

## **The Contribution of Teaching Skills and Teachers' Professionalism toward Students' Achievement in Isfahan, Iran**

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**Abstract:** This research is aimed at finding out the correlation of between the teachers' teaching skills and the teachers' professionalism toward student's achievement improvement. The research method employed is a descriptive one by using the quantitative approach, the correlation research. The sample is 100 teachers of elementary schools in Isfahan Province, Iran. The study reveals that there is a positive and significant correlation between the teachers' teaching skills and students' achievement, and there is also a positive and significant correlation between the teachers' professionalism and students' achievement. Furthermore, the study also shows that there is a positive and significant correlation between the teachers' professionalism and their teaching skills toward students' achievement. Henceforth, this means that the improvement of both variables the teaching skills and the teachers professionalism, either individually or collectively, could eventually improve the students' achievement in school. Teachers, while they deserve continuous special attention from their school principals and the department of religious affairs at both municipality and provincial levels, should independently improve the competency, both pedagogical and professional competencies.

**Keywords:** Teaching skills, the teachers' professionalism, student's achievement, teaching and learning process, and elementary schools.

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### **1. Introduction**

Teachers as professional educators, who have good images, play an important role as exemplary models or examples for their students and the local community. As professional personnel, the teachers also have many great responsibilities such as to improve services, increase knowledge, and provide direction and encouragement to their students. These roles reflect both teachers' professionalism and performance, which in turn, make some improvement in the school.

Teachers undeniably have some important and heavy responsibility inherently related to their professions. They have not only to be educators and instructors, but they also have to adequately master the subject matter and teaching methodology, which are essentially very important in the teaching and learning process in classrooms. As Samana (1994) states that it is important for them to master the teaching materials of the teachers' subjects in the learning process. In addition to the teachers' professional knowledge and competence, the ability to assess students' achievements adequately cannot be neglected (Krolak-Schwerdt, et al, eds., 2014). This is because the ability to accurately gauge student outcomes is also considered to be one of the key characteristics of a good teacher as well. Currently, there are many teachers with the various educational backgrounds, in terms of degree, so their levels of quality and professionalism are consequently different one from the others. These also influence, to a certain extent, the teachers' experience in handling and coping with the teaching and learning process. Their ability to teach constitutes the benchmark for achieving good learning process. Earlier research on teaching has demonstrated to the satisfaction of many that qualified and professional teachers can produce improved student achievement (Darling-Hammond, 2000).

Darwin (2002), quoting Semiawan, suggests that the hierarchy of professional teachers consist of three levels: 1) Professionals, those teachers holding the undergraduate diploma or its equivalent; 2) Semi-professional, the teachers holding diploma-three level; 3) Pre-professionals, the teachers whose educational backgrounds are diploma-two levels or below. Sine teachers are the persons with some idea to be realized for the benefit of students, they should be supported with the good relationship as well as possible, within the framework of upholding, developing and implementing the substantive concern about religion, culture, and science (Nurdin, 2003).

Moreover, professional teachers are considered as important determinant factors of the quality improvement in the education process. To be professional, they should be able to discover and actualize their identity. Teachers as educators should possess the ability to design learning programs, organize and manage the classroom so that students can learn and develop their potentials maximally. Teachers with the high level of professionalism will reflect their mental attitude and commitment to their task and responsibility as educators. The teachers as educators should have the teaching skill in the classroom; this is because teaching capabilities will, later on, determine the quality of the learning process that occurs in the classroom.

Interests, talents, skills, and potentials of the learners will not develop optimally without the help of the teachers. Arikunto (1993) suggests that in order to produce the good quality of learning achievement, the good teaching quality is required as well. It can be inferred that if the students' achievements are not optimal and flourish, it means that the learning process in the school is not able to be maximized yet. In line with this, the teachers' teaching skills which are implemented fully in the teaching-learning process in the class will lead to the high achievement of the students. These again also reflect the professionalism of the teachers.

In line with this, the main purpose of this study is therefore to know the correlation degree of the teaching skills toward the teachers' professionalism in improving student achievement. The proposed research hypothesis are: 1) there are differences between the teaching skill between male and female teachers, 2) there are differences between the male and female teachers' professionalism, 3) there are differences between male and female students' achievement, 4) there is a relationship between the teachers' professionalism and students' achievements, 5) there is a relationship between teachers' teaching skill and students' achievement, 6) there is a relationship between the teachers' professionalism and their teaching skills toward the students' achievement.

## **2. Literature Review**

### **2.1. Teaching Skills**

Skill or ability means the individuals' capacity to perform various tasks in a job (Robbins & Judge, 2009). Skill is also defined by Collins, et al. (2011) as something one knows how to do. It is attained by practice and can have many components. Glasser, as quoted in Sudjana (2002), says that there are four things that must be held by teachers, they are: 1) Mastering the material, 2) The ability to diagnose students' behavior, 3) The ability to implement the learning process, 4) The ability to measure students' learning results. Other opinions on teachers qualification proposed by Delandshere and Arens (2001, 552). They list the following recurring themes in policy statements: (1) definition of general statements that apply to all teachers, (2) acquisition of specified essential knowledge and skills, (3) application of the same standards of performance to all teachers, and elimination of differences between the aims of teacher education programs, and (4) emphasis on performance and practical skills rather than theoretical knowledge.

Robbins & Judge (2009) also states that overall individual capability basically consists of two factors, they are: (1). Intellectual skills (intellectual ability), is the skills needed to perform various mental activities (thinking, reasoning, and problem-solving), and (2) physical ability is the ability to perform tasks that require stamina, skill, strength, and similar characteristics.

Buhari (1995) says that teaching is a teacher's ability to carry out his duties as a teacher to improve learning achievement. Teaching is not only the process of delivering information about science but rather to promote the occurrence of human interactions with various aspects which are quite complex (Usman, 2006). According to Hamalik (1992), teaching is organizing an activity or setting the environment as well as possible. In other words, teaching creates opportunities for children to make the learning process efficiently. Basically, teaching is an attempt to create the conditions or the environment system that supports and allows for the learning process (Sardiman, 2007).

A teacher must have the ability in the state of art to be covered to students, have knowledge of how to convey the knowledge and skill to the students, have enough knowledge to empower students, and have the knowledge of how to plan all the teaching and learning process in the classroom as well (Barizi&Idris, 1987).

The learning process according to Subroto (2002) is a process containing a course of conduct of teachers and students on the basis of reciprocal relationships that take place in an educational situation in order to achieve certain goals. Whereas Sudjana (1989) defines teaching as the guided activities on how the students learn, manage and organize the learning environment around the students so as to encourage them to learn more seriously.

In addition, Suharyono (1991) states that the learning process will take place in an optimal and effective if it is well planned and well run well. The learning process basically consists of three general activities. They include activities before the learning, the implementation of learning activities, and activities after learning (Suwarna, et al. (2005).

### **2.2. Teacher professionalism**

Arifin (1995) says that professionalism is derived from the profession, which means a field of work one wants or will be occupied by someone. In a professional work, it requires techniques and procedures that rely on intellectual foundation refer to the services expert.

Kunandar (2007) argues that a profession is defined as a specific position or a type of job that requires specific knowledge and skills gained from intensive academic education. A similar definition of profession is also provided in Merriam-Webster Dictionary (2017) which is referred to as a type of job that requires special

education, training or skill. So, profession constitutes an occupation that requires a certain expertise. Surya et al, (2003) similarly convey that professionals have a meaning which refers to the person who holds a profession and designation of the person's appearance in the performance realization according to the profession.

Discussing profession one also has to relate it to the professionalism. Professionalism is defined as "the conduct, aims, or qualities that characterize or mark a profession or professional person" (Merriam-Webster Dictionary, 2017). Supporting this definition, Collins, et al, are of the opinion that professionalism is the conduct, aim, or qualities that characterize or mark an occupation or a person working in particular occupation (2011:373). Even, the persons of the profession are also bound by a set of ethical rules and code of conduct specific to the profession. In line with this, Welker (1992) believes that teachers' professionalism can be achieved when teachers are able to carry out the task maximally, and always develop themselves continuously. They should also keep the ethical rules and code of conduct specific to the profession.

Henceforth, teachers, as a specific profession commonly found in schools, they undoubtedly require some competence (expertise and authority) in education and learning in order to carry out the task effectively and efficiently (Kunandar, 2007). A professional job is a job that can only be done by someone specifically prepared for it, and it is not done by someone who is unable to get to another job. Professional teachers are, therefore, the people who have the ability and special skills in teaching and learning. With this quality, they are able to perform their duties and functions, professional teachers, with full functionality (Usman, 2006). Similarly, Kunandar (2007) opines that the professional teachers are not only educated and trained adequately, but they also have rich experiences in the education field. Concerning this, Lohithakshan (2002) affirms that teachers literally are ones who teach, the professional personnel who are employed in schools. Teaching is thus a profession which requires them to possess specialized knowledge and specific skill acquired through intensive training and education.

Hamalik (2006) argues further that professional teachers are people who have obtained diplomas of the relevant teacher education programs, at least at the undergraduate level, and adequate teaching and learning experience. In practical reality, predicting the quality of a teacher in school must be based on the teaching effectiveness standard according to the prevailing curriculum of the school. Teachers are required to be able to formulate and integrate the objectives, materials, methods, media and teaching evaluation appropriately, and in designing and managing the whole learning process as well. Moreover, the teachers should be able to conduct or guarantee the quality of the learning process which will be experienced by the students (Sabri, 1992). Indeed, teachers' job is not simply the transmission of knowledge to the students, to improve their academic achievement; instead, they are also expected to in developing the competencies of the students to the optimum and in making them fit for well-adjusted life in their society (Lohithakshan, 2002).

In Iran related Law and Regulations state that the position of teachers as professionals, who have academic qualifications, competence, teaching certificate, physically and mentally healthy, serves to enhance the dignity of teachers as well as its role as a learning agent to improve the quality of national education.

There are several criteria for a profession as Langford offered in Yamin (2007). He explains that the criteria for the profession include: (1) wages, (2) the knowledge and skills, (3) a sense of responsibility and purpose, (4) priority services, (5) a sense of unity, and (6) receive recognition from others for what they do. Rebore (1991) even offers six characteristics which professional teachers should carry. These cover some important aspects such as (1) understanding and acceptance of the duties, (2) willingness of the effectively cooperating with students, teachers, parents, and community, (3) the ability to developing a vision and growth positions continuously, (4) prioritizing services, (5) directing, pressing and fostering students' behavior, and (6) implementing the job code of ethics.

Teachers are recognized as professional occupations because, in their professional task, there are several characteristics and requirements to meet as proposed by Robert W. Riche (quoted in Arifin, 1993), namely: more concerned about the perfect humanitarian service as compared to private interests; a professional takes a long time to learn the concepts and principles of specialized knowledge that supporting their expertise. Professionals must have certain qualifications, such as being able to follow the developments in the growth of job expertise and having a code of ethics that governs their membership, in terms of behaviors, attitudes, and ways of working. Namsa (2006) argues further that there are several rational and empirical reasons about teaching as a profession; (1) the teacher's task requires careful planning, steady implementation, and good control. Teaching tasks carried out on the basis of the system; (2) the teaching jobs requires the supporting of theoretical sciences of education and learning; (3) the education sector takes a long time in education and training, from the basic education to personnel education.

Consequently, professional teachers should be able to assume and carry out the responsibility toward their students, parents, community, nation, state, and religion. Professional teachers should also have a personal, social, intellectual, moral, and spiritual responsibility (Kunandar, 2007). As additional requirements, Glickman

(1981) identifies the teacher professionalism from two aspects; the ability to think abstractly (abstraction) and commitment (commitment).

Glatthorn (1990) reminds us that the teacher professionalism may be seen from their ability to carry out the task, and the consideration of the aspect of their commitment, responsibility, and independence (autonomy). They are the persons who are responsible for developing the potential of students' affective, cognitive, and psychomotor potential domains. So that the professionalism of the teachers is badly needed to improve the quality of education in the schools, especially to the quality of their students achievement..

### **2.3 Student achievement**

The term of achievement, in school tradition, indicates actual attainment or performance and is to be distinguished from other words such as ability and competence (Gordon, 2003). As for achievement test, Santrock (2011) defines it as the test that measures what students have learned or what skills the students mastered. Based on this, the students' achievement is then, according to Purwodarminto (1985), can be defined as the results which have been achieved (produced, made) by the students. In another place, Gie (1980) states that learning is a whole series of activities conducted by a conscious and leading the change. In the light to this point, Surakhmad (1982) opines that the student learning achievement is the learning results that students achieved/obtained so as to determine the extent of students' mastery.

The learning achievement covers all the students' psychological dimensions as the result of their experiences and learning process. The learning achievement can essentially be judged from several ways: a). Formative assessment; it is the assessment activities aimed at looking the feedback, and then, such good assessments can, later on, be used to improve the implementation of the following teaching and learning process; b). Summative assessment; they are the assessments conducted to obtain data or information, where the mastery or achievement of student learning to the material over a certain period (Purwanto, 2001).

The key point to obtain the real measurement and the student learning outcomes is by recognizing the major indicators (learning achievement indicators) which are associated with the kinds of the achievement measured (Shah, 1999). Wingkel (1984) defines learning achievement as the proof of the learning objectives which can be achieved. In a similar tone, Sutrantinah (1983) asserts that the learning achievement is indeed as the result of the measurement and assessment of learning endeavors.

Student achievement is the result of student learning undertaken during certain periods of the learning process at school, learning outcomes. As for Winkle (1966), learning outcomes are all the changes of cognitive, affective and psychomotor occur in human beings. Another understanding of learning outcomes expressed by Sudjana (2009) says that the learning outcomes are the abilities of the students after they undergo their own learning experience.

While Bloom in Sudjana, (2009) argues that learning outcomes can be divided into three categories according to the results achieved, namely, the learning results in terms of domains: cognitive, affective and psychomotor. In achieving high learning outcomes, students face many problems. According to Dalyono (2005), the student achievement or students learning outcomes are generally affected by two factors: internal and external factors.

## **3. Research methods**

The method used in this research is the descriptive method with quantitative approach. The descriptive method used to emphasize the analyzing on data numeric (numbers). Descriptive method is used to describing and analyzing the research results, but it is not used to make a broader conclusion (Sugiyono: 2005). Similarly Sukmadinata (2011), descriptive research is aimed at describing or depicting phenomena, both natural or human engineering phenomena.

A quantitative approach is a research in which the events or the variables can be measured quantitatively (Subyantoro and Suwanto, 2007). This point of view is confirmed by Creswell (2008) that quantitative approach in essentially is an inquiry approach useful for describing trends and explain the relationship between variables under study. It is a quantitative study, which is consistent with the quantitative paradigm, is an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures in order to determine whether the predictive generalizations of the theory hold true (Creswell, 1996). Meanwhile, Schumacher (2001) asserts that the quantitative is a form of research, it is evaluating the object, phenomenon, events or data that can be measured in numbers (scale, index, formula, etc.) and using statistical analysis.

The population in this study are all teachers, with the total number as many as 120 persons, who teach in elementary and secondary schools in Isfahan, Iran. Among those teachers, this study only involves 100 teachers as part of total population number taken as the sample. As for the data collection instruments, three sets of questionnaires with the Likert scale model were applied.

As for the data analysis, the descriptive and inferential statistics are used. The descriptive statistics, as Sugiono (2010) suggests, is used for finding out the degree of strong relationship between each variable under discussion through the correlation analysis. Whereas the predictions are inferred from the regression analysis and the comparisons by comparing the average of the data samples from the population. Descriptive statistics is utilized to organize, analyze and provide a thorough understanding of the data (state, symptoms, problems) in numbers. It can give an overview on a regular basis, clear and simple way. Inferential statistics are used to analyze the proposed hypothesis. Inferential statistics are statistics providing the rules which can be used as the tool to derive general conclusions from a set of the compiled and processed data. Inferential statistics also, among other things, provides certain rules in order to draw conclusions, the prediction, and assessment (or estimation) (Sudjiono, 2004).

Inferential statistics were used to analyze the research hypotheses. It uses correlation, regression, and t-test. Correlation analysis is used to determine the relationship between two random variables that have a minimal interval measurement scale and bivariate normal distribution. A regression test is done to find out the relationships between the variables. The t-test is used to see the differences between the research variables.

#### 4. Results and Discussion

##### 4.1. Descriptive study

The descriptive statistical method is more often associated with collecting and summarizing the data, and the presentation of the results. The calculation description relating to the research results are explained as follows.

Student achievement scores obtained from measurements using questionnaires as the theoretical range, the scores of students' achievement variable are 30 to 150, and the empirical score range between 69 to 120. From the calculation of the descriptive statistics, it shows that the average scores is (M) = 92 standard deviation (SD) = 11, variance = 122, median (ME) = 91 and the mode (MO) = 85, Range = 51. As for the distribution of student achievement variable, it can be described in the frequency terms of distribution as shown in Table 1 below:

Table 1: Frequency Distribution of Student Achievement

N0	Class			Midpoint	Frequency Absolut	Frequency Relative (%)	Frequency cumulative
	Interval						
1	67	-	73	70	5	5.0	5.00
2	74	-	80	77	8	8.0	13.00
3	81	-	87	84	25	25.0	38.00
4	88	-	94	91	25	25.0	63.00
5	95	-	101	98	16	16.0	79.00
6	102	-	108	105	12	12.0	91.00
7	109	-	115	112	7	7.0	98.00
8	116	-	122	119	2	2.0	100.00
<b>Total</b>					<b>100</b>	<b>100.0</b>	

Based on the above table, student achievement scores are 38 respondents which mean (38.0%) of the respondents are below the average group, 53 respondents (53.0%) are in the group of average and 9 respondents (9%) are in the above average group. Thus it can be inferred that student achievement is in good standing, which means that the achievement should be maintained so as to improve the education quality of the schools. The roles of the teacher should, therefore, be maximized. The previous study of Pullias and Young (1998), Manan (1990), as well as Yelon and Weinstein (1997) in Mulyasa (2007), identify that at least there are 19 the roles of the teacher; the teacher as an educator, teacher, counselor, coach, advisor, innovator (innovator), a model and example, private investigators, driving creativity, generating views, regular workers, shifting the camp, carrying the story, actor, emancipator, evaluators, preservatives, and as culmination.

The range of teachers' professionalism variable scores has a theoretical range from 30 to 150, and the empirical range score from 57 up to 115. From the calculation of descriptive statistics, the average scores obtained are (M) = 80 standard deviation (SD) = 10, variance = 107 median (ME) = 79 and the mode (MO) = 75 and range = 58. The distribution of teacher professionalism variable data can be described in terms of frequency distribution as shown in Table 2 below:

Table 2: Frequency Distribution of Professional Teacher

N0	Class		Midpoint	Frequency absolut	Frequency Relative (%)	Frequency cumulative
	Interval					
1	54	- 61	57.5	2	2.0	2.00
2	62	- 69	65.5	12	12.0	14.00
3	70	- 77	73.5	29	29.0	43.00
5	78	- 85	81.5	31	31.0	74.00
5	86	- 93	89.5	18	18.0	92.00
6	94	- 101	97.5	4	4.0	96.00
7	102	- 109	105.5	3	3.0	99.00
8	110	- 117	113.5	1	1.0	100.00
<b>Total</b>				<b>100</b>	<b>100.0</b>	

Based on the frequency distribution table, the teachers' professionalism score is 43 respondents, which means that (43.0%) of the respondents are in below the average group, 53 respondents or (53.0%) are in the group of average and 4 respondents (4%) are in the above average group. Thus it can be said that the teachers have good professionalism.

Darwin (2002), states that a professional teacher can be viewed from two perspectives. First, based on educational background, and the second from the teachers control of teaching materials, managing of learning and students, and performing tasks guidance. Mulyasa (2008) insists that the competency of a teacher requires four aspects: pedagogical, personal, professional, and social competence.

The ranges of teaching skills variable scores have a theoretical range from 30 to 150, and the empirical score range between 45 and 94. From the calculation of descriptive statistics obtained an average score is (M) = 75 standard deviation (SD) = 9 variance = 77 median (ME) = 74 and the mode (MO) = 72 and range = 49. The distribution of teaching skills variable data can be described in frequency distribution as shown in Table 3 below:

Table 3: Frequency Distribution of Teaching Skills

N0	Class		Midpoint	Frequency Absolut	Frequency Relative (%)	Frequency cumulative
	Interval					
1	43	- 49	46	1	1.00	1.00
2	50	- 56	53	1	1.00	2.00
3	57	- 63	60	3	3.00	5.00
5	64	- 70	67	27	27.00	32.00
5	71	- 77	74	32	32.00	64.00
6	78	- 84	81	20	20.00	84.00
7	85	- 91	88	15	15.00	99.00
8	92	- 98	95	1	1.00	100.00
<b>Total</b>				<b>100</b>	<b>100.00</b>	

Based on the above table, the teaching skills score have 5 respondents. It means (5.0%) of the respondents are in the group below the average, 79 respondents (79.0%) are in the group of average and 16 respondents (16%) are in the above group average. It can be concluded that the teachers teaching skill or ability are in good standing.

In assessing the progress of the learning process, every teacher can make an assessment of the progress of the students, both illuminative and structurally-objective. The illuminative-observational assessment carried out by the continuous observation about the progress of students. While structural objective assessment related to scoring, the number or value are usually done in the framework of assessment of student learning outcomes (Sudjana, 1998).

## **4. 2. Research Hypothesis Testing**

### **4.2.1. There is a difference of male teachers teaching skills with female teachers teaching skills**

To answer hypotheses and research questions of whether there are differences in teaching skills between male and female teachers, the examination towards the respondents or samples is needed. The answer to the research question can be found by using the t-test, which shows that there are differences between the teaching skills/ability of male teachers and female teachers by sig. > 0.05.

The values of teaching skills ( $t = -1.168$ ; Sig = 0.246), it is known that there are differences in the teaching skills between male and female teachers, negative of t value means the average teaching skills of male teachers is lower than female teachers, the difference in average (mean difference) amounting -2.040 and differences ranging up to 1.426 -5.506. The mean value of the overall teaching skills of men 74.00, with a standard deviation of 6.925, while the average value of teaching skills of females teachers is 76.04 and the standard deviation of 10.226. It can be seen that the average value of teaching skills of male teachers is lower than the female teachers. Thus the teaching skills of the female are higher when compared with the teaching capabilities of male teachers, the female teachers with motherhood in nature are possibly able to provide much greater part in the learning process in school.

### **4.2.2. There is a difference between male and professional teachers**

To answer hypotheses and research questions about whether there are differences between the professionalism between male teachers and female teachers is important. The answer to those questions is relied on to the T-test, in which T-test shows that there are differences between the professionalism of male and female teachers with the sig. > 0.05.

The score of the teachers' professionalism are ( $t = 0.010$ ; Sig = 0.992). It is known that there are differences between the professionalism of male and female teachers. The positive T value means that the average of professionalism of male teachers is higher than female teachers. The mean difference is 0.020 and the difference ranged from -4.104 to 4.144. The mean value of the overall professionalism of male teachers is at 79.70, with a standard deviation of 8.612, while the average value of professionalism of female teachers is 79.68 and a standard deviation of 11.905. From those facts, it can be inferred that the average value of teachers professionalism of male is higher than female teachers, and thus the professionalism of male teachers is higher when compared to the professionalism of female teachers.

### **4.2.3. There is a difference between male and female students achievement**

To answer hypotheses about whether there are differences between male and female students achievement, statistical T-test analysis is applied. By using the T-test, it shows that there are differences of between male student achievement and female students achievement based on the sig. > 0.05.

The values of student achievement are ( $t = -1.022$ ; Sig = 0.309), it is known that there are difference achievements between male and female students. The negative T value means the average of the student achievement of the males is lower than female, the mean difference is -2.211 and differences ranging up to 2.127-6.647. The mean value of overall student achievement of the female is 90.90, with a standard deviation 87.14, while the average value of female student achievement is 93.16 and the standard deviation of 12.979. Based on those data, it can be seen that the average value of learning achievement of male students is lower than female students.

### **4.2.4. The relationship between teaching skills and teacher's professionalism**

The proposed hypothesis to be tested is: "There is a relationship between the teaching skills toward the teacher professionalism". In other words, it is predicted that the higher teaching skills will make the higher the professionalism of teachers. Conversely, the lower the ability of teaching will make the lower the professionalism of teachers in schools.

Based on the calculation of simple regression analysis on the data of teaching skills variable toward teacher professionalism, it is obtained that the regression b value is = 0.648 and 31.076 to a constant. Thus the second form of the relationship (X and Y) can be described by the regression equation  $Y = 31.076 + 0.648X$ . The variable regression equation of teaching skills toward teachers' professionalism can be seen in Table 4 below:

Table 4: Regression equations of teaching skills toward teacher professionalism

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	31.076	7.537		4.123	.000
	Teachers teaching skill	.648	.100	.548	6.493	.000

a. Dependent Variable: Teacher Professionalism

Before being used for prediction purpose, the regression equation needs to meet the significance test (significance) requirement and a linearity test. To determine the degree of significance and regression linearity, F-test was conducted with the measurement criteria of  $F_{count} > F_{table}$  (0.01).

From the calculation obtained, it is known that the value  $F_{count}$  42.158 while  $F_{table}$   $\alpha = 0.05$  4.04 at  $\alpha = 0.01$  at 7.19. These results indicate that the  $F_{count} > F_{table}$ , so it can be stated that the regression coefficient Y on X1 is very significant at the significance level, thus the equation  $Y = 31.076 + 0.648X_1$  can be used to describe the relationship between the teaching skills and teachers professionalism as a positive and significant correlation.

To find a linear regression equation can be done through a linear regression line. The assessment criteria are  $F_{count} < F_{table}$ . From the calculations, the value of  $F_{count}$  1.521; while the value of  $F_{table}$  at  $\alpha = 0.05$  of 2.25. Whereas at the level at  $\alpha = 0.01$  of 3.20. This case shows that the value of  $F_{count} < F_{table}$  or  $1.521 < 2.25$ . Thus the model of the linear regression equation.

The strength of the relationship between the variables of teaching skills with the teachers' professionalism shown by the correlation coefficient  $r_{y1} = 0.548$ . T-count obtained for 6.486 while the T-table distribution of student "t" with  $\alpha = 0.05$  obtained T-table value index of 1.68. Therefore T-count is greater than T-table ( $6.486 > 1.68$ ), means the correlation coefficient between the teaching skills toward teachers' professionalism is very significant. Thus the hypothesis is a very significant positive relationship between the teaching skills toward teachers' professionalism. Thus the higher the skills of teaching will make the teachers professionalism are better in schools. Furthermore, it holds coefficient of determination analyzes. The coefficient of determination of the relationship between the teaching skills toward teachers' professionalism is 0.301. This means that 30.1% of the variation of the teachers' professionalism can be influenced by the teaching skills and can be explained by the regression  $Y = 31.076 + 0.648X$ . In other words, teaching skills contribute 30.1% to the increase of the professionalism of teachers in schools.

#### 4.2.5. The Relationship between teaching skills and student achievement

The proposed hypothesis to be tested is: "There is a positive relationship between the teaching skills toward the student achievement." In other words, it was expected that the higher teaching skills of teachers in the school, so the student achievement will be the higher. Conversely the lower the teaching skills of the teachers in schools, it will make the student achievement lower.

Based on the calculation of simple regression analysis on the data of teaching skills variable on student achievement, it is obtained by regression  $b = 0.703$  and 39.265 to a constant. Thus the second form of the relationship (X to Z) can be described by the regression equation  $Y = 39.265 + 0.703X$ . The regression equation of the variable of teaching skills toward student achievement can be seen in Table 5 below:

Table 5: Regression equations of teachers' teaching skills and student achievement

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	39.265	8.010		4.902	.000
	Teachers' teaching skill	.703	.106	.557	6.631	.000

a. Dependent Variable: Student Achievement

Before being used for the predictive purpose, the regression equation must be standardized by using the significance test (significance) and a linearity test. To determine the degree of significance and linearity regression, F test conducted with the assessment criteria of  $F_{count} > F_{table}$  (0.01). From the calculation, it is known that the value of F-count 43.976 while F-table at  $\alpha = 0.05$  by 4.04 at  $\alpha = 0.01$  at 7.19. These results indicate that the  $F_{count} > F_{table}$ , so it can be stated that the regression coefficient Z direction on X is very significant and at the significance level. Thus the equation  $Y = 39265 + 0.703X$  can be used to describe the relationship between teaching skills and student achievement as positive and significant.

To find a linear regression equation, a line of linear regression can be done. The assessment criteria are  $F_{count} < F_{table}$ . From the calculations, the value of F-count 1.087; while the value of F-table at  $\alpha = 0.05$  of 2.27. whereas at the level of  $\alpha = 0.01$  of 3.24. It indicates that the value of  $F_{count} < F_{table}$  or  $1.087 < 2.27$ . Thus, it uses the model of the linear regression equation.

The strength of the relationship of teaching skills toward student achievement is indicated by the correlation coefficient  $r_{y1} = 0.557$ . T-count obtained was 6.64 while t-table distribution of student "t" with  $\alpha=0.05$ , T-table price index gained 1.57. Therefore T-count greater than T-table ( $6.64 > 1.57$ ) means the correlation coefficient between teaching skills toward student achievement is very significant. Thus the hypothesis that there is a very significant positive relationship between teaching skills toward student achievement is proven. Thus, the better the skills of teaching in school will make the student achievement better. Further statistical analysis, the coefficient determinant is taken into account. The coefficient of determination of the relationship of teaching skills toward student achievement is at 0.310. This means that 31.0% of the variation in student achievement can be influenced by the teacher teaching skills in schools and can be explained by the regression  $Y = 39.265 + 0.703X$ . In other words, the teaching skills of the teachers give a contribution of 31.0% toward the improvement of student achievement in school.

#### 4.2.6. The relationship between teacher professionalism and student achievement

The proposed hypothesis to be tested is: "There is a positive relationship between the teachers' professionalism toward student achievement". In other words, it is predicted that the higher the teachers' professionalism will make the student achievement higher in the school. On the contrary, the lower the professionalism of the teachers, the lower the students' achievement will be.

Based on the calculation of simple regression analysis on the data of teachers professionalism variable toward student achievement, it is obtained by regression  $b = 0.849$  and 24.396 to a constant. Thus the second form of the relationship (Y, Z) can be described by the regression equation  $Y = 24.396 + 0.849Y$ . Variable regression equation professionalism of teachers on student achievement can be seen in Table 6 below:

Table 6: Regression Equations of Professional Teacher with Student Achievement

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	24.396	5.283		4.618	.000
	Teachers' professionalism	.849	.066	.794	12.908	.000

a. Dependent Variable: Student Achievement

Before being used for predictive purposes, the regression equation should meet the significance test (significance) and a linearity test in advance. To determine the degree of significance and linearity regression, F test is conducted with the assessment criteria of  $F_{count} > F_{table}$  (0.01). From the calculation, it is known that the value of F-count 166.614 while the value of F-table at  $\alpha = 0.05$  by 4.04 at  $\alpha = 0.01$  at 7.19. These results indicate that the  $F_{count} > F_{table}$ . So it can be stated that the regression coefficient Z direction on Y is very significant and on the significance level, thus the equation  $Y = 24.396 + 0.849Y$  can be used to describe the relationship between the professionalism of teachers toward student achievement.

A linear regression equation value can be done through a linear regression line. The assessment criteria are  $F_{count} < F_{table}$ . From the calculations, it can be inferred that the value of F-count 0.857; while the value of F-table at 0.05 of  $\alpha = 2.19$ . whereas at the level of  $\alpha = 0.01$  on 3.23, this indicates that the value of  $F_{count} < F_{table}$  or  $0.857 < 2.19$ . Thus, it can be used the model of the linear regression equation.

The strength of the relationship between variables professionalism of teachers and student achievement is indicated by the correlation coefficient  $r_y = 0.794$ . T-count obtained is 12.93 while t-table distribution of

student "t" with  $\alpha = 0.05$  obtained t-table value index of 1.68. Therefore t-count greater than t-table (12.93 > 1.68). It means that the correlation coefficient of the teachers' professionalism and student achievement is very significant. Thus the hypothesis which states that there is a very significant positive relationship between the teachers' professionalism toward student achievement is proven and accepted. Thus the higher the professionalism of teachers, the better the students' achievement. The further statistical analysis used is the coefficient of determination. The coefficient of determination between teacher professional relationship and student achievement is at 0.630. This means that 63.0% of the variation in student achievement can be influenced by the professionalism of teachers and can be explained by the regression  $Y = 24.396 + 0.849Y$ . In other words, the professionalism of teachers gave a contribution of 63.0% to improve students' achievement in school.

## 5. Conclusion

There are differences of the teaching skills of the male and female teachers, teaching skill of male teachers is lower than the average female teachers' teaching skills. There are differences in the professionalism between male and female teachers, the professionalism of male teachers is higher than the average female teachers. There are differences in male students' achievement and female students' achievement, academic achievement of male students is lower than the average of female students.

There is a positive and significant relationship between teaching skills and the teachers' professionalism. The relation pattern of two variables is based on regression, and correlation analysis. Based on the equation shows that if teaching skills increase higher, it will affect to the teachers' professionalism positively.

There is a positive and significant relationship between the teachers' teaching skills and student achievement, the pattern of the relation between two variables are based on the regression analysis and correlation. This equation shows that if the teachers' professionalism is high, it will contribute a positive improvement to student achievement in school. The better the teaching skills of the teachers, the result of students' achievement will be better.

There is a positive and significant relationship between the teachers' professionalism and academic achievement of students in schools, the pattern of the relationship between two variables are confirmed based on regression analysis, and correlation. This equation shows that if teachers' professionalism increase, it will affect the students' achievement in school positively. The higher the teachers' professionalism get, the higher the students' achievement in school are. In sum, this is in line with earlier research findings that teacher training and professional development are considered essential mechanisms for enhancing teachers' content knowledge and developing their teaching practices in order to teach to high standards (Cohen & Hill, 2001 ; Darling-Hammond & McLaughlin, 1995 ; Smith & O'Day, 1991, Creemers, et al, 2013), which later on, lead to the students high achievement. On how important the role of teachers is, Stronge (2007: ix) rightly puts that "[t]eachers have powerful, long influence on their students. They directly affect how students learn, what they learn, how much they learn, and the ways they interact with one another and the world around them."

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