

## **JUNIOR HIGH SCHOOLS TEACHERS' PERCEPTION ON THE IMPLEMENTATION OF UJI KOMPETENSI GURU TO ASSESS PROFESSIONAL DEVELOPMENT**

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### **Abstract**

This research explores teachers' perception on the implementation of UKG to assess professional development. UKG is one of the government policies that must be followed by teachers who are still actively teaching. The implementation of UKG is expected to map teachers' competence whose results will be followed up as a reference in the development of teachers' competency and professionalism so that they can reach the expected result based on the Standar Nasional Pendidikan or National Education Standards (SNP). Survey research is conducted since the researcher needs a method that is able to make the result of this study represents the population of junior high school teachers. Teachers' perception are divided into three main parts which each of them focuses on teachers' understanding before taking UKG, teachers' views about UKG after taking the test, and teachers' action for the upcoming UKG

**Keywords:** Professional development, teachers' perception, UKG.

### **Introduction**

It cannot be denied, that education is the essence of national progress. If the education of a nation is good, then it is almost as certain that the quality of the nation will be good, and vice versa. In fact, every nation in the world is undergoing change and civilization progress due to education. The success of student's learning process is very dependent on the responsibility of teachers in carrying out their duties. A teacher is a human figure who has an important role in the learning process. A teacher has the task of educating, teaching, and training. The better and qualified teachers, it is possible output and outcome of the educational process will also be good. A qualified and professional teacher will be able to act as a great and reliable educational facilitator (Usman, 2001; Idris, 2014). In sum, the devotion of teachers who have high integrity and enthusiasm will produce a good learning quality. Conversely, the lack of teachers' commitment can weaken students' learning process and the educational services.

In order to improve the goal of Indonesian education which to educate the nation and develop a person as a whole, it requires the participation of a professional educator. The government's policy on teacher certification carries

many consequences for teachers, both directly and indirectly, on both the rights and obligations of teachers. Teachers are required to be qualified and high performing teachers. Teachers must meet the standards of competence and professionalism. In accordance to Indonesian Act Number 14, 2005 about teachers and lectures and Government Regulation Number 19, 2005 about Standar Nasional Pendidikan or National Education Standards (SNP), the education system must meet minimum standards on the educational system at the entire jurisdiction in Indonesia which includes content standards, graduate competency processes, education personnel, facilities and facilities, management, financing and educational assessment. Teachers and lectures have to obtain four competencies, which are professional competence, pedagogy competence, personal competence, and social competence, in order to meet the SNP (Mulyasa; 2013; Idris, 2014; Kemendikbud, 2015). Indonesian government has done various ways to fulfill the SNP, especially on the improvement of teacher professionalism. Among the recent endeavors include Uji Kompetensi Guru or Teachers Competency Test (UKG), Penilaian Kinerja Guru or Teacher Performance Assessment (PKG) and Pengembangan Keprofesian Berkelanjutan or Sustainable Professional Development (PKB) (Mulyasa; 2013; Idris, 2014)

UKG is one of the government policies that must be followed by teachers who have Nomer Unik Pendidik dan Tenaga Kependidikan or Unique Number of Educators and Educational Personnel (NUPTK) and who are still actively teaching. The implementation of UKG is expected to map teachers' competence whose results will be followed up as a reference in the development of teachers' competency and professionalism so that they can reach the expected result based on the SNP (Kemdikbud, 2015; Mulyasa, 2013).

However, in fact, the results of UKG in 2015 turn out to be unexpected. According to the data obtained by OkeZone.com, it turns out that the average result of UKG in 2015 across Indonesia is only 53.02, while the target of the average result set by the government is 55. In addition, the average professional competence score is 54.77, while the average score of pedagogy competence is 48.94. To add more, from 2.9 million teachers across Indonesia, there are only 3,805 teachers who get score above 91. Of all provinces in Indonesia, there are only 7 provinces whose average UKG results are above the government target. Those provinces are Yogyakarta, Central Java, DKI Jakarta, East Java, Bali, West Java and Bangka Belitung (Wurinanda, 2015).

Moreover, previous research shows several obstacles regarding the implementation of UKG which includes UKG follow-up, UKG material content, internet access, UKG implementation time, and UKG assessment criteria (Yuswono, 2014). Besides, there are several editorial problems that use complicated word which difficult to understand, the content of the question is too high, and a mismatch between questions and answers (Warganegara, 2013).

The facts stated above make the researcher wondering about how UKG assess teachers' professional development. Based on teachers' perception, the researcher would like to know whether they agree or disagree to the implementation of UKG to assess their professional development.

## **Literature Review**

### ***UKG and teachers' professional development***

UKG is a follow-up of the teacher certification program. UKG is implemented primarily to monitor the functioning of the teaching profession because every profession demands the ability to make the right decisions and policies. UKG is also required to obtain teachers who can work professionally based on adequate competence as mandated by government regulations on national educational system and national educational standard. Actually, UKG is implemented to not just test certain skills that teachers have, but more than that, UKG is able to develop teacher's professional agency. The agency that mentioned here includes the incorporation and application of an interlocking skills, knowledge, attitude and beliefs (Mulyasa; 2013; Idris, 2014; Kemendikbud, 2015).

The implementation of UKG has various benefits. Based on Mulyasa (2013) and Kemendikbud (2015), there are five benefits of UKG for Indonesian educational system and for the teachers. First, UKG is a mean to map teacher competency and performance. It means that the result of UKG will then be used to group teachers. The grouping process will be done according to the level of their pedagogy and professional competence. In groups, their competencies development will be coached. Second, UKD is used as a mean of teachers' development and teachers' empowerment. The government claims that UKG is an effective mean of teachers' development and teachers' empowerment since the result of UKG is obtained from preliminary accurate data. Third, the result of UKG can be used as references in curriculum development. Curriculum development will be clear and focus. Next, UKG has an influence in improving teaching and learning activities. Last, UKG can be used for pre-service teachers' admissions tool. Not only for teachers who had already served, UKG is also used as a standard in the screening process for pre-service teachers.

The aims of UKG are to test teachers' pedagogy and professional competence. Broke and Stone (2005) define teachers' competence as "descriptive of qualitative nature of teacher behavior appears to be entirely meaningful". Thus, competence is a combination of knowledge, skills, values, and attitudes which are reflected in the habit of thinking and acting. In that sense, the concept of competence contains aspects or domains: (1) knowledge, (2) understanding, (3) skill, (4) value, (5) attitude, and (6) interest. Meanwhile, according to Kemdiknas (2010) the principles in implementing UKG are: (1) comprehensive, (2) open, (3) cooperative, (4) in stages, 5) up-to-date.

There are four competencies that must be owned by the teacher who became the basis for developing educational personnel. These four competencies are tested in the UKG (Mulyasa; 2013; Idris, 2014; Kemendikbud, 2015). They are:

1. Personal competence.

These competencies include: sympathy, empathy, dignity, responsibility, openness and self-criticism. Understanding of teachers in acting in accordance with religious norms, law, social, and national culture of Indonesia, showing a mature, responsible person, a high work ethic and can serve as role models.

2. Professional competence.

Professional competence includes the ability mastery of educational base, teaching materials, management learning, using of learning media, a good understanding of learners and the principles of good educational services.

### 3. Pedagogy competence

Pedagogy competence is teachers; competence on educational science. Pedagogy competence includes the ability of teachers to recognize the characteristics of students, master learning theories and principles of educational learning, curriculum development, educating learning activities, understanding and developing the potential of communication with learners, assessment and evaluation.

### 4. Social competence

The social competence covers teachers' ability to engage in social interaction or interaction with others, whether with students, colleagues, leaders, or the community. Social competence focuses on teachers' status as educators in the eyes of society and social responsibility in the eyes of the community.

It can be concluded that in UKG, teachers in Indonesia is expected to fulfill those four competences in order to be considered as a good teacher based on SNP. In contrary, professional development is teachers' right and responsibility to maintain their agency. It is considered as something "for teachers, by teachers". Different teachers may have different manifestation and different process of professional agency development. The development is indeed a dynamic process and also varies between teachers since they have different backgrounds and beliefs (Tao & Gao, 2017). Professional development is a continuous process of individual. It is an achievement of a teacher professional growth which requires a lifelong learning. The professional development can be achieved by gaining increased experience and examining his or her teaching systematically. Besides, it requires the commitment to personal change and the reconstruction of personal understanding of teaching and learning, and the ultimately classroom practice (Glatthorn, 1995; Richards and Farrel, 2005; Rodrigues, 2005). In conclusion, the researcher is questioning the reliability of UKG to assess teachers' professional development by only testing those four competences that has been mentioned above. By implementing UKG, it seems that the government would like to equalize the professional development of every teacher in Indonesia.

### ***Perception***

As mentioned before, the researcher is interested in exploring the teachers' perceptions on the implementation of UKG. Looking to the facts about UKG and professional development as have been mentioned above, it would be interesting to understand teachers' personal opinion about the implementation UKG, especially in its goal to maintain teachers' professional development. Before going further, it is important for the researcher to gather some sources that can give an understandable idea about perception.

Perception is a conscious mental process of observing, comprehending, and responding stimulus toward some phenomena, which involves awareness of individuals' beliefs (Chaplin, 1968; Gibson, 1985). Thus, the teachers' perceptions are used as a standard of measuring the efficiency of the implementation of UKG. In other words, teachers' perceptions are needed to judge whether UKG is worth or worse in Indonesia educational system.

According to Vernon (1987), there are three dimensions of perception. They are the understanding about the object, the view and the action toward the object. When exploring someone's perception, those three dimensions are the basic components to deal with.

1. Understanding

Understanding can be defined as a process of selecting and organizing information which will be integrated with prior knowledge. Individuals can bring understandings to bear on new problems and situations, deciding in which ways one's present competencies can suffice and which ways one may require new skills or knowledge (Wiggins, 1998). In other words, understanding can help teachers to judge possible responses that come to their mind. When teachers understand the concept of UKG, they can grasp and judge the functions of the implementation of UKG for both their teaching experiences and professional development.

2. View

A view is an honest judgement based on factual evidences. A view can also be considered as opinion or a belief held with confidence (Ramsey, 1986). Besides, A view or opinion is not always necessary supported by evidence, and this kind of view is known as a subjective statement. Some factors that influence subjectivity are emotion and individual interpretation of a fact. In the end, teachers may judge UKG based on some evidences they got or only based on their emotion and individual interpretation after doing the UKG. In other words, after doing the UKG, how teachers view UKG can be considered as their honest judgement about the implementation of UKG to assess their professional development.

3. Action

Action is a work or a process that is doing or done by somebody which involves the subject of motion and the target of action. A person action can give influence to the environment (Dretske, 1988). To conclude, what teachers will do or prepare to face the upcoming UKG is regarded as an action, since it is an obligation for them.

Based on the description above, it can be concluded that perception refers to the understanding, view and action related to the English teachers' perceptions of the implementation of UKG. It refers to the teachers' understanding of the UKG, their view after passing the UKG and their action toward the upcoming UKG.

## **Method**

Survey research was conducted by the researcher since the objective of this research was to investigate teachers' perceptions of the implementation of UKG to assess professional development. The researcher needed a method that was able to make the result of this study represents the population of junior high school teachers. According to Wiersma (1995) and Lodico (2006), survey research is used to answer research question which is related to social and emotional aspects. It can gather opinion, beliefs or perceptions about the current issue for a large group of people. It has close relation to the basic concept of perception in which someone's perception is influenced by someone's environment and way of living in the society.

The participants of this research were 35 junior high school teachers from a public school in Yogyakarta. The researcher decided to take those teachers who work in a public school in Yogyakarta because of the consideration of time and financial constraint. To gather a quantitative data, the researcher used questionnaire and as the instruments of this research. The quantitative data were taken from close-ended questionnaire. Questionnaire is a data gathering instrument that is helpful for money and time constraint consideration. It is possible to include a large number of the subjects and can guarantee confidentiality, which may produce more truthful responses (Ary, Jacobs, Irvine, Walker, 2010).

The questionnaire was divided into three main parts which consist of 15 statements. The first part is Before UKG. In this part, there were 5 statements which were related to the understanding dimension of teacher's perception. The statements in before UKG part focused on teachers' understanding about UKG before they took the test. The second part is After UKG. In this part, there were 5 statements which related to the view dimension of teacher's perception. The statements in after UKG part focused on teachers' view, belief, and opinion about UKG after they took the test. The third part is Future UKG. In this part, there were 5 statements which related to the action dimension of teacher's perception. The statements in future UKG part focused on teachers' action to prepare for the next UKG.

Wiersma (1995) introduces Likert scale that can be used in a questionnaire. Likert scale is a scale with a number of points that provide ordinal scale measurement. Each statement was provided with five column of number from 1 to 5 which represents the level of the respondent's agreement. The high score represents positive answer in responding the questionnaire, while the low score represents the negative answer. The scores were as followed:

1. 1 is for totally disagree
2. 2 is for disagree
3. 3 is for neutral
4. 4 is for agree
5. 5 is for totally agree

The participants of this research were chosen randomly. Some of them teach different subject. The use of simple random sampling in this research was because the researcher needs to be objective in data gathering. Considering that not all teachers can understand English, the questionnaire was written in Bahasa. However, the researcher had translated the questionnaire to English so that the readers of this article can get better understanding. The questionnaire was as followed:

**Questionnaire for  
Teachers' Perception of the Implementation of UKG  
to Assess Professional Development**

No.	Statements	Answer				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	1	1	1	1

<b>A.</b>	<b>Before UKG: The statements below focus on your understanding before taking UKG.</b>					
1.	I had got socialization from the government about UKG before the test was conducted.					
2.	I had understood about the goals of the implementation of UKG are to maintain teachers' teaching performance and professional development.					
3.	I had understood that UKG will be used as the standard of teachers' certification.					
4.	I knew that if I failed in UKG I had to join such kind of remedial classes.					
5.	I agreed with the implementation of UKG.					
<b>B.</b>	<b>After UKG: The statements below focus on your opinion after taking UKG.</b>					
6.	I got good scores from my last UKG.					
7.	The competencies tested in UKG could assess my teaching performance and professional development.					

8.	I got the benefits of UKG after taking the test.					
9.	I thought that I had been professionally developed after taking the test.					
10.	UKG could be used as a reflection of my performance as a teacher.					
<b>C.</b>	<b>Future UKG: The statements below focus on your preparation or expectation for future UKG.</b>					
11.	I feel excited to take the upcoming UKG.					
12.	I will evaluate my mistakes from the previous UKG.					
13.	I will learn the competencies that are tested in UKG to get a better score.					
14.	I feel sure that the upcoming UKG will make me a better teacher.					
15.	I will make a group discussion with my colleague as a preparation for the upcoming UKG.					

The result of the findings guided the researcher in drawing a conclusion about teachers' perceptions of the implementation of UKG to assess professional development.

### **Findings and Discussion**

There are 35 questionnaires distributed to 35 junior high school teacher in a public school in Yogyakarta. All of them were back. After distributing all the



questionnaires and collecting them back, the researcher counted the score. After that, the researcher translated the score into tables. To ease the readers' understanding, the findings and discussion was divided into three main parts. They are (1) Teachers' perception before UKG; (2) Teachers' perception after UKG; (3) Teachers' perception for future UKG.

**Teachers' perception before UKG**

This part is going to discuss about teachers' perceptions about UKG before they took the test. There were 5 statements that were written in the questionnaire which focused on teachers' understanding before taking UKG. In sum, to answer the questionnaire, the participants had to look back to their past experience before they took UKG or to the first time UKG was introduced to them. The findings of this part of questionnaire can be seen in the table below.

No.	Statements	Answer									
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
		No.	%	No.	%	No.	%	No.	%	No.	%
<b>A.</b>	<b>Before UKG: The statements below focus on your understanding before taking UKG.</b>										
1.	I had got socialization from the government about UKG before the test was conducted.	0	0	0	0	0	0	17	48.57	18	51.42
2.	I had understood about the goals of the implementation of UKG are to maintain teachers' teaching performance and professional development.	0	0	0	0	0	0	34	97.14	1	2.87
3.	I had understood that UKG will be used as the standard of teachers' certification.	0	0	0	0	0	0	34	97.14	1	2.87
4.	I knew that if I failed in UKG I had to join such kind of remedial classes.	0	0	0	0	0	0	34	97.14	1	2.87
5.	I agreed with the implementation of UKG.	1	2.87	5	14.28	17	48.57	11	31.42	1	2.87

From the table above, the data shows that all of the participants had got socialization about UKG before they took the test. With 48.57% agree and 51.42 strongly agree, it can be conclude that teachers had got an understandable idea about UKG before taking the test. The data shows that 97.14% of them have understood about the goals of UKG, the correlation between UKG and teachers' certification, and the impact of failing the test. The interesting part is in the fifth statement. The statement was written to ask about their personal agreement about

the implementation of UKG. 31.42% of them agree about UKG. However, with higher value, 48.57% of them feel neutral about UKG.

**Teachers’ perception after UKG**

This part is going to discuss about teachers’ perceptions about UKG after they took the test. There were 5 statements that were written in the questionnaire which focused on teachers’ views or opinions after taking UKG. In sum, to answer the questionnaire, the participants had to look back to their past experience after they took UKG. The findings of this part of questionnaire can be seen in the table below.

No.	Statements	Answer									
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
		No.	%	No.	%	No.	%	No.	%	No.	%
<b>B.</b>	<b>After UKG: The statements below focus on your opinion after taking UKG.</b>										
6.	I got good scores from my last UKG.	0	0	7	20	16	45.71	12	34.28	0	0
7.	The competencies tested in UKG could assess my teaching performance and professional development.	0	0	9	25.71	18	51.42	8	22.85	0	0
8.	I got the benefits of UKG after taking the test.	0	0	10	28.57	7	20	18	51.42	0	0
9.	I thought that I had been professionally developed after taking the test.	0	0	11	31.42	16	45,71	8	22,85	0	0
10.	UKG could be used as a reflection of my performance as a teacher.	0	0	8	22,85	9	25.71	18	51.42	0	0

Based on the data above, 45.71% of them say neutral when asked about their UKG scores, 34.28% of them agree that they got good score, and 20% of them disagree about the good score. 51.42% of them show neutral view, 25.71% of them disagree and 22.85% of them agree to the statement that the competencies tested in UKG could assess my teaching performance and professional development. Most of them (51.42%) say that they got benefits of taking UKG and others show neutral view (20%) and disagreement (28.57%). 45,71 of the show neutral view to the statement that UKG helps them to professionally develop. The others show disagreement (31.42%) and agreement (22.85%). For the last statement of this part, the participants were asked if UKG can be used as reflection of my teaching performance. 51.42% of them agree that UKG can be

used as reflection. The others show neutral view (25.71%) and disagreement (22.85%).

**Teachers’ perception for future UKG**

In this part, the researcher is going to discuss about teachers’ perceptions about UKG after they took the test. There were 5 statements that were written in the questionnaire which focused on teachers’ action and preparation for the upcoming UKG. In sum, the statements were design to know their future projection for the upcoming UKG. The findings of this part of questionnaire can be seen in the table below.

No.	Statements	Answer									
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
		No.	%	No.	%	No.	%	No.	%	No.	%
<b>C.</b>	<b>Future UKG: The statements below focus on your preparation or expectation for future UKG.</b>										
11	I feel excited to take the upcoming UKG.	3		9	25.71	16	45.71	7	20	0	0
12	I will evaluate my mistakes from the previous UKG.	0	0	6	17.41	6	17.41	23	65.71	0	0
13	I will learn the competencies that are tested in UKG to get a better score.	0	0	8	22,85	8	22,85	19	54.28	0	0
14	I feel sure that the upcoming UKG will make me a better teacher.	2	5.71	6	17.41	27	77.14	0	0	0	0
15.	I will make a group discussion with my colleague as a preparation for the upcoming UKG.	0	0	7	20	28	80	0	0	0	0

The data above show that 45.71% of them are neutral about the excitement of taking the upcoming UKG. 25.71% of them do not feel excited. 20% of them feel excited. 65.71% of them state that they will evaluate their mistakes from the previous UKG. 54.28% will learn the competencies that are tested in UKG to get a better score. In conclusion, most of the participants are preparing for the upcoming UKG by evaluating their mistakes before and learning the competencies tested. However, 77.14% of them are neutral to the statement that UKG will make them a better teacher. 80% of them are also neutral to make a group discussion with their colleagues as a preparation for the upcoming UKG.

## Conclusion

From the findings, the researcher can conclude that teachers' perception of UKG is just neutral. They do not agree or disagree about the implementation of UKG. Most of them have obtained a good understanding about UKG, especially before taking the test. It can be because the socialization from the government. However, teachers' perception after UKG is more varies. Most of them show neutral views in some aspects, such as in the statement that the competencies tested in UKG could assess their teaching performance. Yet, most of them also agree in some aspects, such as in the statement that UKG could be used as a reflection of their teaching performance. The rest of them show disagreement in some statements. For their future projection in dealing with the upcoming UKG, most of the participants are preparing for the upcoming UKG by evaluating their mistakes before and learning the competencies tested. However, most of them are neutral to the statement that UKG will make them a better teacher. Most of them are also neutral to make a group discussion with their colleagues as a preparation for the upcoming UKG.

In sum, the implementation of UKG is beneficial for teachers. They stated that they can evaluate and reflect about their teaching performance by taking UKG. However, it is way too shallow to only refer to one particular test to judge whether a teacher is a good teacher or the bad one. Moreover, the reliability of UKG to assess teachers' professional development by only testing those four competences is questioned. Professional development is a lifetime process of a teacher. Different teachers with different backgrounds and beliefs will develop differently.

## References

- Ary, D., Jacobs, L. C., & Sorensen, C. (2010). *Introduction to research in education* (8th ed.). New York: Wordsworth Thomson Learning.
- Broke & Stone. (2005). *Competency based on training*. New York: McGraw Hill Company.
- Chaplin, J. P. (1968). *Dictionary of psychology*. New York: Dell Publishing Co. Inc.
- Dretske, F. (1988). *Explaining behavior*. Cambridge, MA: MIT Press.
- Gibson, J. L. (1985). *Psychology*. Texas: Business Publication Inc.
- Glatthorn, A. (1995). *Teacher development*. London: Pergamon Press.
- Idris, Z. (2014). *Uji kompetensi guru (UKG) dan penilaian kinerja guru (PKG).pdf*. Program Pascasarjana: Universitas Islam Nusantara Bandung. Retrieved from [http://www.academia.edu/24361946/UJI\\_KOMPETENSI\\_GURU\\_UKG\\_DAN\\_PENILAIAN\\_KINERJA\\_GURU\\_PKG](http://www.academia.edu/24361946/UJI_KOMPETENSI_GURU_UKG_DAN_PENILAIAN_KINERJA_GURU_PKG) on September 27, 2017.
- Kemdikbud. (2015). *Pedoman pelaksanaan uji kompetensi guru*. Jakarta: Direktorat Jenderal Guru dan Tenaga Kependidikan.
- Lodico, M. G., Spaulding, D. T., & Voegtler, K. H. (2006). *Method in educational research*. San Fransisco: Jossey-Bass.

- Mulyasa, E. (2013). *Uji kompetensi dan penilaian kinerja guru*. Bandung: PT. Remaja Rosda Karya.
- Ramsey, F. H. (1986). *The little brown handbook*. Boston: Little Brown.
- Richards, J.C.& Farrel, T.S.C. (2005). *Professional development for language teachers: Strategies for teacher learning*. Cambridge: Cambridge University Press.
- Rodrigues, S. (2005). *A model of teacher professional development: The partnership in primary science project*. New York: Nova Science Publisher, Inc.
- Tao, J. & Gao, X. (2017). *Teacher agency and identity commitment in curricular reform*. *Teaching and Teacher Education*, 63(2017), 346-355.
- Usman, M U. (2001). *Menjadi guru profesional*. Bandung: PT Remaja Rosdakarya.
- Vernon, M. D. (1987). *The psychology of perception*. Middlesex: Penguin Books.
- Warganegara, N. S., Berchah P., & Hermi, Y. (2013). *Persepsi guru terhadap pelaksanaan uji kompetensi guru di SMA Negeri 3 Bandar Lampung tahun pelajaran 2012/2013.pdf*. Retrieved from <http://digilib.unila.ac.id/8980/> on October 5, 2017.
- Wiersma, W. (1995). *Research method in education: An introduction*. New York: Allyn and Bacon.
- Wiginss, G. (1998). *Educative assessment*. San Fransisco: Jossey-Bass Publisher.
- Wurinanda, I. (2015). *Rata-rata nilai UKG di bawah standar*. OkeZone.com. Retrieved from <https://news.okezone.com/read/2015/12/30/65/1277618/rata-rata-nilai-ukg-di-bawah-standar> on September 30, 2017.
- Yuswono, L. C., Martubi, Sukaswanto, & Agus, B. (2014). *Profil kompetensi guru SMK teknik kendaraan ringan di Daerah Istimewa Yogyakarta.pdf*. Prosiding Konvensi Nasional Asosiasi Pendidikan Teknologi dan Kejuruan (APTEKINDO) ke 7 FPTK Universitas Pendidikan Indonesia. Retrieved from [http://www.academia.edu/11417575/Menyiapkan\\_Guru\\_Profesional\\_di\\_SMK\\_Teknik\\_Kendaraan\\_Ringan\\_TKR](http://www.academia.edu/11417575/Menyiapkan_Guru_Profesional_di_SMK_Teknik_Kendaraan_Ringan_TKR) on October 5, 2017