

THE ANALYSIS OF LEARNING MOTIVATION ON COLLEGE STUDENT OF ELEMENTARY SCHOOL TEACHER EDUCATION COURSES IN THE SCIENCE BASIC CONCEPT

Mohammad Taufiq¹, Herawati Susilo², Mimien Henie Irawati Al Muhdhar³, Murni Saptasari⁴

¹ Biology Education Study Program, Postgraduate Program, State University of Malang;
Primary School Teacher Education Study Program, Nahdlatul Ulama University of Surabaya,
Surabaya, Indonesia

mohammadtaufiq6@gmail.com

² Biology Education Postgraduate, FMIPA, State University of Malang
Malang, Indonesia

herawati.susilo.fmipa@um.ac.id

³ Biology Education Postgraduate, FMIPA, State University of Malang
Malang, Indonesia

mimien.henie.fmipa@um.ac.id

⁴ Biology Education Postgraduate, FMIPA, State University of Malang
Malang, Indonesia

murni.sapta.fmipa@um.ac.id

Accepted: November, 11 2018 Published: April, 30 2019

DOI: <http://doi.org/10.21107/jps.v6i1.5134>

ABSTRACT

Motivation in learning will influence the student to be a success. Four aspects that became part of the motivation is the fundamental aspects of attention, relevance, confidence, and satisfaction. The purpose of this research is to know the extent to which students ' motivation of elementary school teacher education on the basic concept of subject science. The method used is descriptive quantitative survey method; in this case, use the question form of student motivation. This research was carried out in April 2016. The subject of research is the 234 students distributed in University of Nahdlatul Ulama Surabaya and the State University of Surabaya. The results showed that students ' learning motivation of elementary school teacher education in aspects of attention, relevance, and satisfaction are on the category quite nicely, while confidence is at a type less well this defines the that required increased efforts of student learning motivation on the subject the basic concept of science.

Keywords: *Motivation, ARCS Learning Model, the basic concepts of science*

¹ Corresponding Author

Introduction

The National Qualification Framework for Indonesia (KKNI) became a new milestone (milestone) for the world higher education in Indonesia to produce qualified human resources and compete at the global level (Directorate General of higher education, 2015). Education is not just to make knowledgeable learners, but also embraced the scientific attitude and science and technology, namely, critical, logical, inventive and innovative, as well as consistent (BSNP, 2010). Motivation strong weak in learning will influence the success of learners in education. According to Djamarah (2002); Puwanto (2002); Suharto (2003); and Winkel, (2004) motivation is a sophisticated statement in a human that directs behavior towards an objective (goal) or stimulant (incentive). Its purpose is to restrict/determine the action of the people. Thus, motivation in the learning process is necessary for the occurrence of acceleration in achieving the objectives and learning specifically. Those as the power to arouse, give direction to, and hold, and select specific learning behavior (Wlodkowski, 1985).

Motivation can be instrumental in strengthening learning when learners faced with a problem that needs solving and can only be solved thanks to the help/things that never took place. Learners must always have the determination, optimistic, thinking of the future for the sake of achieving the learning objectives as well as answering global challenges. In some educational research revealed that there was a significant positive relationship between the motivation of learning with students' academic achievement (Lim, 2009; Kusboantor, 2014; Hatmalyakin, 2015). Student learning outcomes and associated basic concept of science on the academic

year 2015/2016 in Elementary Teacher Education Study Program at University of Nahdlatul Ulama Surabaya using the conventional strategy obtained that the students who earn A grade of about 30%; the value of B is 46%; the value of C 14%; the value of D and E value is 0%. Meanwhile, student learning outcomes and associated science basic concepts, while in Elementary Teacher Education Study Program at State University of Surabaya using conventional strategies obtained that college students who earn A grade of about 12.97%; the value of 38.89% B; the value of C 24.07%; 14.81% D value and the value of E 9.26%. It suggests that the need to identify and optimize students' mastery of concepts through increased motivation to learn.

Based on the theory of Bandura (2001), motivation is a behavior that is geared to achieve the goal, the initiated and maintained by hope the consequences concerning the likely impacts over the destructive actions and the effectiveness of themselves performing the activities. From the perspective of the theory of motivation, appreciation of the consequences is essential, because learners think about potential outcomes over doing various actions and act in ways they believe will get the results they consider valuable. Learners who are motivated academically find that, when they studied diligently, then they will get the educational values. With them appreciate the benefits of high academic, we should suspect will actively learn, and thus validate their hope (Schunk et al., 2012).

Keller (2010) suggested motivation ARCS (Attention, Relevance, Confidence, and Satisfaction) learning model that focuses on the realization and maintenance of motivation strategies used in the design of the instructional. Aspects

The Analysis of Learning Motivation

of attention driven by curiosity. Therefore, this curiosity got the stimulus so that the learners will give attention and maintain during the process of teaching and learning, even much longer. According to Margueratt (2007) attention refers to whether the passion aroused the curiosity of students and whether appropriately over time. This curiosity can stimulate through the elements of the new, strange, another with existing ones. When such features incorporated in the design of learning, it will boost the learner's curiosity. However to note that stimulation doesn't be excessive, because it will make things less ordinary and their effectiveness (Keller, 2010).

Relevance aspects are indicating a connection between the materials and associated with the needs and condition of the learners. The motivation will preserve when they consider what studied meets the needs of, or helpful and under the value which is holding. Learning will be relevant to learners if given concrete examples related to their experience (Driscoll, 1994).

The Aspects confident, feel competent or capable of self is the potential to be able to interact positively with the environment. The concepts associated with personal beliefs, learners have to perform a task that is a requirement of success. The principle that applies, in this case, is that the motivation will increase in line with rising expectations for success. Motivation can produce perseverance that brought success (achievement), and the successful experiences will motivate the students to work on the next task. When a person is convincing that she/he can do something, then it will increase efforts to do something (Pintrich and Groot, 1990).

Aspects of Satisfaction, success in achieving an objective will result in satisfaction, and students will be

motivated to keep trying to achieve similar objectives. Satisfaction for achieving goals is affected by the consequences of the accepted, whether originating from inside or from outside of self-learners. Motivational models which are used to enhance learner satisfaction may take the form of verbal reinforcement, awards, personal attention, feedback, and deliberately avoid negative influences (Keller & Suzuki, 2004).

Based on the background exposure, then the outline of the research issue, i.e., how is the motivation of the students on the basic concept of lecturing science. The purpose of this research is to know the extent to which students' motivational lecture on science basic concepts of Elementary Teacher Education Study Program.

Research Method

This research includes detailed research with survey method (Cimer, 2012). This research was carried out in April 2016 in Elementary Teacher Education Study Program of the State University of Surabaya and Nahdlatul Ulama University of Surabaya. Determination of a sample of research conducted at random. Presented the following distribution of the research sample can see in table 1.

Table 1 Research Sample

No.	University	Number of respondents
1	University of Nahdlatul Ulama Surabaya	A = 40
2	The State of Surabaya University	A = 32 B = 34 C = 32 D = 32 E = 32 F = 32
Total Respondents		234 college student

The research instrument used, i.e., learning motivation against the now lecture the basic concept of science, with as many as 52 statement number Statement on the now top positive and negative statements number with each covering aspects of attention, relevance, confidence, and satisfaction. Aspects of attention consist of 14 statement, aspects of relevance consisting of 14 statement, aspects of confidence consist of 10 statements, and the satisfaction consists of 14 statement. The criterion uses Likert scale, assessment for positive criteria statements and negative criteria.

Data research results are using descriptive quantitative analysis statistics, to find out the average score students' learning motivation (M) on each of the criteria:

$$M = \frac{\textit{The Students Answer}}{\textit{The number of students}} \times 100$$

An average score of which obtain are grouped in five categories namely: 1.00-1.49 (not good); 1.50-2.49 (less good); 2.50-3.49 (good enough); 3.50-4.49 (good); 4.50-5.00 (very good) (Adnan, 2012).

Results and Discussion

The results of the study on motivation related question form and associated basic concept of science in Table 2 and 3.

The motivation for studying as the trend students consider the activities of the academic meaning, worthwhile and attempting to take the desired educational benefits. Motivation to learn can interpret as a general trait (a feature of which is common) or situation-specific state (the State of the given situation) (Adnan, 2012). Based on the results of data analysis (see figure 1), the student learning motivation on attention,

relevance, and student satisfaction in elementary teacher education study program at University of Nahdlatul Ulama Surabaya and the State University of Surabaya are at categories excellent, as for the aspect of confidence. When are reviewed further, several factors cause a lack of trust among other elements, such as firstly the presumption that the material of the basic concept of science is more elusive than with other lecture material. Secondly, the assumption that the material presented in this study contains a wealth of information so tricky to take essential ideas and remember it. Third, the material organization which is served either at the time of course and textbook impressed complicated and not systematic. Fourthly, that is less eager to learn in this material further. Five, learning strategies are using dictate and lectures. Finally, learning resources and learning environments are fewer impacts.

Feel competent is the potential to be able to interact positively with the environment. The concepts, associated with the personal beliefs of learners, have to perform a task that is a requirement of success. The principle that applies, in this case, is that the motivation will increase in line with rising expectations for success. It is often influencing the experience of success in the past. Thus there is a connection between spiral experience successes with motivation. Motivation can produce perseverance that brought success (achievement), and the successful experiences will motivate the students to work on the next task. When a person is convincing that she/he can do something, then it will increase efforts to do something (Pintrich and Groot, 1990). Intrinsic motivation correlates positively toward student learning performance and attitude of the students towards learning (Byman et al., 2012).

Table 2. Recap of the question form on the course Learning Motivation Elementary Teacher Education Study Program Nahdlatul Ulama University of Surabaya

No	Class	MOTIVATIONAL ASPECTS											
		<i>Attention</i>			<i>Relevance</i>			<i>Confidence</i>			<i>Satisfaction</i>		
		Motives Average	Category Average	Score	Motives Average	Category Average	Score	Motives Average	Category Average	Score	Motives Average	Category Average	Score
1	A	2,60	Good Enough	51,96	2,50	Good Enough	50,46	2,24	Deficient	44,89	2,55	Good Enough	50,95
		2,60	Good Enough	51,96	2,50	Good Enough	50,46	2,24	Deficient	47,86	2,55	Good Enough	50,95

Table 3. Study on the motivation of the now recapitulation Elementary Teacher Education Study Program at the State University of Surabaya

No	Class	Motivation aspects											
		<i>Attention</i>			<i>Relevance</i>			<i>Confidence</i>			<i>Satisfaction</i>		
		Motives Average	Category Average	Score	Motives Average	Category Average	Score	Motives Average	Category Average	Score	Motives Average	Category Average	Score
1	A	2,54	Good Enough	50,89	2,48	Deficient	49,69	2,38	Deficient	47,69	2,50	Good Enough	50,00
2	B	2,68	Good Enough	53,57	2,65	Good Enough	52,96	2,50	Good Enough	52,79	2,48	Deficient	49,69
3	C	2,60	Good Enough	51,96	2,58	Good Enough	51,76	2,48	Deficient	50,49	2,54	Good Enough	50,89
4	D	2,52	Good Enough	50,86	2,46	Deficient	48,68	2,46	Deficient	48,68	2,50	Good Enough	50,62
5	E	2,66	Good Enough	53,46	2,56	Good Enough	50,93	2,54	Good Enough	50,89	2,48	Deficient	50,49
6	F	2,50	Good Enough	50,62	2,48	Deficient	50,49	2,46	Deficient	48,68	2,50	Good Enough	50,62
	Average	2,58	Good Enough	51,89	2,54	Good Enough	50,75	2,47	Deficient	49,87	2,50	Deficient	41,97

Educators should provide support interpersonal and offer opportunities in creating a climate of autonomy for his protégé in actualizing oneself to the point of giving more energy in the process of learning (Reeve and Yu-Lan, 2014). According to research Hermawati (2010), the success of a college professor in the process of teaching and learning should support with his abilities, one of which is the attitude that is sympathetic and interesting, flexible, prudent and modest in the Act. Professors should be sensitive and exciting in explaining the lecture material to be endeared by the students.

The role of produce educators and lecturers as a motivator should be able to develop the educational interaction patterns so it can grow and increase the motivation of learning so that the achievements of learning can achieve optimally. Teacher or lecturer is highly instrumental in the learning process. A college professor should be able to float a wide range of innovative learning models because of the success of student learning are also influenced by the way the lecturer managing the learning process (Kusbiantoro, 2014).

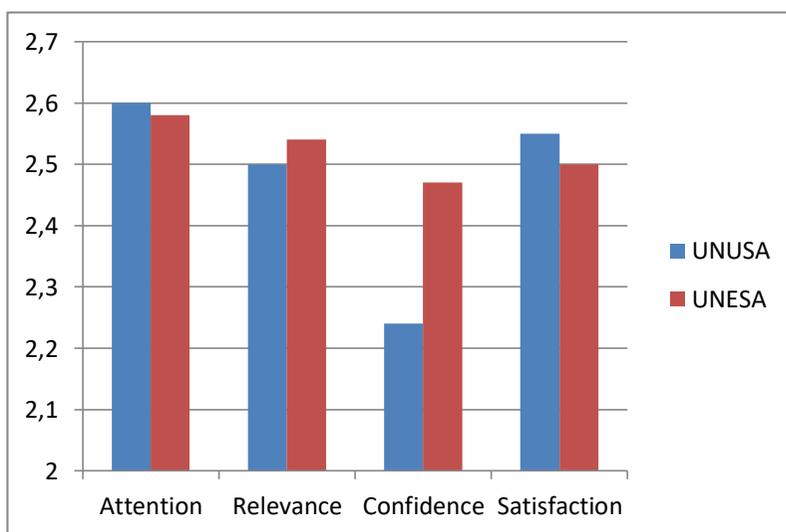


Figure 1. Graph of Score Learning Motivation aspects of Attention, Relevance, Confidence, and Satisfaction of students at a lecture of the basic science concept

Brophy (2004) States that there are five factors which might affect the motivation of learning, such as the expectations of teachers, instructions, feedback, reinforcement, as well as reward and punishment. In analyzing motivation, it is essential to identify the nature of the gap and realize that the motivation problem may vary within a single individual or subgroup than at another. It is also necessary to determine the existence of factors positive

motivation. A motivational system must be able to solve the problem of motivation, but it also has to maintain the desired level of motivation. The output of the analysis indicates where there are gaps to be closed and motivation where an adequate level of motivation needs to preserve (Keller, 2000).

Humanistic perspectives are, stressing the capacity of learners in developing a personality, freedom to choose their fate. View Maslow

The Analysis of Learning Motivation

humanistic perspective, associated with self-actualization is the highest needs and difficult so that should be given special attention because self-actualization is the motivation to develop its full potential as a man. Most people cease to be adults after they developed a high level of self-esteem, and never get to self-actualization. However, some people who disagree with the Maslow contended that for some learners more fundamental cognitive needs than the needs of self-esteem (Santrock, 2007).

Keller suggests five strategies to stimulate and maintain interest and curiosity learners, such as firstly the use of new, conflictual 1 or events the paradox. Secondly, using anecdotes and other devices which evoke the emotional elements of the related procedural materials or intellectual property. Third, provide an opportunity to learn more about the things they already know about and are interested in, but also give them a moderate dose. Fourthly, using the analogy. Finally, guide the learners in the process of generation of questions and inquiry (Brophy, 2004).

Uno (2007) suggests that there are some motivational techniques that can be done in learning, such as (1) raises curiosity, (2) use of material that is known to the students as an example in learning, (3) demanding learners to use the things that have been studied previously, (4) clarify learning objectives to be achieved, (5) inform the work that has been achieved, (6) create an atmosphere of healthy competition among learners, (7) gives an opportunity to the learners to show his expertise in public.

The motivation may affect a person's learning results because motivation can move, directing and encouraging the behavior towards humans, including the practice of learning so that it can achieve the desired learning goal

(Mudjiono&Dimiyati, 2009). Someone who has a high motivation will streamline the learning process so that the results of the study became a maximum contrast and someone who has a low motivation will inhibit the learning process so that the results of his studies less maximum. In some educational research revealed that there was a significant positive relationship between the motivation of learning with students ' academic achievement (Lim, 2009; Kusboantor, 2014; Hatmalyakin, 2015).

Conclusion

Based on the results of research and data analysis, then the review in this study is the student learning motivation Elementary Teacher Education Study Program aspects of attention, relevance, confidence, satisfaction is at a category is good enough, while confidence is at a category less either.

References

- Adnan, F. & Marliyah, S. (2012). Study of Motivation of Middle and Equal Students in the City of Makassar at the Science Biology Subject. *Jurnal Bionature*, 13(2): 103-107.
- Aunurrahman, (2009). *Learning and Learning*. Bandung: Alfabeta.
- Bandura, A. (2001). *Social Cognitive Theory: An Agentic Perspective*. *Annual Review of Psychology*, 52, pp 1-26.
- Brophy, J. (2004). *Motivating Students to Learn*. New Jersey: Lawrence Erlbaum Associates
- BSNP. (2010). *National Paradigm XXI Century*. National Education

Taufiq et al

- Standards Agency (Online). (<http://.bsnp-indonesia.otg>). Diakses pada Tanggal 23 September 2015.
- Byman, R., Lavonen, J., Juuti, K., and Meisalo, V. (2012). Motivational Orientations in Physics Learning: A Self-Determination Theory Approach. *Baltic Science Education*, 11(4), pp 379-392.
- Djamarah & Zain. (2002). *Teaching & Learning Strategies*. Jakarta: RinekaCipta.
- Dirjen Dikti. (2015). *Pengembangan Kurikulum Pendidikan Tinggi Mengacu KKNI & SN Dikti*.
- Driscoll, B.J. (1994). *Psychology of Learning for Instruction*. Needham Heights, MA: Allyn& Bacon.
- Hatmalyakin, (2015). Hubungan Motivasi dalam Memilih Program Studi keperawatan dengan Prestasi belajar pada mahasiswa Keperawatan Angkatan 2014 Fakultas Kedokteran Universitas Tanjungpura Pontianak. Pontianak: Universitas Tanjungpura.
- Keller, J. M. (2000). How to Integrate Learner Motivation Planning into Lesson Planning: The ARCS Model Approach. Paper presented at VII Semanario, Santiago, Cuba.
- Keller, J. M. & Suzuki, K. (2004). Learner Motivation and E-Learning Design: a Multinational Validated Process. *Journal of Educational Media*, 29(3), pp 229-239.
- Keller, J. M. (2010). *Motivational Design for Learning and Performances: The ARCS Model Approach*. USA: Instructional Systems Program. Florida State University.
- Kusbiantoro, D. (2014). Relationship between Learning Motivation and Student Achievement in Semester 1 Nursing Science Study Program STIKES Muhammadiyah Lamongan Academic Year 2013/2014. *Surya*, 1(17).
- Lim, D. H., & Morris, M. L. (2009). Learner and Instructional Factors Influencing Learning Outcomes within a Blended Learning Environment. *Educational Technology & Society*, 12(4), pp 282–293.
- Pintrich, P. R., & De Groot, E.V. (1990). Motivational and Self-Regulated Learning Components of Classroom Academic Performance. *Journal of Educational Psychology*, 82(1), pp 33–40.
- Purwanto, M. (2002). *Educational Psychology*. Bandung: RemajaRosdakarya.
- Reeve, J, and Yu-Lan, S. (2014). *The Oxford Handbook of Work Engagement, Motivation, and Self-Determination Theory*, Edited by Marylene Gagne. New York: Oxford University Press.
- Santrock, J. W. (2007). *Educational Psychology (Translation) Second Edition*. Jakarta: KencanaPrenada Media Group.
- Schunk, D. H., Pintrich, P. R., Meece, J. L. (2012). *Motivation in Education: Theory, Research, and*

- Application of the Third Edition.
New Jersey: Pearson Education.
- Slameto. (2003). Learning and the Affecting Factors. Jakarta: PT. RinekaCipta.
- Soeharto. (2003). Approaches and Techniques in the Learning Process. Bandung: Tarsito.
- Soekamto dan Winataputra. (1997). Learning Theory and Learning Models. Jakarta: Ditjen Dikti Depdikbud.
- Uno, H. B. (2007). The Theory of Motivation and Measurement. Jakarta: BumiAksara.
- Winkel, W.S. (2004). Teaching Psychology. Jakarta: PT.Grasindo.
- Wlodkowski, R. J. (1985). Enhancing Adult Motivation to Learn. San Francisco: Jossey-Bass..