

## **A STUDY OF THE RELATIONSHIP BETWEEN SELF-CONFIDENCE AND PHYSICS ACHIEVEMENT OF GRADE 9 STUDENTS**

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### **Abstract**

The main purpose of this study is to explore the relationship between self-confidence and Physics achievement of Grade 9 students. Descriptive survey research method was applied and quantitative data analysis was executed in this study. As the research instruments, Self-Confidence Questionnaires and researcher made Physics achievement test were applied. Self-confidence questionnaires consist of 40 items and researcher made Physics achievement test consists of 25 multiple choice items. A total of 800 Grade 9 students (male=347, female=453) from eight selected high and branch of high schools in Yangon Region were participated in this study. Data from the questionnaires were coded, categorized and analyzed using descriptive statistics, independent sample-*t* test and one way analysis of variance (ANOVA). The results showed that self-confidence was significantly correlated with Physics achievement. In addition, parents' education were positively related with students' self-confidence and Physics achievement. It was found that female students' self-confidence and Physics achievement were higher than male students. As the ANOVA results of this study, students' self-confidence and physics achievement from B.E.H.S (2) Kamayut was the highest among the eight schools and there were significant difference among schools in self-confidence and physics achievement. Again, students' self-confidence and Physics achievement whose parents' education were graduated was higher than that of primary, middle and high.

**Keywords:** self-confidence, physics achievement

### **Introduction**

Academic achievement plays an important role in the life of an individual. In educational life academic achievement is highly valued. The parents and the teachers expect that the achievement of the students should be the highest. Academic performance can represent a variety of learning outcomes such as knowledge, understanding, attitude, intelligence, skill and application. On the basis of the achievement, the child is graded and evaluated

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as high achiever or low achiever. Good or high academic achievement tends to help both in improving the personality of the students and also their recognition by parents, peer groups, teachers, neighbors and society at large. It boosts their morale and develops feeling in them that they are useful in the family, school and society.

Confidence is the growth hormone for an individual's personality development. Without confidence, a person's growth in his life; personal, professional and social remains stunted. If the educational endeavors are to succeed in deriving optimal benefit from the input, the capabilities of pupils need to grow constantly unhampered through the encounter of the individual with his environment. During adolescence, self-confidence is affected by age, race, ethnicity, puberty, health, body height, body weight, body image, involvement in physical activities and gender identity, and awakening or discovery of sexuality. Self-confidence can vary and be observed in a variety of dimensions. An individual's self-confidence can vary in different environments, such as at home or in school.

The achievement of the child depends upon the main factors namely child's interest, motivation, conceptual learning, understanding in class, adjustment, school environment, home environment and reading interest. It further depends on numerous factors like child interest and motivation in the subject that they study, the devices and methods adopted by teachers in class, family set up, self-confidence and study habits (Bashir &Mattoo, 2012). Students' academic achievement and their excellence in studies depends mainly on their self-confidence, which is very much influential in their learning process. Therefore, this study is aimed to determine the relationship between self-confidence and Physics achievement in higher secondary students as effective and efficient steps to improve the quality of education has been.

### **Purpose of the Study**

The main purpose of this study is to explore the relationship between self-confidence and Physics achievement of Grade 9 students.

### **Research Questions**

1. Is there any difference in self-confidence and Physics achievement of Grade 9 students by gender, schools, father's education and mother's education?
2. Is there any relationship between self-confidence and Physics achievement of Grade 9 students?

### **Scope and Procedure**

In this study, Grade 9 students' self-confidence and Physics achievement were conducted by survey method. The study was limited to Grade 9 students from eight schools of four districts in Yangon Region. A total of 800 students from eight schools were administered to assess the Grade 9 students' self-confidence and Physics achievement. Self-confidence Questionnaires developed by Liu and Wangs (2005) was used to explore the students' self-confidence and Researcher made Physics Achievement Test was used to measure the students' Physics achievement.

### **Definition of the Key Terms**

**Self-Confidence:**Self Confidence refers the ability to take appropriate and effective action in any situation (Burton &Platts, 2006).

**Physics Achievement:**Physics achievement is defined in this study as the scores on the researcher made Physics Achievement Test, designed to measure academic competency in ninth-grade students.

## **Review of Related Literature**

### **Self-Confidence**

Self-confidence is the first requisite to great undertakings (Samuel Johnson, 2005).Self-confidence refers to assuredness in one's own worth, abilities and power, regardless of the situation he is in. Someone who is self-confident has a strong sense of belief and certainty in himself. He exudes calmness, composure and is self-aware. Self-confidence is often linked with possessing of certain knowledge, skill sets or abilities, whether it is acquired or innate. While having aptitude in a particular area can help bolster the self-

worth, it is not a necessary prerequisite for self-confidence. Someone with absolutely no competency in something can still be self-confident.

Self- Confidence refers to a person's perceived ability to tackle situations successfully without leaning on others and to have a positive self-evaluation. A self-confident person perceives himself to be socially competent, emotionally mature, intellectually adequate, successful, satisfied, decisive, optimistic, independent, self-reliant, self-assured, forward moving, fairly assertive and having leadership qualities. Adolescence is the period of time when the surge of life reaches its highest peak. Academic achievement during this period can be a stepping stone for the forthcoming year. Adolescents with high academic achievement are considered to achieve their identity in the society, get good career opportunities, develop leadership qualities, and enhance their self-confidence whereas, academic failure leads to frustration, stress, inferiority complex, rejection, increased number of suicides, discouragement and ultimately to dropping out.

### **The Importance of Physics Achievement**

Physics, the study of matter, energy and their interactions, is an international enterprise, which plays a key role in the future progress of humankind. The support of physics education and research in all countries is important because physics is an exciting intellectual adventure that inspires young people and expands the frontiers of one's knowledge about nature. Physics is the most basic of the physical sciences. From chemistry and geology through to biology and cosmology, people understand science in terms of the concepts developed in physics. Not only this, but many of the tools on which the advances of science and technology depend are direct product of physics.

In medicine, X-rays, radioisotope and nuclear magnetic resonance imaging are used. In addition, laser, electron microscopes, synchrotron radiation, and electronics all depend on advances made in physics. Physics has the capability of playing a major role in finding solutions to many of the problems facing the human race. Of course it does not have all the answers but the science is developed enough to have created nuclear weapons which remain a global threat, then surely it can be used for the betterment of all

people around the globe. Of course politics, socioeconomic factors and acceptance by the people all play a role in the development of a nation. But physics, engineering and other technological and scientific feats can transform a developing nation to a developed nation.

Physics improves the quality of life by providing the basic understanding necessary for developing new instrumentation and techniques for medical applications, such as computer tomography, magnetic resonance imaging, positron emission tomography, ultrasonic imaging, and laser surgery. Again, Physics is important to man's life because it is used in cooking food, cleaning clothes, watching TV, heating clothes, playing sports and everything else in an individual's life. Therefore Physics achievement is important for students nowadays. Teachers and parents should train and guide children to improve the knowledge about Physics to use the modern materials easily, to solve the problems scientifically, to invent the new things and to serve their country well with modern ideas.

## **Method**

### **Sample of the Study**

By using stratified random sampling technique, eight schools were randomly selected from four districts in Yangon Region. Therefore a total of 800 Grade 9 students (347 males and 453 females) from selected schools were chosen as sample.

### **Instrumentation**

The instruments adapted for data collection were Self-Confidence Questionnaires developed by Liu and Wangs (2005) and researcher made Physics Achievement Test. A total of 40 items were involved in the Self-Confidence Questionnaires to be used in this survey questionnaire. Self-Confidence Questionnaires required the respondents to indicate their level of agreement or disagreement, designated by "Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD).

To find Physics achievement, researcher made Physics Achievement Test was used. Firstly, chapter 1 to 9 from the Grade 9 Physics textbook were selected to examine students' Physics achievement. Next, a table of

specification was drawn according to the level of taxonomy of educational objectives based on the periods allocated for each chapter expressed in Grade 9 Physics Teacher's Manual. Then, 79 multiple choice items were prepared according to the table.

Firstly, Self-Confidence Questionnaires were developed in Myanmar Version and Physics achievement test was conducted at the same time. After preparing the items for each category of Self-Confidence and Physics achievement test, expert review was conducted for face validity and content validity by 11 experts who have special knowledge and close relationship with the field of educational psychology and academic subjects from Yangon University of Education. After the expert validity, items were revised in length and wording. To know reliability, pilot testing was carried out with 70 Grade 9 students in B.E.H.S (1) Thingangyun in the last week of November 2016. After piloting, some items of Self-Confidence Questionnaires were revised. The internal consistency (Cronbach alpha) of Self-Confidence Questionnaire was 0.870 and Physics achievement test was 0.692. For Physics Achievement Test, 25 items were selected according to the values of item difficulty and item discrimination (See Table 3.3) by using the Test Analysis Program. Time allowed was (45) minutes for totally 25 items. For real data collection, the students were administered in the first and second week of December, 2016.

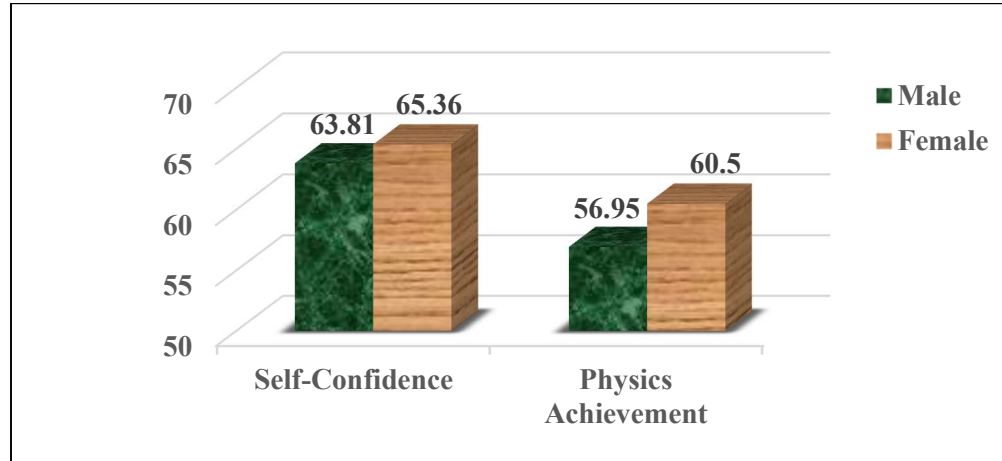
### **Data Analysis and Results**

After developing the instrument, self-confidence and Physics achievement of Grade 9 students were investigated. Moreover, the other influencing factors on the students' self-confidence and Physics achievement such as gender, schools, father's education and mother's education were also explored.

#### **Comparison of Grade 9 Students' Self-Confidence and Physics Achievement by Gender**

To investigate whether students' self-confidence and Physics achievement vary with regard to gender, independent sample *t*-test was carried out. From the results of independent sample *t*-test, it may be assumed that

male students were lower than female students in their self-confidence and there were statistically significant differences by gender. Again, from the results of independent sample *t*-test, it may be interpreted that male students were lower than female students in their Physics achievement and there were statistically significant differences by gender (See Table 1).



**Figure 1:** Mean Comparison of Grade 9 Students' Self-Confidence and Physics Achievement

**Table 1:** Results of Independent Sample *t*-test of Grade 9 Students' Self-Confidence and Physics Achievement by Gender

Variable	Gender	N	Mean	SD	<i>t</i>	<i>p</i>
Self-Confidence	Male	347	63.81	8.55	-2.50*	<b>.013</b>
	Female	453	65.36	8.80		
Physics Achievement	Male	347	56.95	20.87	-2.55*	<b>.011</b>
	Female	453	60.50	18.29		

\*The mean difference is significant at the 0.05 level.

**Comparison of Grade 9 Students' Self-Confidence by Schools**

To explore whether or not there were significant differences in students' self-confidence among schools, one way analysis of variance (ANOVA) was computed. ANOVA results showed that there were significant differences in students' self-confidence among the schools at 0.001 level (See Table 2).

**Table 2.**ANOVA Results of Grade 9 Students' Self-Confidence by Schools

Variables		Sum of Squares	df	Mean Square	F	p
Self-Confidence	Between Groups	3195.07	7	456.44	6.28***	.000
	Within Groups	57536.92	792	72.65		
	Total	60731.99	799			

\*\*\*The mean difference is significant at the 0.001 level.

To obtain more detailed information of a particular group, Post-Hoc test was executed by Tukey HSD method and it was found that there were significantly different in self-confidence among the schools at 0.05, 0.01 and 0.001 levels (See Table 3).

**Table 3:** The Results of Tukey HSD for Self-Confidence of Grade 9 Students Among Schools

Variables	School	(J) Schools	Mean Difference	Standard Error	p
Self-Confidence	B.E.H.S (2) Kamayut	Branch of B.E.H.S (3) Mingalardon	6.74***	1.26	.000
		B.E.H.S (2) South Okkalapa	5.05**	1.18	.001
	B.E.H.S (2) Insein	Branch of B.E.H.S (3) Mingalardon	5.93***	1.28	.000
		B.E.H.S (2) South Okkalapa	4.24*	1.21	.011
	Branch of B.E.H.S (3) Mingalardon	B.E.H.S (1) Kyauktan	-5.18**	1.28	.001
		B.E.H.S (2) Thanlyin	-4.75**	1.25	.004
		B.E.H.S (1) Thingangyun	-4.52**	1.25	.008

\*The mean difference is significant at the 0.05 level.

\*\*The mean difference is significant at the 0.01 level.

\*\*\*The mean difference is significant at the 0.001 level.



The results showed that there were significantly different at 0.05, 0.01 and 0.001 levels and that students’ self-confidence from B.E.H.S (2) Kamayut and B.E.H.S (2) Insein were higher than that of Branch of B.E.H.S (3) Mingalardon and B.E.H.S (2) South Okkalapa. And then, students’ self-confidence from Branch of B.E.H.S (3) Mingalardon was lower than that of B.E.H.S (1) Kyauktan, B.E.H.S (2) Thanlyin and B.E.H.S (1) Thingangyun. Therefore, it can be concluded that socioeconomic status of schools such as situation of the school, facilities supported by the school etc., play a vital role in molding the self-confidence of students at all levels of education.

**Comparison of Grade 9 Students’ Physics Achievement by Schools**

To explore whether or not there were significant differences in students’ Physics achievement among schools, one way analysis of variance (ANOVA) was computed. ANOVA results showed that there were significant differences in students’ Physics achievement among the schools at 0.001 level (See Table 4).

**Table 4:** ANOVA Results of Grade 9 Students’ Physics Achievement Among Schools

Variables		Sum of Squares	df	Mean Square	F	p
Physics Achievement	Between Groups	98564.09	7	14080.58	54.27***	.000
	Within Groups	205481.91	792	259.45		
	Total	304046.00	799			

\*\*\*The mean difference is significant at the 0.001 level.

To obtain more detailed information of a particular group, Post-Hoc test was executed by Tukey HSD method and it was found that there were significantly different in Physics achievement among the schools at 0.05 and 0.001 levels (See Table 5).

**Table 5:**The Results of Tukey HSD for Physics Achievement of Grade 9 Students Among Schools

Variables	School	(J) School	Mean Difference	Standard Error	p
Physics Achievement	B.E.H.S (2) Kamayut	B.E.H.S (1) Thingangyun	14.66***	2.17	.000
		B.E.H.S (2) South Okkalapa	18.91***	2.23	.000
		B.E.H.S (2) Lamataw	26.20***	2.29	.000
		B.E.H.S (2) Thanlyin	30.98***	2.18	.000
		B.E.H.S (1) Kyauktan	26.11***	2.23	.000
		B.E.H.S (2) Insein	15.43***	2.23	.000
		Branch of B.E.H.S (3) Mingalardon	39.22***	2.37	.000
	B.E.H.S (1) Thingangyun	B.E.H.S (2) Lamataw	11.54***	2.29	.000
		B.E.H.S (2) Thanlyin	16.32***	2.17	.000
		B.E.H.S (1) Kyauktan	11.45***	2.22	.000
		Branch of B.E.H.S (3) Mingalardon	24.56***	2.36	.000
	B.E.H.S (2) South Okkalapa	B.E.H.S (2) Lamataw	7.29*	2.34	.040
		B.E.H.S (2) Thanlyin	12.07**	2.23	.000
		B.E.H.S (1) Kyauktan	7.20*	2.28	.035
		Branch of B.E.H.S (3) Mingalardon	20.31***	2.42	.000

<b>Variables</b>	<b>School</b>	<b>(J) School</b>	<b>Mean Difference</b>	<b>Standard Error</b>	<b>p</b>
	B.E.H.S (2) Insein	B.E.H.S (2) Lamataw	10.77***	2.34	.000
		B.E.H.S (2) Thanlyin	15.55***	2.23	.000
		B.E.H.S (1) Kyauktan	10.68***	2.28	.000
		Branch of B.E.H.S (3) Mingalardon	23.79***	2.42	.000
	B.E.H.S (2) Thanlyin	Branch of B.E.H.S (3) Mingalardon	8.24*	2.37	.012
	B.E.H.S (1) Kyaukan	Branch of B.E.H.S (3) Mingalardon	13.11***	2.42	.000
	B.E.H.S (2) Lamataw	Branch of B.E.H.S (3) Mingalardon	13.02***	2.48	.000

\*The mean difference is significant at the 0.05 level.

\*\*\*The mean difference is significant at the 0.001 level.

The results showed that there were significantly different at 0.05 and 0.001 levels and that students' Physics achievement from B.E.H.S (2) Kamayut was higher than B.E.H.S (1) Thingangyun, B.E.H.S (2) South Okkalapa, B.E.H.S (2) Lamataw, B.E.H.S (2) Thanlyin, B.E.H.S (1) Kyauktan, B.E.H.S (2) Insein and Branch of B.E.H.S (3) Mingalardon. And then, students' Physics achievement from B.E.H.S (1) Thingangyun, B.E.H.S (2) South Okkalapa and B.E.H.S (2) Insein were higher than that of B.E.H.S (2) Lamataw, B.E.H.S (2) Thanlyin, B.E.H.S (1) Kyaukan and Branch of B.E.H.S (3) Mingalardon. And then, students' Physics achievement from Branch of B.E.H.S (3) Mingalardon was lower than that of B.E.H.S (2) Thanlyin, B.E.H.S (1) Kyauktan, and B.E.H.S (2) Lamataw.

### Comparison of Grade 9 Students' Self-Confidence by Father's Education

To explore whether or not there were significant differences in students' self-confidence among father's education, one way analysis of variance (ANOVA) was computed. ANOVA results showed that there were significant differences in students' self-confidence among the father's education at 0.001 level (See Table 6).

**Table 6:** ANOVA Results of Grade 9 Students' Self-Confidence Among Father's Education

Variables		Sum of Squares	df	Mean Square	F	p
Self-Confidence	Between Groups	1919.28	3	639.76	8.66***	.000
	Within Groups	58812.71	796	73.89		
	Total	60731.99	799			

\*\*\*The mean difference is significant at the 0.001 level.

To obtain more detailed information of a particular group, Post-Hoc test was executed by Tukey HSD method and it was found that there were significantly different in students' self-confidence among father's education at 0.05, 0.01 and 0.001 levels (See Table 7).

**Table 7:**The Results of Tukey HSD for Self-Confidence of Grade 9 Students Among Father's Education

Variables	Father's Education	(J) Father's Education	Mean Difference	Standard Error	p
Self-Confidence	Graduated	Primary	4.63**	1.46	.009
		Middle	3.64***	.82	.000
		High	2.06*	.71	.020

\*The mean difference is significant at the 0.05 level.

\*\*The mean difference is significant at the 0.01 level.

\*\*\*The mean difference is significant at the 0.001 level.

According to the Table 7, the students’ self-confidence whose father’s education was graduated was higher than that of the students’ self-confidence whose father’s education was primary, middle and high and there were significantly different at 0.05, 0.01 and 0.001 levels. So, it can be assumed that father can train the children how to face the life’s difficulties besides academic success encountering in their future life confidently.

**Comparison of Grade 9 Students’ Physics Achievement by Father’s Education**

To explore whether or not there were significant differences in students’ Physics achievement among father’s education, one way analysis of variance (ANOVA) was computed. ANOVA results showed that there were significant differences in students’ Physics achievement among the father’s education at 0.001 level (See Table 8).

**Table 8:** ANOVA Results of Students’ Physics Achievement Among Father’s Education

Variables		Sum of Squares	df	Mean Square	F	p
Physics Achievement	Between Groups	31630.22	3	10543.41	30.81***	.000
	Within Groups	272415.78	796	342.23		
	Total	304046.00	799			

\*\*\*The mean difference is significant at the 0.001 level.

To obtain more detailed information of a particular group, Post-Hoc test was executed by Tukey HSD method and it was found that there were significantly different in Physics achievement among the father’s education at 0.05, 0.01 and 0.001 levels (See Table 9).

**Table 9:**The Results of Tukey HSD for Physics Achievement of Grade 9 Students Among Father's Education

Variables	Father's Education	(J) Father's Education	Mean Difference	Standard Error	p
Physics Achievement	Graduated	Primary	9.78*	3.14	<b>.010</b>
		Middle	16.06***	1.76	<b>.000</b>
		High	9.66***	1.53	<b>.000</b>
	High	Middle	6.41**	1.80	<b>.002</b>

\*The mean difference is significant at the 0.05 level.

\*\*The mean difference is significant at the 0.01 level.

\*\*\*The mean difference is significant at the 0.001 level.

The results showed that there were significantly different at 0.05, 0.01 and 0.001 levels and that students' Physics achievement whose father was graduated was higher than that of students' whose father was primary, middle and high. And then, students' Physics achievement whose father education high was higher than that middle. From the results, it can be shown that father involves an important role in developing students' academic achievement. Since they pass different grades levels, they can guide their children which way is better and more effective for them than others and how to study lessons to get high grades in academic subjects.

### **Comparison of Grade 9 Students' Self-Confidence by Mother's Education**

To explore whether or not there were significant differences in students' self-confidence among mother's education, one way analysis of variance (ANOVA) was computed. ANOVA results showed that there were significant differences in students' Physics achievement among the father's education at 0.001 level (See Table10).

**Table 10:** ANOVA Results of Grade 9 Students’ Self-Confidence Among Mother’s Education

Variables		Sum of Squares	df	Mean Square	F	p
Self-Confidence	Between Groups	1740.29	3	580.10	7.83***	.000
	Within Groups	58991.70	796	74.11		
	Total	60731.99	799			

\*\*\*The mean difference is significant at the 0.001 level.

To obtain more detailed information of a particular group, Post-Hoc test was executed by Tukey HSD method and it was found that there were significantly different in self-confidence among mother’s education at 0.05 and 0.001 levels (See Table 11).

**Table 11:** The Results of Tukey HSD for Self-Confidence of Grade 9 Students Among Mother’s Education

Variables	Mother’s Education	(J) Mother’s Education	Mean Difference	Standard Error	p
Self-Confidence	Graduated	Primary	5.40***	1.22	.000
		Middle	2.32*	.82	.026
	High	Primary	3.81*	1.25	.012

\*The mean difference is significant at the 0.05 level.

\*\*\*The mean difference is significant at the 0.001 level.

According to the Table 11, the students’ self-confidence whose mother’s education was graduated was higher than that of the students’ self-confidence whose mother’s education was primary and middle. And then, the students’ self-confidence whose mother’s education was high was higher than that of primary and there were significantly different at 0.05, and 0.001 levels. It can be interpreted that mother can nurture the children how to solve the problems for all situation and how to pass difficult times with fully strength and confidence. Therefore, parental support is an essential thing in upgrading the students’ self-confidence.

### Comparison of Grade 9 Students' Physics Achievement by Mother's Education

To explore whether or not there were significant differences in students' Physics achievement among mother's education, one way analysis of variance (ANOVA) was computed. ANOVA results showed that there were significant differences in students' Physics achievement among the mother's education at 0.001 level (See Table12).

**Table 12:** ANOVA Results of Grade 9 Students' Physics Achievement Among Mother's Education

Variables		Sum of Squares	df	Mean Square	F	p
Physics Achievement	Between Groups	26069.49	3	8689.83	24.8***	.000
	Within Groups	277976.51	796	349.22		
	Total	304046.00	799			

\*\*\*The mean difference is significant at the 0.001 level.

To obtain more detailed information of a particular group, Post-Hoc test was executed by Tukey HSD method and it was found that there were significantly different in Physics achievement among the mother's education at 0.001 level (See Table 13).

**Table 13:**The Results of Tukey HSD for Physics Achievement of Grade 9 Students Among Mother's Education

Variables	Mother's Education	(J) Mother's Education	Mean Difference	Standard Error	p
Physics Achievement	Graduated	Primary	11.36***	2.64	.000
		Middle	13.71***	1.79	.000
		High	9.46***	1.57	.000

\*\*\*The mean difference is significant at the 0.001 level.

The results showed that students' Physics achievement whose mother was graduated was higher than that of students' whose mother was primary, middle and high and there were significantly different at 0.001 level. Like fathers, mothers have a responsibility in increasing the academic achievement



and monitor their children towards that. Parents are the first teachers of children. So, it is important that the parents especially mothers be knowledgeable about everything including the nature of their children, condition of the education, family income, economic level of country, etc. If mothers are wise and can act, think and nurture their children suitably according to the current situation, it is sure to produce all round developed children for the nation.

**The Relationship Between Grade 9 Students’ Self-Confidence and Physics Achievement**

To explore the relationship between Grade 9 students’ self-confidence and Physics achievement, Pearson product-moment correlation coefficients was conducted. The results revealed that students’ self-confidence and Physics achievement were positively correlated (See Table 14).Therefore, it can be interpreted that the higher the students’ self-confidence, the higher Physics success they become.

**Table 14:** Correlations Between Self-Confident and Physics Achievement of Grade 9 Students

		Self-Confidence	Physics Achievement
Self-Confidence	Pearson Correlation	1	.254***
	Sign (2-tailed)		.000
	N	800	800

\*\*\*Correlation is significant at the 0.001 level.

**Conclusion**

The main purpose of this study was to find out the relationship between self-confidence and Physics achievement of Grade 9 students.In comparing student’s self-confidence by gender, the mean score of male students were lower than that of female students. Therefore, it can be assumed that female students were more self-confident in their academic subjects than male students. Moreover, ANOVA results showed that there were significant differences in self-confidence among schools. The results showed that the

mean score of students' self-confidence from B.E.H.S (2) Kamayut was the highest and Branch of B.E.H.S (3) Mingalardon was the lowest. Therefore it may be assumed that students from B.E.H.S (2) Kamayut have the highest happiness about their school life and would possess the benefits of being self-confidence such as greater self-worth, freedom from self-doubt, freedom from fear and anxiety, more energy and motivation to act, etc. And then, self-confidence of students whose father and mother's education were graduated was the highest and primary was the lowest.

In comparing students' Physics achievement by gender, the mean score of male students was lower than that of female students. It can be assumed that the female students gain more success in Physics achievement than that of male students. ANOVA results showed that there were significant differences in Physics achievement among schools. The results showed that the mean score of students' Physics achievement from B.E.H.S (2) Kamayut was the highest and Branch of B.E.H.S (3) Mingalardon was the lowest. And then, Physics achievement of students whose father and mother's education were graduated was the highest and middle was the lowest. Therefore, parents' level of education play an important role in becoming high self-confidence and receiving more successful in academic subjects for students.

And then self-confidence and Physics achievement were significantly correlated. This shows that there is a positive relationship between self-confidence and Physics achievement and further indicates that as the students' self-confidence improve their Physics achievement also improve. It means that when there was high in students' self-confidence about their academic subjects, there will also increase in academic achievement of the students. This finding is consistent with the previous research of "A study of Self-Confidence of Adolescents in Relation to their Gender, Locality and Academic Achievement" defined by Fareen Fatma(2015).

### **Discussion and Recommendation**

In particular, education is seen as the means by which goals can be achieved. Therefore, in raising a healthy and talented society, the education system is very essential. Uplifting the education standards of the entire nation is being constructed as a social objective. As the education system had

improved, other branches of sources that are necessary to become a modern developed nation will develop. Finally, it will be built the Republic of the Union of Myanmar with new generations. However, to do so, new generations' academic achievement is very important because they are determined on the result of it. And then, the education system relies on the future teachers. Teacher education is believed to be the only hope to make the society better. Teachers are the persons who could make students' self-confidence become high by providing learning opportunity that can promote academic achievement.

The findings of this study showed that self-confidence was positively related with Physics achievement. Therefore, teachers, parents and society should provide guidance for students in the development of self-confidence in themselves by making decisions on one's own and taking responsibility for them. In following these guidelines, students would not only develop self-confidence, but would also take important and necessary steps toward a healthy adult life. Teachers should mold the students as good citizen and make them self-confident to take responsibility on their shoulders for developing their nation. The young generation should be confident to excel in their academic performance and enhance life skills to face the problems in future. Moreover, it is the responsibility of the teachers and the school administrators to create a better learning environment that arouses students' curiosity to achieve higher goals, critical and creative thinking.

Unfortunately, in order to foster positive self-confidence, many educators purchase a wealth of materials that espouse the popular, and misleading, belief that simply telling kids that they are wonderful, terrific, nice, etc. builds self-confidence. Instead of wasting time and time on such ineffective self-confidence building exercises, educators should devote attention to everyday classroom techniques such as the following:

- Demonstrate social support by showing personal interest in every individual student. Granted, elementary teachers have more time for this than most high school teachers, but it still can be done at every grade level.
- Consistently demonstrate respect, acceptance, and care toward all students, regardless of their backgrounds and past or present behavior.

- Avoid social comparisons (e.g., posting of grades). Encourage students to compare their performance (including in behavior) not to that of their peers but to personal goals or previous performance (e.g., instead of saying “Why don’t you act like others in the class?” you should say “Your behavior is much better than last week when you show that you can ignore others when they bother you”).
- Avoid public humiliation. When possible, handle discipline problems privately, and not publicly.
- Garner social support from others, especially parents and peers, to help booster positive emotions and behavior. A two-minute phone call home, informing parents that their child could use some emotional support after experiencing an unexpected failure, is likely to be time well spent.
- To help protect feelings of autonomy, and thus self-confidence, apply only as much external regulation as necessary to bring about compliance. Referred to as the Principle of Minimal Sufficiency, educators should use “just enough” external pressure to bring about compliance without making students feel that they are being coerced. When external pressure is not obvious, students tend to believe that they perform a requisite behavior for reasons that are intrinsically motivated, and thus are more likely to engage in that behavior in the future (Dr. Manning, 2003).

These recommendations can be achieved by talking to parents and teachers on the issues raised in a forum like the Parent-Teacher’s-Association. Group counselling can also be organized for students on good study habits, well self-confidence and gender quality. School administrators i.e., the head teachers should forward the needs and problems affecting students study habits to government for intervention.

### **Suggestion for Future Research**

The sample used in this study from seven Basic Education High School and one Branch of Basic Education High School. To make more representative, more Grade 9 students from the other high schools should be participated in the study. In another future research, students should be tested

in other subjects such as Myanmar, English, Mathematics and etc. Physics achievement had many dimensions that are differed to schools, teacher trainees and regions. It was suggested that the future researchers should concentrate on this. Self-confidence had also many dimensions such as home, school environment, curriculum, personality, intelligent, a good community, sex, caste, physical and social environment. Therefore, future researchers should also concentrate on these areas. Furthermore, the future researchers should conduct the studies with larger sample size including different Grades from different states and regions to be more generalized, reliable and valid. Demographic variables should be considered in future research. Qualitative research should be studied to investigate deeply about the adjustment and shyness of students. Moreover, longitudinal study should be extended to explore the effectiveness of self-confidence.

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