

## Scientific Learning Skill Of Islamic School Teachers And Students In Indonesia

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**Abstract:** The recent policy of education in Indonesia is a learning strategy called "Scientific Learning". To be able to implement this policy, it must be made clear indicators of scientific learning. This study aims to explore the scientific learning indicators both for teachers and students. Results of the research found that indicators of scientific learning skills of teachers and students are different. Teacher's scientific learning skills include: organize object study, monitor students' activities, facilitate students' problem, and evaluate students' progress. While the students' scientific learning skills include basic and integrated skills. Basic skill intended for primary education, while the integrated skills for secondary and higher education. The research was done in elementary school so it is describe basic skill. Students' basic skill include: ability to observe, classify, communicate, conclude, measure, and guest. The result showed that the average score of teacher's scientific learning is 3.475 (maximum score is 4.000). The average score of students' scientific learning skill is 3.567. The students' scientific learning skill is strongly influenced by the skill of teachers in implementing the learning process or otherwise affected by scientific learning skill of teacher. The program to improve teacher's scientific learning skill is still required even though the mean scores in the high position. There needs to be researched relationship of scientific learning skill between teachers and students.

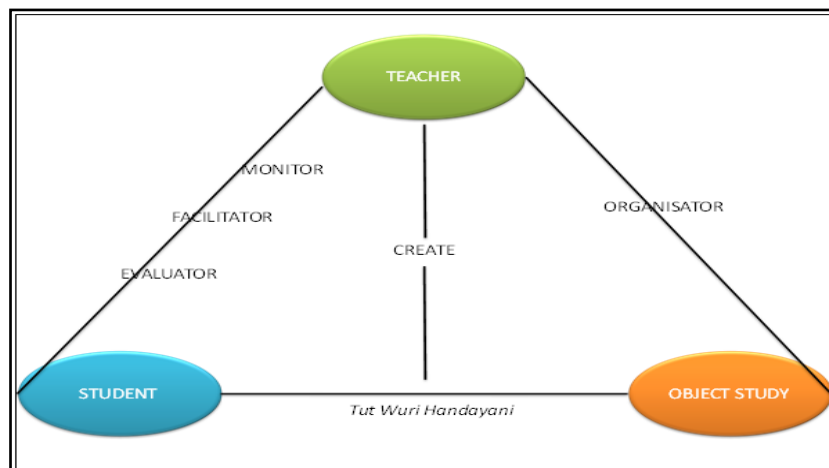
**Keywords:** Scientific Learning Skill, Basic school

### I. Introduction

The newest policy of education in Indonesia is learning strategy that is caeled 'Scientific Learning'. Most of Indonesia teachers in Indonesia know the meaning of scientific learning but they don't know the value of it. They don't understand well how to implement it. This problem is caused by there is no clear and fix indicators of scientific learning. Until now, they know a little about what must be done by students in learning process, but they don't know well what must be done by teachers. The reseach based on Djohar (2007) in formulating the indicators of scientific learning for teacher. While in formulating the students' scientific learning based on Wiwi Isnaeni (2014). There are two kinds of students' scientific learning, namely basic and integrated scientific learning. Because the reseach was done in elementary school of Islamic, so the indicators of students' scientific learning skill is basic one.

Indicators of teacher's scientific learning skill include: skills to (1) organize learning problems, (2) monitor students' activities during learning process, (3) facilitate students' problem, and (4) evaluate learning achievement and valueing the result of evaluation. Indicators of basic scientific learning skill of student includes: skill to (1) observe, (2) classify, (3) measure, (4) guest,(5) communicate, and (6) conclude.

The rationale for the birth of indicators of teacher's scientific learning skill was from the concept of the mechanism of learning process. Here is the concept of strategy or mechanism of learning process.



**Aims of The Research**

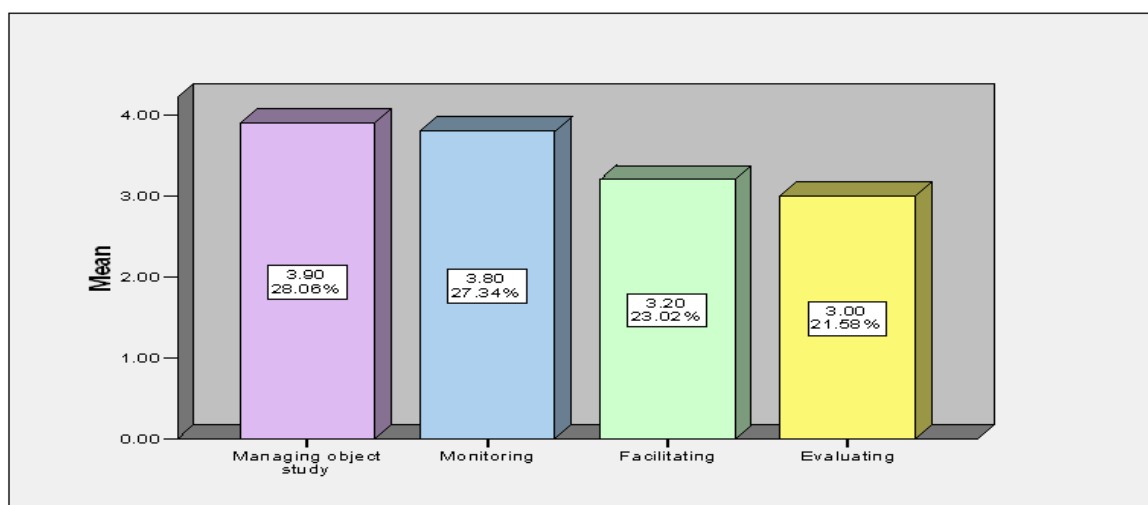
The aims of the research were:

1. To describe the scientific learning skill of Indonesian teachers in elementary school.
2. To describe the scientific learning skill of Indonesian students in elementary schools.
3. To describe the students' competencies as the result of scientific learning school.

**Taecher's Scientific Learning Skill**

According Djohar (2007), indicators for scientific learning skill of the teacher's are: ability to organize the object of study, monitor students' activities, facilitate students' problems, and evaluate the progress of learning achievement. The result showed that scientific learning skills of teachers in Islamic schools in Indonesia as follows: the highest score is skill to organize object study with the average score 3.90 achieved by 28.06% of teachers, followed in sequence, to monitor with the average score 3.80 achieved by 27.34% of teachers, to facilitate the problem of students' with the average score 3.20 achieved by 23.02% of teachers, to evaluate the progress of learning achievement with the average score 3.00 achieved by 21.58% of teachers.

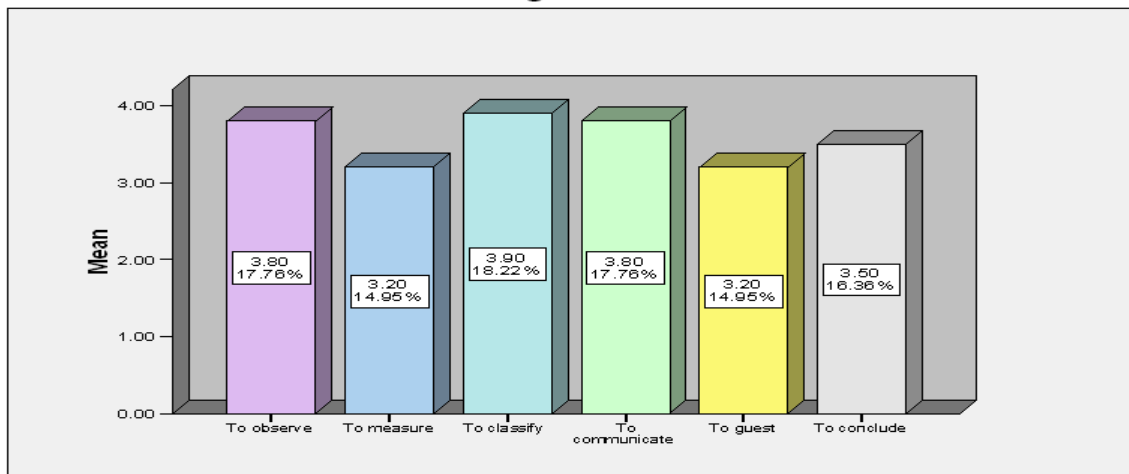
**Scientific Learning Teachers Performance**



**Students' Scientific Learning Skill**

The results of the data analysis about students' basic scientific learning skill from the highest score as follows: (1) the skill to classify with the average score 3.80, achieved by 17.76% of students, (2) to observe with the average score 3.20 achieved by 14.95% of students, (3) to communicate with the average score 3.80, achieved by 17.76% of students, (4) to observe with the average score 3.80, achieved by 17.76% of students, (5) to conclude with the average score 3.50, achieved by 16.36% of students, (6) to measure with the average score 3.20 achieved by 14.96% of the students.

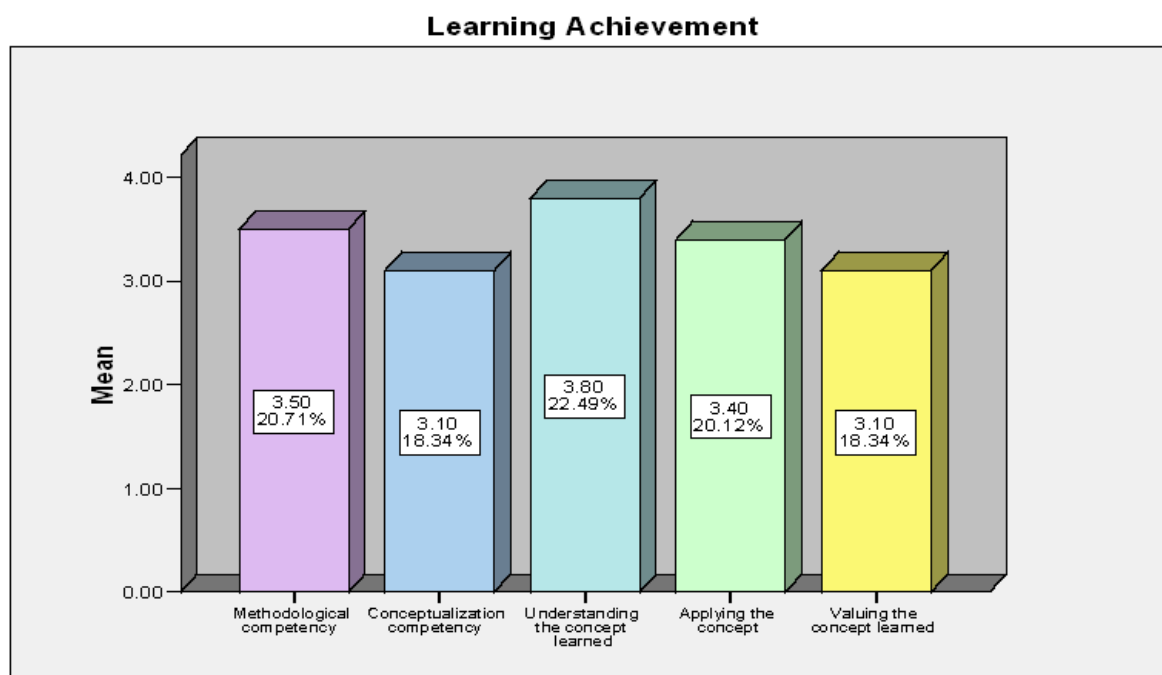
**Scientific Learning Students Performance**



Students' competencies assumed as a result of the implementation of the scientific learning process. This part is not the primary purpose of the study, but need to be revealed impacts that may arise as a result of the implementation of scientific learning. In order for this comprehensive study, it is felt necessary to conduct studies on these aspects. According Djohar (2007) there are five kinds of competencies, namely: (1) the competence to think methodologically, (2) conceptual thinking, (3) understand the concept, (4) apply the concept, and (5) interpret or assess the concepts learned. Five kinds of achievement of learning outcomes or competence can be extrapolated to the achievement of learning outcomes (see Bloom thought) that cognitive, afective, and psychomotoric. Methodologically thinking skill when extrapolated according to the cognitive and psychomotoric capabilities, conceptual thinking skills according to cognitive and psychomotoric capabilities, the ability to understand the concept in accordance with cognitive abilities, the ability to apply the concept in accordance with cognitive and psychomotoric abilities, ability to interpret or assess the concept according to ability sffective.

The results of the data analysis of students' competencies are assumed as a result of scientif learning skills. The ability to think methodologically, the average score is 3.50 achieved by 20.7% of students, the ability of conceptual thinking, the average score is 3.10 achieved by 18.34% of students, the ability to understand the concept, the average score is 3.80 achieved by 22.49% of students, the ability to apply the concept, the average score is 3:40 achieved by 20.12% of students, the ability to give meaning or value to the concept, the average score is 3.10, achieved by 18:34% of the students.

Based on the analysis above, it is interpreted that the scientific learning skills are not much different from the conventional teaching methods. It is shown that the learning outcomes for the aspect of "understanding of the concept". All this time, conventional method of learning pressured about this one. The ability to interpret or give value the concept is at lowest position (read from the existing scores). Whereas post-modern era demands the ability of the fifth (see the ability to give meaning or value).



## II. Conclusion

The reseach concluded that

1. Teacher's and students' indicators of scientific learning skill may be different of different concept.
2. Research of concept building of scientific learning skill is still needed.
3. The government's program about scientific learning should be completed with the indicators of scientific learning skill of teacher and student.
4. Training of scientific learning skill to make it higher should be done for teachers.
5. The reality of scientific learning skill condition both teacher and student are good, but the concept about it is unclear yet.
6. Factors that may influence the scientific learning skill of teacher must be investigated.
7. It is important to improve the implementation of scientific learning strategy in order result of learning will be different with conventional strategy that focus on 'concept understanding only'.

### References

- [1]. Adi Putra Ariawan. 2009. *Perkembangan dan Motivasi Beragama Pada Anak (Analisis Pemikiran Zakiah Daradjat)*. Malang: UIN Malik Ibrahim.
- [2]. Albanese, M.A., and Mitchell, S. 1993. *Problem-Based Learning: A Review of Literature on its Outcomes and Implementation Issues*. *Academic Medicine*, Vol. 68.
- [3]. Andrea Sella. 2012. *Teaching and Learning Methods*. London. University College London. Diakses dari <http://www.ucl.ac.uk/teaching-learning/teaching-learning-methods>, pada 18 Maret 2014
- [4]. Bransford, J.D., Brown, A.L., and Cocking, R.R., eds. 2000. *How People Learn: Brain, Mind, Experience, and School*. Washington, D.C.: National Academy Press. Online at <<http://www.nap.edu/books/0309070368/html/>>.
- [5]. Djohar. 2007. *Pendidikan Melalui Proses*. Makalah diseminarkan di FMIPA UNY pada acara dies natalis FMIPA.
- [6]. ----- . 2008. *Membangun Pendidikan Indonesia*. Yogyakarta. Grafika Indah.
- [7]. ----- & Istiningsih. 2014. Paper "Pro & Kontra Kurikulum 2014". Disajikan dalam diskusi ilmiah dosen PGMI. 13 Desember 2014 di FITK UIN Sunan Kalijaga Yogyakarta
- [8]. Fitrotul Faizah. 2010. *Pengaruh Pembelajaran Kontekstual Terhadap Prestawi Siswa*. Malang. UNM
- [9]. Gall, M.D., Gall, J. P., & Borg, W. R. 2007. *Educational Research: An Introduction*. Eight Edition. Pearson, Allyn and Bacon. USA
- [10]. Istiningsih, *Integrasi Agama dan Sosial*
- [11]. Jalaluddin Rahmat. 2007. *Psikologi Komunikasi*. Bandung: Rosda Karya.
- [12]. Lakrim, M. 2001. *Classroom techniques to improve learning biology through writing*. *Journal of Science Educational*.
- [13]. Mario Sigit Anggoro. 2013. *Galau Kurikulum 2013*. Diakses dari <http://sudut-buku.blogspot.com/2013/03/galau-kurikulum-2013.html>, pada 20 Maret 2014
- [14]. Martin, R; Sexton C; Franklin, T. & Gerlovich, J. 2005. *Teaching Science for All Children: Inquiry Methods for Constructing Understanding*. New York, Pearson Education, Inc.