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RESEARCH ARTICLE

Carpentry and Beyond: Unraveling the Linkages between Student Attributes and Academic Success in Kayapa Secondary Schools

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ARTICLE INFO	**ABSTRACT**
	This study examines factors influencing Grade 7 students' academic achievement in Carpentry in Kayapa for the school year 2016-2017. It involved 100 samples using questionnaires to assess achievement, personality traits, work attitude, creativity, and learning approaches of the students. The findings show that while students generally display these traits and attitudes, their academic performance in Carpentry is average. Although there are correlations among personality traits, learning approaches, creativity, work attitude, and academic achievement, these attributes do not directly correlate with performance in Carpentry. Further research on demographics and psychological influences is suggested.

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INTRODUCTION

Filipinos are well-known for their passion for education, which is the key to success. Education opens a multitude of opportunities to learners who willingly explore new knowledge and eventually innovate things to make life more meaningful. In the Philippine setting, a nation's ability to thrive and prosper depends heavily on its educational system. It is associated with an individual's well-being and prospects for a better life, and it is essential to the development of human capital (Battle & Lewis, 2002). It guarantees that people gain the information and abilities necessary to boost their output and enhance their quality of life. This productivity boost also creates new revenue streams, which further boosts a nation's economic expansion (Saxton, 2000).

The level of education that each individual receives determines how quickly the economy grows. This responsibility falls to the country's educational system, which makes every effort to give the majority of its residents the education they require. For educators, trainers, and researchers who have been interested in examining factors that successfully contribute to learners' performance quality for a long time, the quality of students' performance continues to be the top priority. These factors, both within and outside of the classroom, have an impact on how well pupils succeed academically. We might refer to these factors as teacher factors, school factors, family factors, and student factors (Crosnoe & Glen, 2004).

In order to properly prepare its students for the complicated and global workforce, the Department of Education is considering the fundamental ideas and practices of education.

Education is an ongoing, never-ending process that adapts to the requirements and circumstances of the day. People used to think that education was just about teaching the knowledge, values, and abilities needed to become citizens and actively participate in society. More and more individuals nowadays see education as a commodity to be utilized in the marketplace, purchased and sold by educational establishments, with quality serving as the brand's distinguishing feature and sign of global competitiveness. The school system, as the main supplier of education, has a big obligation to adapt to these changes and raise the standard of education by offering the means to achieve the learning objectives and the betterment of humanity as a whole.

The results indicate that several elements influence students' academic achievement in the classroom. Academic accomplishment, in its simplest form, refers to performance outcomes that show how well a person has fulfilled particular objectives that were the main focus of activities in instructional contexts, particularly in school, college, and university. Most educational systems have cognitive goals that are either interdisciplinary (critical thinking, for example) or include learning and comprehension in a particular intellectual field (numeracy, reading, science, history, etc.).

As a result, academic accomplishment ought to be viewed as a complex concept including several learning areas. The concept of academic accomplishment varies depending on the indicators used to quantify it because the area is quite broad and encompasses a wide range of educational outcomes. There are a variety of criteria that can be used to determine academic achievement, including more curricular ones like grades or performance on tests, cumulative indicators like degrees and certificates, and more general ones like declarative and procedural knowledge gained through education (Steinmayr et al., 2019).

Similarly, a student's ability to continue their education (e.g., to attend a university) is determined by their academic achievement as measured by the GPA (grade point average) or by standardized assessments designed for selection purposes like the Scholastic Assessment Test (SAT). Consequently, a person's ability to pursue further education is determined by their academic performance, which also affects their post-educational job depending on the degree they get. A nation's wealth and success are greatly influenced by academic performance, in addition to its personal significance (Steinmayr et al., 2016).

Academic success is the educational objective attained over a certain length of time by a student, instructor, or institution. Exams or ongoing evaluations are used to test this, and each person or organization may have a different objective.

The result of education is academic accomplishment, or (academic) performance, which measures how well a student, instructor, or institution has met its learning objectives. Examinations and ongoing assessments are frequently used to gauge academic success, although opinions on the most effective testing methods and the distinction between declarative and procedural information, such as facts and abilities, are divided.

Ultimately, the pinnacle of student performance occurs when learners are capable of metacognition, which enables them to become useful members of society. Students will be given the tools they need to become successful, self-directed, responsible, and organized people. A good, all-encompassing education creates literate people who can utilize technology, think critically, and solve problems effectively.

This study is an attempt to investigate the factors associated with academic accomplishment in the subject of carpentry in Grade 7 at secondary schools in Kayapa that offer the trade.

CONCEPTUAL FRAMEWORK

This research investigates how student characteristics might influence their achievement in carpentry class.

The researchers are interested in four characteristics:

Personality: This refers to a student's natural tendencies and behavioral patterns.

Learning approach: This refers to how students prefer to receive and process information.

Creativity: This refers to a student's ability to come up with new ideas and solutions.

Work attitude: This refers to a student's feelings and disposition towards work or learning.

The researchers will look at how students perceive themselves in these areas and how these perceptions relate to their grades in carpentry class.

MATERIALS AND METHODS

Research Design

The goal of descriptive research is to examine current occurrences, highlighting the current condition of the field under study (Shields & Rangarajan, 2013). It entails gathering information in order to illustrate actions, things, people, or procedures that throw light on current circumstances or customs.

The method's selection is consistent with the study's goal of identifying the characteristics linked to success in seventh-grade carpentry. Testing of hypotheses is possible with this method. Responding to inquiries on the status of the study participants, descriptive research is especially useful for supplying details about a place and time period that help comprehend the features of a population or phenomena (Shields & Rangarajan, 2013).

Descriptive research involves meaning and significance interpretation rather than data collecting. By including comparison and contrast measures, interpretations, and judgments, it goes beyond description. This approach makes it easier to test hypotheses, explore correlations between variables, and formulate generalizations.

Research Locale

The secondary schools in Kayapa, Nueva Vizcaya, were the study's location. The town of Kayapa is situated halfway between Nueva Vizcaya and Benguet provinces. The province of Ifugao borders it on the north; the municipality of Ambaguio borders it on the northeast; the municipality of Bambang borders it on the east; the municipality of Aritao borders it on the southeast; the municipality of Santa Fe borders it on the south; and the province of Benguet borders it on the west. The municipality uses the Nueva Vizcaya-Benguet secondary national route to link Nueva Vizcaya with the city of Baguio.

The comandante came up with the name Kayapa, combining the words "Yapa," which means valley, and "Kalabao," which means orange. Nestled among the Central Cordillera mountain range lies Kayapa, a third-class municipality. The settlement is located 33 kilometres from the Municipality of Aritao and 66 kilometres from Bayombong, the province capital. It is 79 kilometres from the city of Baguio, which is 265 km north of Manila, and takes three hours to go there via Ambuklao.

This research includes Kayapa's public secondary schools. The information provided here, particularly about enrollment and school heads, is only valid for the 2013–2014 academic year and might have changed in subsequent academic years.

Table 1: Frequency and Percentage Distribution of Respondents when Grouped according to School

Schools	Population	Number of Respondents	Percentage
Sta. Cruz Pingkian High School	60	30	**50.00**
Binalian Integrated National High School	40	20	**50.00**
Nansiakan National High School	100	50	**50.00**
Total	**200**	**100**	**50.00**

Data Gathering Procedure

In order to gather valid and reliable data, the researcher first asked permission to conduct the study from the Schools Division Superintendent before administering the questionnaires to the respondents from the secondary schools in Kayapa for the school year 2016-2017.

The instrument on academic achievement, personality, work attitude, creativity, and approach to learning were adopted from various authors discussed in the succeeding section and with slight modification.

For the validation of the instruments, a test is valid when it measures what it is supposed to measure. In order to determine the validity of the instrument, the researcher sought the assistance of the eight (8) experts in the field of research and management. The experts were members of the panel and members of the advisory committee headed by the dean of College of Teacher Education who is proficient in research.

After the content validation done by the experts, the questionnaires were reprinted and reproduced ready for administration.

In order to identify the respondents, the respondents were taken from the list of the schools. They were randomly selected.

After the identification of the respondents of the study who were randomly selected, the questionnaires were administered in order to gather information regarding academic achievement, personality, work attitude, creativity, and approach to learning. These questionnaires were administered and were retrieved personally by the researcher by visiting the different school despite their distance.

 After the administration of the different instruments, scores were tabulated for statistical treatment to answer the specific questions posted in chapter I. Analysis and interpretation of results followed after which, conclusions and recommendations were offered based on the findings of this study.

Research Instruments

In gathering the data needed, this study used questionnaires as the primary instruments. Specifically, the following instruments were used:

Academic Achievement Test. This was used in order to measure the academic achievement of the respondents.

The test was taken from Ligmayo 2015. The instrument was scaled and the respondents were categorized into five (5) as follows:

Score	Qualitative Description
81-100	Very Good
61-80	Good
41-60	Average
21-40	Poor
1-20	Very Poor

Personality Questionnaire. This was used in order to measure the personality of the respondent schools.The questionnaire was based from ideas of Revelle& Loftus (1992); Howard& Howard (1998); Boree, (no date); McCrae & John (1992); and Wallach & Wing (1969). The instrument was scaled and the respondents were offered four (4) choices to select from:

Rating	Qualitative Description
4	Completely Agree
3	Agree
2	Disagree

| 1 | Completely Disagree |

To arrive at a verbal description of each item, the following arbitrary numerical guide were used:

Range	Competency Level
3.25 - 4.00	Very Good
2.50 - 3.24	Good
1.75 - 2.49	Poor
1.00 – 1.74	Very Poor

Approach to Learning Questionnaire. This was used in order to measure the approach of the respondents to learning. The questionnaire was taken from Prosser &Trigwell (1999); Biggs (1999); and Ramsden (1992). The instrument was scaled and the respondents were offered four (4) choices to select from:

Rating	Qualitative Description
4	Completely Agree
3	Agree
2	Disagree
1	Completely Disagree

To arrive at a verbal description of each item, the following arbitrary numerical guide was used:

Range	Competency Level
3.25 - 4.00	Very Good
2.50 - 3.24	Good
1.75 - 2.49	Poor
1.00 – 1.74	Very Poor

Creativity Questionnaire. This was used in order to measure the creativity of the respondents. The questionnaire was taken from the internet. The instrument was scaled and the respondents were offered four (4) choices to select from:

Rating	Qualitative Description
4	Completely Agree
3	Agree
2	Disagree
1	Completely Disagree

To arrive at a verbal description of each item, the following arbitrary numerical guide was used:

Range	Competency Level
3.25 - 4.00	Very Good
2.50 - 3.24	Good
1.75 - 2.49	Poor
1.00 – 1.74	Very Poor

Work Attitude Questionnaire. This was used in order to measure the work attitude of the respondents.

The questionnaire was retrieved from http://www.job-interview-site.com/work-ethics-interview-questiona-and-answers.html. The instrument was scaled and the respondents were offered four (4) choices to select from:

Rating	Qualitative Description
4	Completely Agree
3	Agree
2	Disagree
1	Completely Disagree

To arrive at a verbal description of each item, the following arbitrary numerical guide was used:

Range	Competency Level
3.25 - 4.00	Very Good
2.50 - 3.24	Good
1.75 - 2.49	Poor
1.00 – 1.74	Very Poor

Statistical Treatment of Data

In order to have a clear understanding and for better analysis and interpretation, the data were subjected to statistical treatments using as follow:

Weighted Mean. This statistical tool was utilized to determine the academic performance of the respondents and the attributes to academic performance such as personality, approach to learning, creativity, and work attitude.

Pearson Product-Moment Correlation Coefficient. This statistical tool was used to establish the relationship existing between and among the respondents' personality, approach to learning, creativity, and work attitude.

Furthermore, it was utilized to determine the relationship between academic performance of the respondents and the attributes to academic performance such as personality, approach to learning, creativity, and work attitude. All inferences were based on the five percent (5%) level of significance.
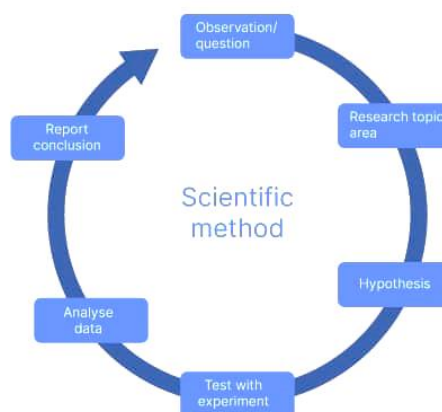
METHODOLOGY

Figure 1. Flow of the study

Observation/Question. The first step involves making an initial observation about the world around you. This observation might spark a question you want to investigate further. In your research project, for example, you might start by observing that some students in carpentry programs seem to perform well academically. This could lead to a research question about how participation in carpentry programs relates to academic success in Kayapa Secondary Schools.

Hypothesis. Based on your observations and research on the topic, you can formulate a hypothesis. A hypothesis is a testable prediction about the relationship between variables. In your carpentry and academic success research, your hypothesis might be that students who participate in carpentry programs will have higher academic performance compared to those who don't.

Experiment. This stage involves designing and conducting an experiment to test your hypothesis. The experiment should be designed to control for other factors that might influence the outcome. In your research project, a true experiment (randomly assigning students to carpentry or a control group) might be challenging in a real-school setting. You might use a different methodology, such as surveys or interviews, to gather data.

Analyze Data. Once you have collected data through your experiment or other methods, you need to analyze it to see if it supports your hypothesis. In your research, you might use statistical software to analyze survey data on student attributes and academic performance. You could also conduct thematic analysis of interview data to understand student experiences and perspectives.

Conclusion. After analyzing your data, you can draw a conclusion about whether your hypothesis is supported or not. Your conclusion should be based on the evidence you collected and acknowledge any limitations of your study.

RESULTS AND DISCUSSIONS

Findings

After thoroughly dealing with the data collected to address the concerns of this study, the following findings were derived:

Personality of the grades 7 students of secondary schools in Kayapa

The overall mean of the assessment made by the respondents of their personality is 2.90 or qualitatively described as good. This finding could be attributed to the majority of the respondents or 82 of them (82.00%) who rated their level of personality between 2.50 and 3.24 in a scale of 4 qualitatively described as good. Further, 14 or 14.00% rated themselves between 3.25 and 4.00 or very good. On the other hand, only 4 or 4.00% rated their personality between 1.75 and 2.49, poor while none rated himself less than 1.75 or very poor.

Respondents' assessment of their approach to learning

The computed overall mean of the respondents' assessment of their approach to learning is 2.96 qualitatively categorized as good. Majority of the respondents or 69 of them (69.00%) rated their level of approach to learning between 2.50 and 3.24 in a scale of 4 qualitatively described as good. Moreover, 25 or 25.00% rated themselves between 3.25 and 4.00 or very good while only 6 or 6.00% rated their approach to learning between 1.75 and 2.49 or poor. None rated himself less than 1.75 or very poor.

Respondents' level of creativity

The overall mean under this construct is 3.09 unveiling the qualitative description of good level of creativity among respondents. This finding is attributed to the majority of respondents or 60 of them (60.00%) who consider themselves good along this aspect having obtained weighted means of 2.50-3.24. Next to this are those who rated themselves between 3.25 and 4.00 or very good, taking 33 or 33.00% of the respondents. Only 7 or 7.00% consider themselves poor having a rating of 1.75-2.49. Nevertheless, no one among the respondents has very poor level of creativity.

Respondents' level of work attitude

Among the independent constructs characterizing the respondents, work attitude takes the highest overall mean, 3.84 or qualitatively described as very good. This is ascribed by majority of the respondents, 82 or 82.00%, whose rating is within 3.25-4.00 or qualitatively described as very good. Seventeen (17) or 17.00% obtained marks within 2.50-3.24 or good while only one or 1.00% had rating within 1.75-2.49 or poor. None of the respondents was classified under the very poor level.

DISCUSSION

Academic achievement of the respondents in Carpentry 7

The overall mean of the respondents' scores in the achievement test administered to them is 43.59 which is qualitatively categorized as average. Most of the respondents (46 or 46.00%) obtained scores within the range 21-40 or poor. Nevertheless, almost the same number of students (45 or 45.00%) got scores within 41-60 or average. The number of respondents whose scores fall within the range of 61-80 or good is 9 or 9.00% sufficient enough to peg the level of the overall mean with a qualitative description of average. None of the respondents got scores within 81-100 and 1-20 signifying that none of them are qualitatively described as very good or very poor.

Analysis of relationship among respondents' personality, approach to learning, creativity, and work attitude

The summary reports on the findings of a study investigating the relationships between personality, approach to learning, creativity, and work attitude. Here's a breakdown of the key points:

Personality is significantly related to all three other aspects: approach to learning, creativity, and work attitude. Students with a high self-reported personality tend to also report using good learning approaches, being creative, and having a positive work attitude.

Approach to learning is significantly related to both creativity and work attitude. Students who report using effective learning strategies also tend to score higher in creativity and work ethic.

Creativity and work attitude also have a significant positive correlation. Students who view themselves as creative tend to report having a better work attitude as well.

Finally, analysis of correlation between creativity and work attitude yielded a correlation coefficient of 0.418 with p-value=0.000 which is less than the level of significance of 0.05. This means that the null hypothesis along this analysis is not accepted. Hence, there is a significant relationship between creativity and work attitude. This implies that as the respondents display very good creativity, they as well display very good work attitude or vice versa.

Analysis of relationship of respondents' personality, approach to learning, creativity, and work attitude with their academic achievement in Carpentry

This summary explains the findings of a study on how personality, approach to learning, creativity, and work attitude relate to achievement in Carpentry 7. The key points are:

No significant relationships were found between any of the four characteristics (personality, approach to learning, creativity, and work attitude) and academic performance in Carpentry 7.

This means that students with high scores in these areas were not necessarily better in Carpentry 7, and vice versa.

In other words, a student's personality, how they approach learning, their creativity level, or their work attitude don't necessarily predict how well they'll do in Carpentry class.

CONCLUSION AND RECOMMENDATIONS

The results of this study provide insights, into the characteristics of Grade 7 students studying Carpentry. How these attributes are connected to their performance. Overall, the participants showed traits in terms of personality learning approach, creativity and work ethic. However, their academic achievement in Carpentry 7 was considered average indicating a level of accomplishment. Interestingly the study found that although there were correlations between the student's

personality learning approach, creativity and work ethic these factors did not have an impact on their academic success, in Carpentry. This suggests that there may be factors affecting students' performance in this subject.

Based on these findings there are suggestions, for educators and future research:

Firstly, it is recommended to focus on enhancing personality traits learning approaches and creativity. This can be achieved by creating personalized learning experiences that foster the development of a personality and promote deep learning strategies.

Additionally, it is advised to maintain a work environment that encourages excellence and intrinsic motivation. The study also suggests the importance of developing interconnected aspects starting from one area and gradually strengthening all aspects.

Moreover, since academic achievement in Carpentry did not show correlation with the studied attributes Carpentry teachers are encouraged to explore potential factors that may contribute to student success in this subject. Lastly future studies should investigate factors that influence the achievement of learners in Carpentry 7 such as variables, psychological factors and performance in other subjects apart from Carpentry. This will provide a understanding of success, in vocational education.

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