-of-year/enrollment-comparison-summary/enrollment-comparison-summary.cfm>

Migrant Education Regional Office. (2011). *Services*. Retrieved from <http://www.esd105.org/>

Office of the Superintendent of Public Instruction. (2012). Migrant education program. Retrieved from <http://www.k12.wa.us/MigrantBilingual/Services.aspx>

Pennucci, A. & Hannah, D. (2007). Immigrant secondary students in Washington State: Population trends and high school diploma programs. *Washington State Institute For Public Policy*. Retrieved from <http://www.wsipp.wa.gov>

Stillwell, R. & Hoffman, L. (2011). Public school graduates and dropouts from common core of data: School year 2005-06. *National Center for Education statistics*. Retrieved from <http://nces.ed.gov/pubs2008/2008353rev.pdf>

Villalobos, R. (2011). Post-secondary retention services for migrant students. *Heritage University College of Education and Psychology, Graduate Studies*. Retrieved from [http://www.heritage.edu/library/mastersprojects/Villalobos\\_Jr\\_Rafael\\_2011.Pdf](http://www.heritage.edu/library/mastersprojects/Villalobos_Jr_Rafael_2011.Pdf)

U.S Department of Education. (2003). Guidance for the William F. Gooding even start family literacy programs. Washington, DC: U.S Government Printing Office. Retrieved from [www2.ed.gov/policy/elsec/guid/evenstartguidance02.doc](http://www2.ed.gov/policy/elsec/guid/evenstartguidance02.doc)

U.S Department of Education (2012) High School Equivalency Program: *Federal Grant*. Office of Migrant Education. Washington DC: U.S Government Printing Office.

U.S Department of Education (2012). Migrant Education Even Start Program: *Federal Grant*. Office of Migrant Education. Washington, DC: U.S Government Printing Office.

Retrieved from <http://www2.ed.gov/legislation/FedRegister/announcements/2002-2/052002b.html>

## Appendix A

### MEP Education Program

- Supplemental academic programs to assist in the achievement of state academic standards
- Instructional training
- Health programs
- Preschool programs (readiness, transitioning to elementary education)
- Family home visiting and academic counseling services
- Parental involvement
- Migrant student data and collection
- Student leadership opportunities
- Summer schools programs
- Secondary credit accrual and exchange
- Grants for supplemental secondary services, dropout prevention and retrieval, and alternative education programs; and
- Dissemination of information (OSPI, 2012)

## Appendix B

### Official GED Practice tests and Official GED Scores

	Official Reading Scores	Official Reading GED Practice Scores	Official Math Scores	Official Math Practice GED scores
1	410	530	550	470
2	540	470	450	450
3	450	450	410	450
4	480	500	420	450
5	500	480	460	480
6	450	450	430	450
7	430	450	450	500
8	490	450	480	480
9	430	470	470	450
10	470	480	430	450
11	480	470	500	450
12	580	600	460	470
13	530	510	530	550
14	430	500	510	470
15	630	610	500	610
16	580	510	480	470
17	440	450	420	450
18	470	450	430	450
19	460	480	410	450
20	620	540	420	450
21	440	540	410	440
22	440	460	410	450
23	470	450	460	450
24	530	450	430	450
25	480	480	410	450
26	500	500	440	450
27	520	540	410	470
28	760	450	490	470
29	500	480	420	450
30	540	500	430	450
31	480	470	420	450
32	450	540	410	420
33	460	600	410	430
34	490	470	420	450
35	460	540	410	450
36	440	490	430	450

37	660	490	470	450
38	440	460	500	480
39	480	470	440	420
40	470	500	450	470
41	540	630	440	470
42	480	470	440	470
43	470	470	420	450
44	430	410	440	450
45	600	550	530	500
46	450	560	510	420
47	490	500	500	500
48	430	450	410	450
49	450	480	490	480
50	580	500	450	480
51	700	600	420	450
52	430	450	450	450
53	440	460	430	460
54	430	450	430	530
55	450	460	450	450
56	560	480	440	450
57	410	450	450	480
58	520	500	420	450
59	460	450	450	450
60	470	450	430	460
61	440	450	470	450
62	450	450	420	450
63	520	500	430	450
64	410	450	430	450
65	590	490	440	460
66	440	470	470	440