

# THE EFFECTIVENESS OF SAT (SELF-ASSESSMENT TEACHER) APPLICATION TO IMPROVE TEACHERS' PROFESSIONALISM

**FR. R. Dewi Astika Indah Sintawati**

Advisor: Prof. Dr. Hermanu Joebagio, M.Pd. Co-advisor: Dr. Leo Agung S, M.Pd.  
Education Technology Study Program  
Faculty of Teacher Training and Education  
SebelasMaret University, Surakarta, Indonesia

dewiastika6881@gmail.com

**Abstract:** Teachers are educational staff who have the main duty to educate, teach, train, and guide students to have readiness to face increasingly fierce global competition with other nations. Hence, the position of teachers as professionals is urgently important in the realization of the vision and mission of learning especially in the educational aspect where the teachers can fulfill their duties. Teachers require particular attention from the government and society, ultimately the government regulates the improvement of the quality of teachers or teachers nationally through Law No. 20 of 2003 on *National Education System*. The "TPA" (Teacher Performance Assessment) system is still implemented conventionally which gives tremendous influence on teacher professionalism. This study aims to determine the effectiveness of SAT applications (Self-Assessment Teacher) to improve the teachers' professionalism. This research uses quantitative methodology with independent *t test* using control class and experiment class as research samples. The result of this research revealed that a computer based SAT (Self-Assessment Teacher) application containing component of assessment which are personality competence, pedagogic competence, professional competence, social competence and result of assessment recap could maximally increase professionalism of teachers. The results indicated that the application was utilized effectively in improving the professionalism of teachers. In the application effectiveness test, it is known that the average value obtained by the experimental class is 82,9178, and that average value is higher than the control class 61,6363. This application is designed using the *Dephi* programming language and *MySql* database. The results of the teacher's performance appraisal can be viewed directly by the assessor and also the teacher with the login their user name and password in order to know the value of each competitor and the follow-up, and also the overall "TPA" recap value to the value used for the teacher's "PAK" (Credit Score Assessment).

**Keywords:** Performance, Teachers' Professionalism, TPA, Competence, Quantitative, SAT Applications

## INTRODUCTION

Stated in Law No. 20 of 2003 on National Education System that national education aims to develop the ability and form the character and the nation, dignified in order to educate the life of the nation. Furthermore, it aims for the development of potential

learners to become human beings who believe and piety to the God Almighty, noble, healthy, knowledgeable, capable and creative, be independent and be a democratic and responsible citizen. An effort to prepare qualified human resources as contained in the above national education purpose, the quality of education in Indonesia should always be improved. In line with that idea, improving the quality of education must be supported by the increasing quality of education staff. Education staff is an important component in the implementation of education, which is responsible for organizing teaching activities, training, researching, developing, managing and providing technical services in the field of education (Hamalik 2003: 9).

Teachers are professional educators who have important duties, functions, and roles in the intellectual life of the nation. Professional teachers are expected to be able to participate in the national development to realize the devoted Indonesian human beings to God Almighty, excelling in science and technology, possessing aesthetic, ethical, noble character and personality. Without exaggeration to agree that the future of society, nation and state, is largely determined by the teacher. To be a professional teacher must have some competences. In Teachers and Lecturers Law No.14 / 2005 and Government Regulation No.19 / 2005 stated that teacher competence includes personality competence, pedagogical competence, professional and social competence. All these competencies must be owned by a teacher in teaching activities at school. Qualified teachers are professional teachers in their work because professional teachers can always improve their quality. Therefore, a teacher must be able to master the competences so that learners can easily absorb the knowledge gained.

Nowadays, education in Indonesia is growing very rapidly. With this condition, teachers are required to have a broad insight in the development of education. The role of a teacher in terms of duties and responsibilities is uneasy. Consequently, a teacher should get the ideal attention. The performance of a teacher is said to be good if the teacher has done elements consisting of high loyalty and commitment to teaching tasks, mastering and developing instructional materials, discipline in teaching and other tasks, having creativity in the implementation of teaching, having cooperation with all citizens, becoming role models of students, showing a good personality, honest, and objective in guiding students, as well as responsibility for the task. Gultom (2012) stated that "Learning is the soul of institution of education unit whose quality must be improved continuously". This is understandable because learners get the most formal learning experience during the learning process at school. This condition requires all parties to realize the importance of continuous improvement of learning quality, in which the teacher is the spearhead. Therefore, the teaching profession should be respected and developed as a profession of quality and dignity. Teachers' professions have an important role and position in achieving the educational vision of creating intelligent, comprehensive and competitive Indonesians. Discussing the quality issues of teacher performance cannot be separated from the achievement of learning outcomes. Since the performance of teachers is crucial to the success of an effective and efficient learning process so that the goal of education can be achieved and materialized from the results of good student learning that ultimately can create quality graduates.

Hence, the teaching profession needs to be developed continuously and proportionally according to the functional position of the teacher. In addition, in order to function and task inherent in the functional position of teachers implemented in accordance with applicable rules, it is necessary *Teacher Performance Appraisal* (TPA) which ensures the occurrence of quality learning process at all levels of education. Implementation of TPA is intended not to complicate the teacher, but instead TPA implemented to realize professional teachers, because the dignity and dignity of a profession is determined by the quality of professional service quality. Finding out precisely the activities of teachers in the classroom, and helping them to improve their knowledge and skills, will contribute directly to improving the quality of learning, while also helping to develop the career of teachers as professionals. It is based on the Regulation of the Minister of National Education of the Republic of Indonesia Number 16 Year 2007 regarding Academic Qualification Standards and Teacher Competencies. The Teacher Competency Standards are developed in four main competencies, namely: Pedagogic, Personality, Social, and Professional Competencies. These four competencies are integrated in teacher performance. The results of TPA can be utilized to develop teacher performance profile as input in the preparation of *Profession Sustainable Development* (PSD) program. The results of TPA are also the basis for determining the acquisition of teacher credit numbers in the context of teacher career development as mandated in the Regulation of State Minister of Administrative Reform and Bureaucracy Reform No. 16 of 2009 on Teacher Functional Position and Credit Score.

In this modern era the use of technology is absolutely needed, especially for information services demanded fast, accurate always up-to-date, yet the implementation of *Teacher Performance Assessment* that happened so far is still conventional from the beginning, so it is very difficult for assessors when doing assessment for more than two teachers simultaneously. *Teacher Performance Assessment* that is manual is also very time-consuming, nay sometimes teachers forget the main obligation to guide learners in the learning process.

The use of manual TPA documents is a problem that must be addressed because it is very time-consuming and interferes the process of teaching and learning so that the professionalism of teachers decreases, the requirements of documents assessed primarily related to the statement of competence and teacher performance indicators in full in many incomplete TPA and use document the previous year. Based on the results of observation and document collection, it was found out that the qualified TPA documents from 72 teachers in the field were syllabus 50%, 48% Lesson Plan, 60% teaching journal, 45% students' progress note. The average of the documents of TPA is less than 50%. These documents are important because they are used by the assessor for guidance on the implementation of the TPA in order that the outcomes are objective, accurate, accurate, valid and accountable. Accordingly, to overcome that situation, there is given solutions to various limitations in the process of *Teacher Performance Assessment* by utilizing technology that has been mastered by teachers and assessors. These limitations can be overcome by using the tools already owned by teachers and

assessors as media in the TPA process that is not bound by time and place. That is by utilizing computer technology in TPA process.

Departing from these conditions, it is necessary an application that utilizes IT that facilitates teachers and assessors in carrying out the TPA process. Undoubtedly, it is necessary to study the effectiveness of SAT Application (Self-Assessment Teacher) on improving teacher professionalism.

## **BACKGROUND OF THEORY AND HYPOTHESES**

### ***The Empirical and Theoretical Review***

In the study conducted by Maharsi (2009) stated that "Contribution of Emotional Intelligence Ability in Social Interaction and Attitudes of Teacher Professionalism to Teacher Performance in Learning". She concluded that teachers who have emotional intelligence in good social interaction tend to have performance in better learning. Thus, the professional attitude of teachers contributes positively and significantly to teacher performance in learning. Teachers as professional educators with the main task of educating, teaching, guiding, directing, training, assessing and evaluating will strive to improve their ability in mastery of learning materials, presentation of learning materials, media utilization, teacher personality, teacher interaction with students, community.

As for Mujiyanto Paul (2015) on "Teacher Performance Assessment as an Effort to Improve Teacher Professionalism", concluded that the TPA was enacted several years ago. However, until now the implementation in schools is still varied. This study aims to (1) Obtain a description of the implementation of *Teacher Performance Assessment* in order to improve the professionalism of teachers, (2) Identify the various issues that emerge related to the Teacher Performance Appraisal as well as the solution. The method used is interview with respondent. The data results are analyzed by quantitative descriptive. In addition, the findings in this research are the implementation of TPA in school has been implemented in accordance with the provisions; in general, the TPA has not directly impacted on the improvement of teacher professionalism, the discovery of various obstacles in the implementation of the TPA, namely: the existence of TPA instruments that change, the existence of "ewuhpakewuh" culture, low in IT skills, and the unavailability of special budget. Advice for principals and senior teachers need to improve IT skills, reduce inappropriate cultures.

Regulation of the Minister of National Education of the Republic of Indonesia No. 18 year 2007, especially in the description of professional competence explained that the utilization of ICT is absolutely used to improve the professionalism of teachers. Tyson and Jackson (2014: 70) also state that effective and professional performance is concerned with the desire to move forward, be self-sufficient, full of responsibility for work and the ability to respond and adapt to changing circumstances. Explained in Truong BaoDuy (2015) on "The Effects of Teacher Professional Development on Teaching Practice and Student Learning Outcome", explains that developing teacher professionalism is very important. Therefore schools need to build good climate and qualifications for teachers. Teachers should be able to find new methods and activities

in teaching. One of them is by training or training for teachers, training and training to develop teachers' professional skills in improving the quality of teaching, material quality, social relations both with students and the surrounding community.

In Horison's (2017) study of "Lecturer Performance Appraisal Application on Web-Based Teaching Process" explained that the lecturer has the main duty called "*tridharma*" Higher Education. Currently the assessment of lecturers using questionnaires by students is still not effective and the data is less valid. It is expected that by applying lecturer appraisal, the lecturer's performance appraisal can be obtained directly to know the lowest value and also the highest score and can also see the result of the total lecturer's score accessed on the account of each lecturer on the campus information system.

### ***Teachers' Performance***

Teachers' performance is an activity or behavior that is highlighted by the teacher in carrying out their duties. In relation to the performance of teachers, the following indicators pointed out concerning the tasks of teachers namely, (1) Able to prepare a teaching program or practice; (2) Able to present a teaching program or practice; (3) Be able to carry out evaluation of learning or practice; (4) Be able to carry out analysis of learning or practice evaluation results; (5) Able to prepare and implement improvement and enrichment programs; (6) Ability to guide students in extracurricular activities; (7) Able to guide teachers in the process of teaching and learning or pratek for teachers who are authorized to direct or nurture teachers at a certain level; (8) Able to organize UN / US activities; (9) Able to perform tasks in remote areas; (10) Can make papers / scientific in the field of education; (11) Able to make teaching tool / props; (12) Able to create works of art; (13) Ability to perform certain tasks at school and; (14) Can participate in curriculum development (Kepmendikbud RI: 025 / O / 1995).

Moreover, Husdarta provided understanding that teacher performance in learning becomes the most important part in supporting the creation of educational process effectively, especially in building the attitude of discipline and the quality of learning outcomes of learners (Husdarta in Supardi, 2014: 54. Zamroni (2000: 68) showed that teacher's job is an art for transferring knowledge, skills and values directed by educational values, individual student needs, environmental conditions, and beliefs possessed by teachers. Budiono (1994: 20) explained that teacher performance consists of preparation of teaching planning program covering: material mastery, subject matter analysis, annual program and semester / semester program, lesson unit program, teaching plan, daily test analysis, teaching implementation, evaluation cannot be separated. In performing each teaching task, the teacher should be guided by the teacher's duties as a teacher which includes: making lesson plans, executing lessons, and conducting evaluations (Popham, 2001: 13).

From those opinions, it can be concluded that the task of teaching teachers is an art to transfer knowledge, skills and values of education, the individual needs of students, environmental conditions, and beliefs owned by teachers. The task of teachers in the educational profession system is teaching, helping students, managing part of education,

designing curriculum, using educational technology, making renewal in the education system.

### ***Teacher Performance Assessment (TPA)***

According to the Law of the Republic of Indonesia No. 14 Year 2005 on Teachers and Lecturers: "teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing and evaluating learners in early childhood education, primary and secondary education". In Law no. 14 of 2005 explained that: "The teacher has a position as manpower, on a formal basis appointed in accordance with legislation (Article 2 of RI Law No. 24: 2005). Because of that position, the teacher occupies a very important position in improving the quality of the learning process and the results. In this context, the quality of education is determined by the quality of teacher performance, which consequently the teacher is required to play an active role in positioning themselves as professionals in accordance with the growing demands of society. Supriyono (2000: 59) explained that in the performance report not only the results can be achieved but also pay attention to the process of achievement. If this is applied in the teaching-learning process then the teacher's performance includes the view that can be achieved in the learning process earlier. Associated with the performance of teachers, it cannot be separated from the duties and competence of teachers. The tasks of teachers according to Usman (2001: 89), grouped into three types, namely: (1) tasks in the field of profession; (2) humanitarian duties; and (3) tasks in the field of society.

Performance appraisal is to compare the actual performance of subordinates with established standards, assess the progress of subordinates and design development plans (Dessler, 1984: 86). This notion is in line with the opinion of Ruky in Supardi (2014: 158) which stated that performance appraisal is comparing the actual results obtained with the planned. Assessment of teacher performance is an assessment conducted by the Principal of the teacher in the implementation of tasks to know the actual results obtained compared with the planned results. Teacher performance quality has certain specifications / criteria. Teacher performance quality can be seen and measured based on competency specification / criteria that must be owned by every teacher. Based on the Regulation of the Minister of National Education of the Republic of Indonesia Number 16 Year 2007 regarding Academic Qualification Standards and Teacher Competencies. As already been explained, the *Teacher Competency Standards* are also developed from 4 main competencies, namely: Pedagogic, Personality, Social, and Professional Competencies. These four competencies are integrated into teacher performance.

### ***Teachers' Professionalism***

In the 2003 national education system law of article 39, paragraph 2 explains: "Educators are professionals in charge of planning and implementing the learning process, assessing learning outcomes, conducting mentoring and training and conducting research and community service." Teachers' professionalism is the

condition, direction, value, purpose, and quality of a skill and authority in the field of education and teaching relating to the work of a person who becomes a livelihood. Professional teachers themselves are qualified teachers, competent, and teachers who are required to bring learning achievement and able to influence student learning process which will result in better student learning achievement. Professional teachers must have the required competencies to undertake educational and teaching tasks. Teachers who are professionally prosecuted must be able to play as a good manager in which should be able to hold all stages of activity and learning process with good managerial so that the expected learning objectives can be achieved with satisfactory results.

Professional teachers will be reflected in the implementation of the dedication of duties marked with expertise in both material and method. It is also designated through its responsibility in carrying out its entire dedication. Professional teachers should be able to assume and carry out the responsibilities as teachers to learners, parents, and communities, Nation, State and Religion. Professional teachers have personal, social, intellectual, moral and spiritual responsibilities. Independent personal responsibilities are capable of understanding themselves, managing themselves, controlling them and appreciating and developing themselves. Besides, social responsibility is realized through the competence of teachers in understanding themselves as an integral part of the social environment and has the ability to interactively and effectively. Additionally, intellectual responsibility is manifested through the mastery of the various tools of knowledge and skills necessary to support its tasks. Still, spiritual and moral responsibility is manifested through the appearance of teachers as religious beings whose behavior is not deviant from religious and moral norms. Many factors influence teacher professionalism. Broadly speaking the factors that affect professional teachers include academic status, learning experience, love the profession as a teacher and personality. Teachers as executors of the educational process, they need to have expertise in performing their duties. Therefore, the success of teaching and learning process depends on how teachers teach. In order for teachers to perform their duties effectively and efficiently, teachers need to have competencies that can support their duties, which is called the competence of professional teachers.

### ***Delphi and MySQL Programming***

Delphi is a programming language that uses the same visualization as Visual Basic programming language. However Delphi uses a language similar to pascal (often called object pascal). It is so much easier to be used. The Delphi programming language was developed by *CodeGear* as the embarcadero software development division. The division originally belonged to Borland, so this language has a version of Borland Delphi. Delphi is an IDE Compiler for Pascal programming language and software development environment used to design a program application. Delphi also uses an Object-Oriented Programming (OOP), meaning programming by helping an app approach the true state of the world. It can be done by designing objects to solve the

problem. This OOP has several elements namely; Encapsulation, Inheritance, Polymorphism.

Delphi has an advantage as a programming language, such as Integrated Development Environment or its own application development environment is one of several advantages of Delphi, in which there are menus that make it easier for us to create a project program, Compilation process is fast, when the application that we make run on Delphi, it will automatically be read as a program, without being run separately and easy to use, the source code of Delphi which is a derivative of pascal, so it does not need a customizer anymore, besides Delphi is also multi purposes, meaning Delphi programming language can be used to develop various application development needs. As data storage in delphi, MySQL database is used, because MySQL is a database program that is open source and can be used with any programming language. MySQL is software for database management system (Database Management System). Because of its open source and has a capacity to accommodate a very large capacity, then MySQL became a very popular database among web programmer.

## **RESEARCH METHODOLOGY**

Senior High School 3 Sragen is selected as a place to gain the data. The research was conducted here by involving several teachers and assessors for different groups namely control group and experimental group. The type of research used is quantitative research. To solve the problem appearing, the method used is field observation, interview, documentation and questionnaire. In the early stages is field observation of teacher performance appraisal process, facilities and infrastructure used and utilization of IT among teachers in Senior High School 3 Sragen. To obtain data, it was directly from sources that understand TPA, and then conducted interviews with principals, assessors and teachers. Data were also obtained from existing TPA documents, questionnaires were used to determine the effectiveness of SAT (Self-Assessment Teacher) applications on teacher professionalism in the TPA process (Teacher Performance Assessment).

In this study used procedural model because it is considered suitable with the development goal to be achieved is to produce a product and test the effectiveness of the resulting product where to achieve the goal must be through certain steps that must be followed to produce the expected product in this case SAT (Self-Assessment Teacher) application program that utilizes information and communication technology that can be used by teachers and assessors. The development and utilization of SAT applications aims to improve the professionalism of teachers. Flowchart programs showing the capabilities of SAT applications can be viewed as shown in Figure 1.



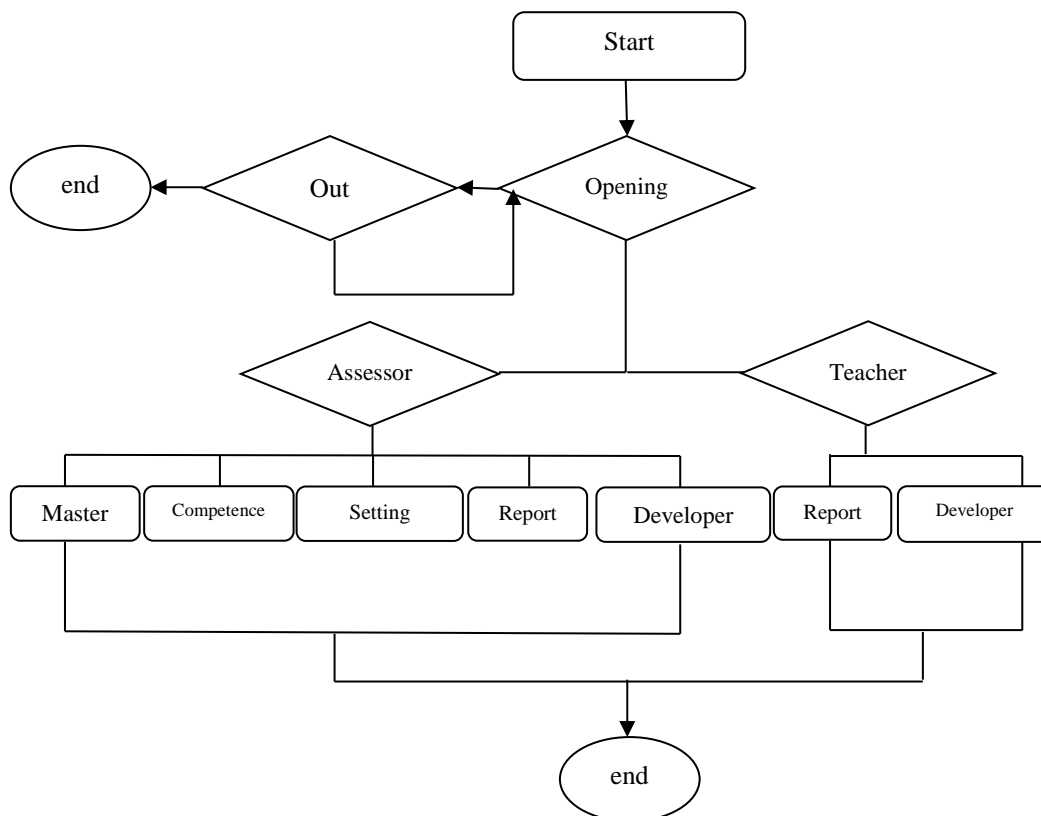


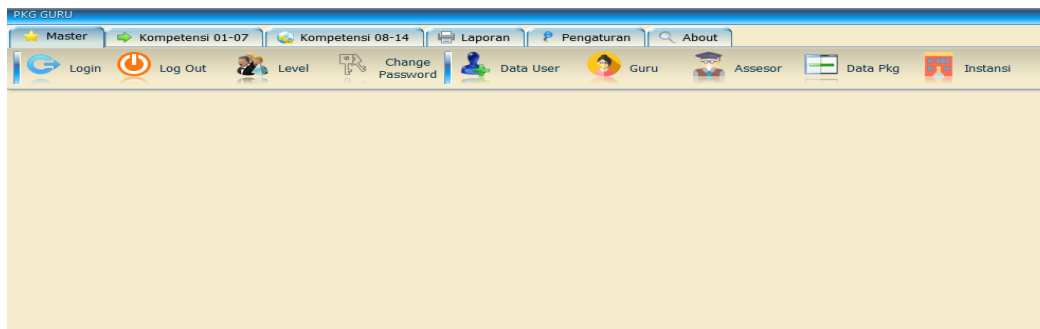
Figure 1. Flowchart of SAT Application

**RESULTS AND DISCUSSION**

The SAT (Self-Assessment Teacher) application is semi-online, an application that is mostly accessible offline without being connected to the internet, but still requires the internet to deliver results from the tests and application usage history. In general, the developed product consists of the assessment field, the observation sheet, the total value and the value specification. In particular this application is essentially a standalone application (stand-alone) that stores all the contents of SAT applications and various supporting materials in one application. Therefore, it is necessary to guide the use of SAT applications that aim to provide guidance to users in utilizing this application. The guidance of using the SAT application is placed inside a special page, so it can be accessed by the user when using the application.

On the first page the master contains entries on user data that follow *Teacher Performance Assessment*. This data is distinguished between the teacher data and the assessor data involved in the TPA (Teacher Performance Assessment) as well as the school data on which the TPA takes place, as shown in Figure 2.

Figure 2. Master page



The second and third pages contain the assessment given by the assessor during the observation, consisting of 14 pages of teacher competency assessment which includes (1) competence to recognize the characteristics of the learners, (2) the competence of mastering learning theory and the principles of learning educate, (3) curriculum development competence, (4) competence of educational activities, (5) competence to understand and develop potential, (6) communication competence with learners, (7) assessment and evaluation competence, (8) competence acts accordingly with the norms of religion, law, social and national culture of Indonesia, (9) competence showing mature and exemplary personalities, (10) work ethic competence, high responsibility, and pride of being teachers, (11) inclusive competence, and not discriminative, (12) competence to communicate with fellow teachers, educational staff, parents and learner community, (13) competence mastery of the material, structure, concepts and mindset of scholarship that supports the lesson learned, and (14) competence develops professionalism through reflective action, seen in figure 3.



Figure 3. Page Competence

The fourth page contains the format of the report and evaluation of the classroom teacher / teacher performance appraisal which in this format includes agreements to be signed by assessors and assessed teachers. Whereas for page five contains recap assessment of performance of teacher of class / subject according to assessment result given by assessor on 14 competences which is divided into 4 main competences that is pedagogic, personality, social and professional, seen in picture 4.

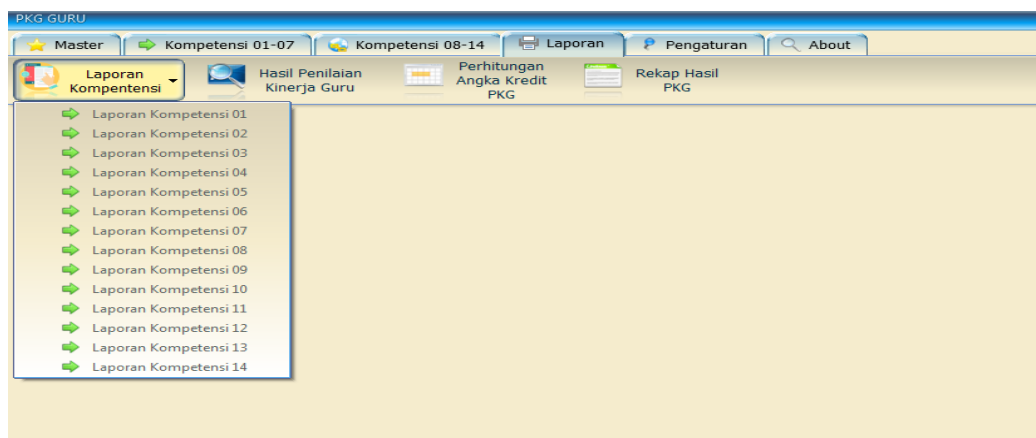


Figure 4. Competence report

On the sixth page contains the calculation of the credit score of the class / subject teacher assessment. In the format of calculation of credit numbers will be automatically generated calculation of the value of credit score automatically during 1 year assessment. The seventh page contains a full recap of the results of the Master Performance Assessment given by the assessor. The eighth page contains how to utilize the sat application program, application developer Performance Appraisal teacher, one mentor profile and two mentor profiles. In this built application system there will be two user logins, namely the user login for the assessor and for the teacher, where each has a different password. The access of the assessor can open the entire assessment contained in this TPA application system, while the teacher login can only see the assessment result recall given by the assessor during the observation and appraisal process, as well as the calculation of the value of credit score from each teacher.

In the testing phase of the effectiveness of the application, there are several steps taken by the researcher to know the extent of effectiveness of this SAT application when applied and utilized by teachers and assessors in an effort to improve the professionalism of teachers. SAT applications that have been successfully tested are then implemented in TPA activities. Assessors and teachers were given treatment using the application of 30 teachers (experimental group), while the group of assessors and teachers who were the control group who did not use the SAT application and used the manual TPA format of 30 teachers as well. Prior to testing the average of two interconnected samples, the first test of data prerequisite is the normality test and homogeneity test. If the data has met the prerequisite then can be tested two averages using independent test t-test.

### ***Normality test***

Normality test is used to determine whether the population data is normally distributed or not. Normal distribution means no difference between the amount of data above and below the mean. In this research will be used *Liliefors* normality test by using software SPSS18. The significance level used is 0.05. Data is otherwise normally

distributed if the significance is greater than 5% or 0.05. The normality test results between the experimental group and the control group used are presented in Table 1.

Table 1. Normality Test Result

Class	Kolmogorov-smirnov			Shapiro-wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Experimental	0,180	30	0,14	0,917	30	0,22
Control	0,162	30	0,44	0,920	30	0,28

Normality test data with *liliefors* (kolmogorov-smirnov) in Table 1 show that the significances in the experimental group 0.14 and in the control group 0.44. Both significances are greater than the alpha used is 0.05%, causing the proposed Ho hypothesis accepted where there is no difference of data above and below the middle value between the control class and the experimental class. The inference from this Ho acceptance is the data being tested, both experimental and control groups are normally distributed.

**Homogeneity Test**

Homogeneity test in this research used Homogeneity Test of Variance and Bartlett Test using SPSS 18 software. Alpha used is 5% or 0.05. The data is homogeneous is data that has the mean, median, and the same mode or in other words has the same distribution of variance. More clearly can be seen in the following table:

Table 2. Homogeneity Test Results

Value	Levene Statistic	df1	df2	Sig
Based on Mean	5.250	1	58	0,026
Based on Median	5.946	1	58	0,018
Based on median dan Adjusted df.	5.946	1	57.742	0,018
Based on average pruning	5.626	1	58	0,021

The data of homogeneity test result based on table 2 shows all test variables less than 0.05, thus causing the proposed Ho hypothesis accepted where there is no difference in data variance between the control class and the experimental class. The inference from this Ho acceptance is the data being tested, both experimental and control groups are homogeneous distributed meaning there is no difference between mean, median, mode (same variance).

**Test of Effectiveness**

After the prerequisite analysis test is done, the next step is to test the product effectiveness by using t-test. In the effectiveness test stage, there are several steps done by the researcher to know how far the effectiveness of application of this TPA system when applied and utilized by teacher and assessor in effort to improve professionalism of teacher. The application of the Teacher Performance Appraisal system that has been successfully tested is then implemented in TPA activities. The group of assessors and teachers were treated using the application of 30 teachers (experimental group), while the assessors and teachers grouped as control groups who did not use the TPA system application and used the manual TPA format of 30 teachers as well.

Comparison of probability values (sig.) with the following criteria:

- If the value of sig. > 0.05, then H0 is accepted
- If the value of sig. <0.05, then H0 is rejected

Comparison of t-count and table with the following criteria:

- If t-count > t-table or -t-count < -t-table, then H0 is rejected
- If t-count < t-table or -t-count > -t-table, then H0 is accepted.

Table 3. Product effectiveness

Value	Levene's Test for Equity of Variances		T-test for equity of Means		
	F	Sig.	T	df	Sig (2-tailed)
Equal Variances Assumed	5.250	0,026	23.797	58	0,000
Equal Variances not assumed			23.797	52.870	0,000

Table 4 Results of t-Test

**Group Statistics**

Class	N	Mean	Std. Deviation	Std. Error Mean
Value → Experimental	30	82.9178	2.87392	.52470
→ Control	30	61.6363	3.96647	.72417

From table 3 it is known that the significance value obtained is 0,000. This leads to the hypothesis H0 being rejected. Hence the alternative hypothesis H1 is accepted. Table 4 shows the inference of receipt of this H1 is the average difference between the experimental group and the control group where the mean questionnaire of the teacher's

proficiency in the experimental group is 82.9178 while the mean of the control class is 61.6363. Based on the calculation also obtained t-count 23,797 while t-table 1.670, this proves that there is difference of result between experimental group using TPA application and group control which do not use TPA application where t-count > t-table so that H<sub>0</sub> is rejected and H<sub>1</sub> accepted. It is concluded that the development of TPA products can improve the professionalism of teachers. This difference can be used as a reference that there are differences in the results of utilizing SAT applications on improving teacher professionalism.

Based on the above data and description it is concluded that the application of Teacher Performance Appraisal is effective in improving the professionalism of teachers because after using the application of professional teacher's TPA is increasing. This is in accordance with the statement of (Tyson and Jackson, 2014: 70) that effective and professional performance is concerned with the desire to move forward, independent, full of responsibility for the work and the ability to respond and adapt to changing circumstances. Reinforced also with the Regulation of the Minister of National Education Republic of Indonesia No. 18 year 2007 on the aspect of professional competence develops teachers' professionalism continuously by doing reflective action and utilizing information and communication technology to develop teachers' competence itself. In addition, the requirement of the *Teacher Performance Appraisal*, one of them is practical where the teacher performance appraisal system should be done by anyone with relative ease, with the same level of validity and reliability in all conditions without disturbing the teaching and learning process.

Some studies that have been done previously also occupy the research that has been described above. Research conducted by Mujiyanto Paul (2014) concluded that the Teacher Performance Assessment (TPA) was enacted several years ago. However, until now the implementation in schools is still varied. This study aims to (1) Obtain a description of the implementation of Teacher Performance Assessment in order to improve the professionalism of teachers (2) Identify the various issues that emerge related to the Teacher Performance Appraisal as well as the solution. The findings in this research are the implementation of TPA in school has been implemented in accordance with the provisions; in general, TPA has not directly impact on the improvement of professionalism of teachers, the discovery of various obstacles in the implementation of the TPA, namely: the existence of TPA instruments are changing, the existence of "*ewuhpakewuh*" culture, low IT skills and utilizing ICT. Suggestions for principals and senior teachers need to improve IT skills and utilize ICTs in the TPA process, reducing inappropriate cultures. This suggests that the SAT (Self-Assessment Teacher) application is indispensable for improving teacher professionalism in the Teacher Performance Assessment process.

## **CONCLUSION**

Based on the results of research effectiveness of SAT applications to improve the professionalism of teachers conducted, it can be drawn conclusions as follows:

1. The results of observations on the process of *Teacher Performance Assessment* can be concluded that the process of teacher performance appraisal is still a lot of fictitious, meaning that the assessment process is not running as appropriate according to TPA procedures. The assessment process is still manual, each process and assessment written manually from competence 1 to competence 14 as well as recapitulation of the assessment so that the manual teacher performance appraisal makes the assessor submit the assessment to the teacher directly. These results in inappropriate judgment and is not objective. Many manual and teacher-led assessments led to many teachers leaving their primary duty to teach and more concerned with completing a teacher performance assessment. Because for the teacher of the teacher performance appraisal it is important to associate with the value of Assessment of Credit Score used by the teacher as the basis of promotion. In addition, TPA is also used as the basis and terms of acceptance Professional teacher allowance. As a result, the teaching and learning process becomes disturbed, many teachers leave the class and only give the task to the learners, learners become abandoned and the target of learning objectives become unattainable, thus reducing the professionalism of teachers. Teachers and assessors need media Performance Appraisal Teachers who use computerized applications so that simplify the assessment and can be done anywhere without having to interfere with the teaching and learning process.
2. In the effectiveness test the significance obtained is  $0,000 < 0.05$ , so from the statistical calculation can be concluded that the application of SAT affects the level of professionalism of teachers. Then when the effectiveness test between the experimental group and the control group showed a significant difference, that the mean value of the experimental group was 82.9178 and the control group was 61.6363. Based on the calculation is also obtained t-count 23,797 while t-table 1.670, this proves that there are differences in results between experimental groups using SAT applications and control groups not using SAT applications where  $t \text{ count} > t \text{-table}$  Thus it can be concluded that the application SAT (Self-Assessment Teacher) in field trials have met very good and effective category in improving teacher professionalism.

## REFERENCES

- Ametembun, N.A. 1981. *Supervisi Pendidikan, Petunjuk Pendidikan terhadap Profesional terhadap Pengawas, Kepala Sekolah dan Guru* : IKIP Bandung.
- Aminatul, Zahroh. 2015. *Membangun Kuaalitas Pembelajaran melalui Dimensi Profesionalisme Guru*. Bandung : Yrama Widya.
- Aqib, Zainal. 2009. *Menjadi Guru Profesional Berstandart Nasional*. Bandung : YramaWidya.
- Arikonto ,Suharsimi. 2006. *Menejemen Penelitian*. Edisi revisi. Jakarta ;RinekaCipta.
- Bong, W.R and Gall M.D. 1989. *Educational Research*. New York: Longman
- Brown, 2001. *Teaching by Principle: An Imperative Approach to Language Pedagogy*,

- 2<sup>nd</sup> Edition. New York: Addison Wesley Longman, Inc.
- Campbell. 1983. Introduction to Educational Administration. Allyn and Bacon, inc
- David Johnson, Rupert Maclean. 2008. Professionalization, Development and leadership. Springer Science.
- Davis, FD, Bagozi. R. P & Warsha. P. R. 2006. Acceptance of Computer Technology: a Comparison of two theoretical models. *Technology Science*, 35 : 982-1003
- Depdiknas RI. UURI No. 20. 2003. Sistem Pendidikan Nasional. Jakarta: Depdiknas RI Jakarta. Diknas, Alat Penilaian Kemampuan Guru. 2003
- Diah Maharsi. (2009). Kontribusi Kemampuan Memanfaatkan Media Pembelajaran, Kecerdasan Emosional dalam Interaksi Sosial dan Sikap Profesional Guru Terhadap Kinerja Guru Dalam Pembelajaran. *Jurnal International for Educational*, 2(1), 27-40.
- Igbaria M, 2001. An Examination of the factors contributing to Micro Computer technology acceptance. Elsevier Science, USA.
- John Barrow. 2010. Introducing DELPHI Programming. Theory through practice.
- Mejia, Luis R. 2012. Managing Human Resources. New Jersey: Pearson Prentice Hall, Fourth edition.
- Mondy, R.W and Noe, R.M. 2008. *Manajemen Sumber Daya Manusia* . Terj. Edisi kesepuluh jilid 1. Jakarta : Erlangga
- Moh. Usman. 2005. Menjadi Guru Profesional. Bandung: PT. Remaja Rosdakarya.
- Mujiyanto Paulus. (2015). Penilaian Kinerja Guru (TPA) Sebagai Upaya Peningkatan Profesionalisme Guru. *Jurnal Penelitian Ilmu Pendidikan*, 2 (2), 27-45.
- Mulyasa. 2006. Menjadi Guru Profesional. Bandung: PT. Remaja Rosda Karya.
- Nick Hodges. 2014. Coding in Delphi . Summer Reading.
- Peraturan Menteri Pendidikan Nasional RI No. 18. 2007. Sertifikasi Guru Dalam Jabatan. Jakarta
- Privida Kristiono. 2009. Pemrograman Stored Procedure pada MySQL. Yogyakarta : Andi Offset.
- Sudjana, Nana. 2004. Dasar-Dasar Proses Belajar Mengajar. Bandung: Sinar Baru Algensindo
- Sugiyono. 2016. Metode Penelitian & Pengembangan Research and Development. Bandung: Alfabeta.
- Sukmadinata, N.S. 2013. Metode Penelitian Pendidikan. Bandung: PT Remaja Rosdakarya.
- Supardi. 2014. Kinerja Guru. Jakarta: PT. Rajagrafindo Persada
- Taufik. F. Prima. P. 2014. Perancangan Aplikasi Sistem Kinerja Karyawan dengan metode MBO dan BARS. *Jurnal Optimasi Sistem Industri*, 13(2), 160-185.
- Thompson Ronald, Howell, Higgins. 2000. Personal Computing: Toward a conceptual Model of Utilization?. *Management Information System Quarterly*, 21(3).
- Truong Bao Duy. (2015). The Effects of Teacher Professional Development on Teaching



Practice and Student Learning Outcome. International Journal for Educational Studies, 7(2), 181-187.

Undang-Undang Guru dan Dosen No. 14. 2005. Guru dan Dosen . Jakarta.

Uzer, Moh Usman. 2005. Menjadi Guru Profesional. Bandung: PT Remaja Rosdakarya.

Wagiran & Sudarsono, FX. (2008). Determinan of SMK Teachers' Performance In The Field Of Mechanical Engineering Expertise. International Journal for Educational Studies, 12(1), 149-167.

Wahana Komputer. 2014. Mastering CMS Programming with PHP and MySQL. Yogyakarta: Andi Offset.

Wijayanti, A. 2012. Evaluasi dan Pengembangan Sistem Penilaian Kinerja pada PT HKS. Jurnal Psikologi Undip, 11(2), 234-257.

Yamin, Martinis dan Maisah. 2010. Standarisasi Kinerja Guru. Jakarta : Gaung Persada Press