

Independent Learning and Student Interest Effects for Learning Result of Basic Concept of Science at Elementary School (PDGK4103), Undergraduate PGSD Program

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ABSTRACT

The article presented a research result about independent learning effect and student interest for learning result of basic concept of science at Elementary School, undergraduate PGSD Program. Information and communication technology development is likely to conduct learning process with distance learning system (DLS). Open University (OU) has applied distance learning system to manage learning with the introduction of independent learning process to student. This has been implemented in order for student to solely depends on their own creativity and initiatives, take responsibility for their conduct and be self sufficient without depending on the lecturer direction. To which extent the student can learn by themselves and their interest for the subject of basic concept of science at Elementary School? The research was conducted for student of Undergraduate Study Program of PGSD who took the basic concept of science (PDGK4103). Data collection had been done by using questionnaire about independent learning and student interest for subject of basic concept of science (PDGK4103) listed on UPBJJ regional office in Jakarta, Semarang, Makassar and Serang. Data analysis with using statistical test was obtained that independent learning had a strong correlation as much as $0,567$ on learning result of basic concept of science with subject code PGSD 4103 and student interest as much as $0,007 < 0,5$. Thus, these are not influencing the learning result of basic concept of science at Elementary School (PDGK4103)..

Keywords: Regional office, Science, Self-Learning, Learning Result, independent learning and student interest for subject of basic concept of science (PDGK4103).

Introduction

Rapid science development has demanded people to do life long education. Therefore the needs to create an education system with open and flexible learning environment. Quick development of information and communication technology had given a new paradigm in world education. Learning process had long been identified with learning process in close-space (Classroom) with lecturer in attendance. Currently, other form of learning process has emerged as an alternative. With the advancement in information and communication technology, it is now possible to conduct learning process through the distance learning system (DLS). DLS has special characteristics, such as: a) The separated teacher with learner, b) Using various media to integrate teacher in learning interaction, c) Learning is directed to individual (Suparman: 2004). The separated teacher with learner gave occasion for student to participate actively in determining what will be learned and how to learn it. Student is no longer depending on lecturer instruction persistently, but they must also have a creativity and initiative, be responsible for their conduct and able to be self-sufficient.

Open University which has applied the distance learning system hopes that student can learn with self-sufficient. Self-sufficient learning ways want a student to learn by their own initiative. Self-learning can be done by individual or group, both in learning group and tutorial group. Open

University provides the subject specially made for studied by self-learning. Beside, using the subject provided by Open University, student can also take an initiative to uses library, attending tutorial, both by face to face or via Internet, radio, and television and also using other learning sources, such as computer-aided subject and audio/video program. Self-learning is very determined by learning efficiently. It is also depending on speed of reading and comprehending a reading content. Student must have self-discipline, high initiative, right action, responsible, manage time rightly, and studying based on schedule determined by themselves in order to learn efficiently. Those learning experience can lead to an attitude and behavior tending to self-service without depending on other.

Undergraduate PGSD FKIP-UT program is a special study program for Elementary School and Islamic Elementary Teacher aimed at improving their education qualification by achieving undergraduate level and becoming professional teacher. One of the subjects offered is Basic Concept of Science for Elementary. Learning result is determined by two factors, internal factor and external factor. Internal factor is from self-student, this would be related with interest, intelligence talent, and motivation. While external factor is from out of student, such as curriculum, lecturer, environment, facilities, method and so on.

Intention to learn and develop an educational insight for teacher without quitting from duty is an effort to make strong

attitude as a professional teacher. Teacher as student of S1 PGSD must have a good management time to plan their learning program, to produce optimum learning result in their profession. S1 PGSD Program is implementing learning process focused on five subjects given to elementary school, one of the subject is Science. Basic Concept of Science for Elementary is learning basic concept of very specific science learned by elementary student.

Interest is an important aspect, because it has a strong relationship for way of learning and it can improve learning result, especially basic concept of Science. Generally, interest meant people passion to like one activity more than other activity. People want to involve in one activity rather than in other activity. Interest is a psychology aspect. It is stying on the group of human soul activities. Fishbein (1980:216-222) defined that intention is a people or individual spirit to act, he also described the human psychology line as human activity hierarchical which began from an abstract to concrete activities.

As a distance education student, we are demanded to do self-learning in accordance with learning result and self-initiative. Then, problem formulation of the research is to which extent self-learning effect and student's interest for Learning Result of Basic Concept of Science at elementary school (PDGK4103) Undergraduate Study Program of PGSD?

Objectives/Purpose of the study

The research aimed to: (1) analyze self-learning effect for learning result of Science at Elementary School; (2) analyze student's interest for Science subject at Elementary School; (3) analyze an interaction between self-learning and student's interest for Science subject at Elementary School.

Literature Review

Science

Science is an abbreviation from the word "Natural Science ", this means also as life science, but in this contexts natural science is used. Natural means nature or related with nature, while science means knowledge. Thus, natural science means the science of learning nature being. Natural Science is the way to recognize natural cosmos through data collection obtained based on controlled observation and research. Science can be seen from two sides, process and result sides. Natural Science can be divided into two elements, process (the investigation) and product (the knowledge). The process side includes how to collect facts and how to relate those facts to be interpreted, while the result or the product side is principles, theory, law of concepts or all facts aimed to define some nature symptoms.

Natural Science is the science born and developed through observation steps, formulation problems, hypothesis test by experiment, taking conclusion, and proposing theory or concept. Functions of natural science subject are: (1) Giving a basic knowledge capital, both to continuing or to higher level education or to be applied in daily life; (2) Developing skill in gaining, developing, and applying a concept of natural

science; (3) embedding scientific attitude and training student to use scientific method to overcome problem faced; (4) it is believed that science teaching and information technology will disenchant the student to appreciate the beautiful of nature thereby it is hoped that students will glorify the creature; 5) Growing creative and innovative power of student; (6) Helping the student to understand new idea or information in Technology and science area; and (7) Fertilizing and developing student's interest for natural science.

Nature of Interest in Learning

Interest means the high heart inclination for something, desire, and intention. Interest and intention can be grouped into activities group, such as: inspiration, intuition, dream, and revelation are as the most abstract activities. For someone, the revelation is a very passive activity both in their psychological or physical.

According to Ahmad and Umar (1992), attention is soul activeness which tends to the interested activity or object, someone who shows the interested object will give attention persistently and looking for information about that object continuously. People's attention for the interested object will always adhere in the self-people whenever and wherever. Beside contains the interest element, interest also contain an intention elements. That intention includes intentions to know and to learn. People who want to know about a certain job or other activities, then he/she will put effort to know about that job or activities selected.

Referring to prior meaning, then greater intention of someone for an object will be more positive reaction of someone for that object, and on the contrary, if someone is not interested in an object, then he/she will leave that object. Some psychology experts stated that interest is always related with motivation, because an interest is one of individual motivation aspects. This was pointed out by Hurlock (1990: 114-115) that interest is a motivation source that encourages an individual to do everything that he/she want to do, thus it is clear that an interest is not the same with motivation. The Liang Gie (2002: 28-31) discussed the importance of interest in the study. According to The Liang Gie, interest means busy, interested or involved with their activities thereby realizing the importance of that activities. Interest of study is the full involvement of student with all their attention to get knowledge and achieve an understanding about some scientific knowledge's which are taken in university.

The importance of study interest as a student's academic attitude in relating with implementation of distance education is an interest for serious thought activity to dig information and to achieve an understanding about all concepts in their majoring. Interest is one of the main factors to achieve successful study, it was explained also that one of the main causes for student's failure in study showed that they are less interesting in that field. An important meaning of interest in relating with study implementation is: 1)giving an attention persistently; 2)making easy to create concentration; 3)preventing from external bother; 4)adhering subject in

memory strongly; and 5) reducing the boredom of self-student in study.

Referring to those definitions, it can be meant that student's inclination to Basic Concept of Science is not lost from student's interests to their learning experience of basic concept of natural science in Elementary School. Science is learning about nature symptoms, invention of some experts about nature phenomenon and dead material. So that, science can be meant as the science learns about product and process. Those make some student like to learn science. In S1 PGSD Program, one of the subject offered is a basic concept of science in Elementary School. Someone who has interest in certain science will feel that insight of the science becomes guidance in their life. People who has an interest in certain science, for example science, he/she will learn it eagerly and responsible. Responsible people are the people has scientific thought pattern and has a strong principles and not easy to rocked. In speaking of interests, then it will include: 1) interest is not influenced by external factor of heredity factor; 2) interest is arising because external effects. Thus, within self-individual can be influenced by certain factors. Interest can arise because individual's needs for something will be conducted, there is relationship between activities will be done by his/her experiences, and there is occasion to get a better result. Interest can also arise because there is a clear information about activities will be done and there is specialization of study program will be learned by someone.

Nature of Self-Learning

Self-learning want to individual for learning based on self-initiative. Self-learning can be done by individual or group, both in learning group and tutorial group. Self-learning is not meant learning alone. People often misunderstand about self-learning as learning alone. That misunderstanding was happened because they tend to learning alone without tutor or friend for people who takes a course in Open University. Self-learning means learning by initiative, with or without help from other in learning.

As self-sufficient Open University student must not know everything. Student is not also expected to become genius student which need not help from other. One of self-learning principles is a student able to know him/herself needs help or supporting from other. That definition included to know him/her need to meet with other student, learning group, administrator committee in Distance Learning Program Unit/Unit Program Belajar Jarak Jauh (UPBJJ), tutor, or even neighbor who takes a course in Open University. Help/support can be an activity to motivate each other for learning, for example, talking with neighbor who takes a course in other Universities. This frequently can motivate them to study hard. Help/support can be meant as dictionary, supporting book literature cases from new paper, news from radio or television, library, information of tutorial schedule, and other not related with people. Student is able to identify an information source. This identification of information source needed to smooth the learning process of student when they need supporting. Self-sufficient people is the people want and able to realize their goodwill or intention

seemed in the actual action or deed to produce something for fulfilling their need and other people need.

Self-learning replaces a learner as subject, controller, decision maker or initiator of their own learning. Thus, learning result has controlled or directed their learning as the main requirement for learner. Learning result in controlling or directing self-learning of individual is basically a continuum classified into four stages: (1) *dependent learner*, (2) *interested learner*, (3) *involved learner* and (4) *independent learner*. Based on the independent learning stage, learner with characteristic 1 and 2 will be very difficult to attend an education with independent learning system. Learning with characteristic 3 (involved learner) has had skill and knowledge and assuming him/herself as participant in their learning. In this learning, tutor/instructor has been rolled as facilitator concentrated on facilitating, communicating and supporting the learner in using the skill owned. Learner with characteristic 4 (self-directed) had been able to arrange their goal and standard, both with or without helping from an expert. It is had been able to use an expert, institution and other source to achieve their learning goal. Independent learner is not meant they are alone, but they have been able to collaborate with other both in club/informal learning group. In this situation, tutor/instructor has rolled as consultant to give delegation or empower learning result of their learning. Thus, Open University distance learning system wants the student can learn by their self. Fluency and readiness in learning independently is the main requirement. Based on the independent learning, in order to attend an independent learning system, learner should be including on 3 stage (involved learner) and 4 (self-directed learner). This characteristic should become an important consideration for implementer of distance education at region (UPBJJ), and the tutor is as a learning supervisor and service provider to student.

Independent learning is the way of learning that gives a greater freedom, responsible and authority to the learner in planning and implementing their learning activities. Learner can get a supervision help from teacher or other people, but it is not meant to be dependent to them. The main feature of open education applying an independent system is a commitment to help learner/student in order to be independent learner and can determine their decision related with 1) goal or learning result want to be achieved; 2) subject, theme, topic or issue will be learned; 3) learning sources and method will be used; and 4) when, how, what will be examined in their learning.

From opinion of some experts above can be concluded that in distance learning system, learner must be supervised and directed in order to have capability in independent learning individually or by group, so that they can determine: 1) their learning goal (what must be achieved); 2) what must be learned and where should get their learning source(material and learning source); 3) how to achieve (learning strategy); and 4) when and how to evaluate their learning (evaluation). Everybody has a different learning result from independent learning, lining with the prior study about personality, stated that there is differences of behavior from each individual. Learning result from independent learning of student can be

disclosed from student's capability in initiating, acting and responsible related with distance learning activity. That is doing a learning activity, understanding a subject and increasing skill. High learning result of student in learning has a big opportunity to achieve an expected achievement.

In understanding subject, student can do some activities, such as learning by him/herself, discussing problem with friend in learning group, joining the course of Open University in radio and television and using local library or local university or other sources available in their surrounding. To achieve the learning result, the student should arrange a learning schedule which has been matched with daily activity and practice regularly. To support an independent learning success, Open University provides the academic help, such as: Face to face tutorial, tutorial via radio, television and mass media, and tutorial via Internet (online tutorial). Tutorial is a service for learning help to student academically. In tutorial, student's learning activity should be done under supervision of tutor as a facilitator.

For Student of Undergraduate PGSD must attend at face to face meeting, with 8 times meeting and in third, the fifth, and the seventh meeting will be given a tutorial task to give contribution for value of last subject. Other tutorial type can be joined by student is online tutorial and tutorial via radio, television and mass media. A study by Suropto (Tesis PPs UI 1996) has reviewed the relationship between independent learning of learning children to some subjects, such as Social Science, Indonesian Language, Natural Science, and Math. This result study showed that independent learning had an effect for learning achievement of Indonesian Language and Math.

Independent learning concept is not new in distance higher education world / pendidkiantinggi jarakjauh (PTJJ). Implementation of independent learning concept is logical consequences in PTJJ system that demands a high independent from student in learning, if compared with face to face learning. Student independence in PTJJ become important, because the limited interaction between student with instructor, and with peer student. Paul (1990), stated that successful of PTJJ institution depends on student's capability in independent learning, and who has independent in learning will be success in achieving education with PTJJ system. Development of independent learning capability is one of encouragement of PTJJ institution for (*student support development*). Hiemstra (1994) pointed out that capable people in learning is a people can plan their learning, practicing a learning process and evaluating their own learning. More specifically, independent learning is as a process to which the people to have self-initiative (both with or without help from other) in diagnosing their learning needs, to formulate a learning goal, to identify the learning source, to choose and implement a match learning strategy, and evaluate their own learning result. The student who has a high independent learning has been described as the people can control a learning process, use various learning source, having an internal motivation and having ability to manage time (Guglielmino & Guglielmino, 1991) with having a positive self-concept compared with student by low capability (Sabbaghian, 1980). Then student with self-capability to learn is meant as individual that has responsible for their

independent learning process (Hiemstra, 1994). Independence level needed is different between one learning situation and another. The different is varieties from learning situation centralized on teacher (*teacher directed learning setting*) until learning situation needing independence of student (*student directed learning setting*). Demand of encouraging student to have learning independent in learning situation centralized on teacher is usually not emphasized more than learning situation in PJJ. Learning situation in PJJ demands a high learning independent from their student because there is "distance" which separates between teacher and student. Learning control which usually given by teacher must be done by self-student. Differences of learning situation will be not much effected to student who has high learning independent.

According to Guglielmino and Guglielmino (1991) that a high independent learning of student was characterized by some factors, such as: 1) Having initiative, independence, and persistence in learning; 2) Responsible for their own learning process and assuming problems as a challenges, not barrier; 3) Discipline and having a great curiosity; 4) Having strong intention to learn or to do changing and having high confidence; 5) Capable to manage time, learning speed, and plan to complete the task; dan 6) Like to learn and tends to fill the target planed. In core, Guglielmino and Guglielmino (1991), argued that people with independent learning is the people that able to act, responsible and not fear to face a problem.

Independent learning process is going on sustainably. Evaluation for learning process should be done to know which learning stages can't be conducted yet or probably it needs other strategy to archive the learning stage. Independent learning process is not always going on perfect, in every independent learning activities stage may be arising a learning barrier, for example less human resources and a limited time to learn (Guglielmino & Guglielmino, 1991), which can bother a teaching and learning activity to student. Lowry (1989), argued that many adult people aren't able to do independent learning because less independent, confidence, and human resources. Successful of independent learning student is caused by capability to control their learning process. This can happen in PJJ institution which has a very structured learning method and demanding the student to be more independent learning because a distance between learner and lecturer. Theoretically, more ready student should be more success in their learning, compared with less ready student for independently learning.

Learning Result

Learning, according to education encyclopedia" is as psychological and education term, learning is not studying. Definition of learning is diverse. This was influenced by philosophy and learning theory. According to education encyclopedia, general definition of learning is referring to the self-people change, i.e. behavior change based on experience. Changing is happened from prior point after learning, and changing is not happened temporarily, but it will be long time or long term process. According to Gagne (1989), the changing intended in learning is a changing of human disposition or

capability which is happening in a certain period and not only caused by growth process. A changing type called as learning will show the behavior changing, and inferential about learning drawn by comparing a possible behavior before the individual was set in learning situation with behavior showed after that treatment. While, (Gredler, 1994) expressed that learning is a process by people to get some fluencies, skill, and attitudes. There are some important things in lining with some learning definition by some experts above, such as: Learning is a behavior change, the change is from point before learning to point after learning, and learning as behavior change not only caused by growth process, but also as capability goes on in certain period. Learning is also an individual effort to get behavior change as the process by people to obtain some fluencies, skill, and attitudes. Learning is triangle interactions among environment, personal, and behavior factors which includes cognitive process as a self-learning result and self-management as the requirement suggested. From some literature review for learning theory, it can be concluded that learning is the process or activity conducted intentionally through training's, so that learning people gets a new fluencies which includes skill, knowledge, and permanent attitude value.

Learning result is one of element in learning activities, speaking about learning result can be not separated with learning activities as learning process. There are three important elements in learning which describes learning process, such as: 1) Learning goal, it is the direction from learning process which can be seen from behavior formulation expected after experiencing a learning, 2) Learning process is as behavior change process through some experiences, 3) Learning result is behavior change as the interaction result with environment of learning activities. In other word, learning result is basically a achievement of learning goal which has been expected after doing some learning experiences.

Bloom (2001) classified the learning result into three domains, such as: Cognitive, Affective and Psychomotor. Cognitive includes goals related with thought, recognizing and problem solving. Affective includes goals related with attitude, value, interest, and appreciation. Psychomotor includes goals related with skill. Bloom detailed some behaviors as arranged from simple behavior until complex behavior. Cognitive aspect contains four categories, such as: factual, conceptual, procedural, and meta-cognitive. Cognitive domain contains procedural factual and meta-cognitive, affective domain contains five levels, include recognition, response, reward, organization and experience. Psycho-motor domain consists of five levels include imitation, using concept, practice, rightness, and naturalization.

Learning result is basically a changing from new learning result obtained by someone after learning, which as learning result of learning people. Based on prior explanation, learning result is a description showing a mastery level of learner for the subject learned. To know learning result can be done by measuring for their learning result. Teaching goal as instructional goal is statement formulation about learning result or the behavior expected. Evaluation of learning result can be done by some ways: written test, oral test, and practice, an instrument of learning result evaluator should be down

from expected behavior formulation to instructional goals, then the evaluation result is stated by number. Therefore, supporting variable for learning result of basic concept of science at Elementary School in this research is an interest and independent learning result. This research was directed to look for correlation of interest variable and learning result of independent learning with learning result to know a learning result for basic concept of science in Elementary School. The learning result achieved by learning participation is interaction result from various factors, both internal and external factors. Internal factor is from self-individual, including: 1) Physical factor, both heredity or achievement; 2) psychological factors consists of: a) intellectual factor, including potential factor, such as: intelligence, talent, and real fluency, such as: cognitive learning result owned, b) non intellectual factor, such as certain personality factor which has been owned such as: attitude, habitual, interest, vague, motivation and emotion. External factor is from out of student, such as: lecturer, teaching method, learning facilities, environment and so on.

Learning in distance learning system is directed to individual, it means that in learning process, the student should be positioned as focus of all learning process, student should be initiated and responsible for their management learning process. From the problems identified from various related problems with learning result in SPJJ environment as like explained before, then this research is limited on internal factor. The internal factor intended is psychological factor of non intellectual. Certain personality elements, such as: interest and learning result of independent learning related with learning result. Then, the problem formulation is as follows: 1) Is there relationship between learning interest of science with learning result of basic concept of science at Elementary School?; 2) Is there relationship between learning result of independent learning with learning result of basic concept of science at Elementary School?; 3) Is there relationship between learning interest of science and learning result of independent learning together with learning result of basic concept of NS at Elementary School?.

Capability obtained by student after learning is called as a learning result. Learning result is capability owned by student after receiving their learning experience. The capability is relatively permanent and useful for them. Capability obtained because learning is classified into three domains. This is consistent with opinion of Bloom(1981:7) which classified the learning result into three domains, such as: cognitive, affective, and psycho-motor. Cognitive domain is concerned with intellectual learning result consisting of six aspects, such as: (1) knowledge or memory, (2) comprehension, (3) application, (4) analysis, (5) synthesis, and (6) evaluation. Affective domain is concerned with attitude consisting of five aspects, such as: (1) interest, (2) attitude, (3) reward, (4) values, and (5) emotional controlling.

According to Winkel (2009:144) that people knowledge learning is starting from various data about being, situation, thing and person. While knowledge learning result of functional people after learning facts will look at correlation between one with another. In available knowledge, the information should be saved separately. One is saved in

science and other information was saved in physical. Knowledge of new functional information about physical is integrated with the owned knowledge. During knowledge learning process need a new knowledge related with the knowledge owned, finally this knowledge owned would be functional. While psycho-motor domain consists of six classification levels: (1) reflective movement, (2) skill on basic movements, (3) perceptual capability, (4) physical capability, (5) skill movement, and (6) capability concerning with communication. The three Bloom's domains, if it was analyzed, then this is as comprehensive capability happened on self-people, cognitive domain is related with individual capability to think, affective domain is related with individual capability to attitude, and psycho-motor domain is related with capability to behavior.

In daily life, many people do activities that really symptom of learning. Capability to do learning activity would be obtained with remembering that in initially the capability is not yet exist. In learning activity has been happened the change process from not capable into capable. That change process has been happened during in certain time. This behavior pattern change indicates the learning process. More capability obtained become personal own, more change will be experienced by that people. Change is not all caused by learning. The change caused by growth and maturity are not effect of learning, but because instinct. The same with the change because tired or disease, it can't be said as learning effect, because this change was happened out of human capability. Learning is the change behavior or capability to conduct in relatively permanent that is not caused by temporarily situation from body, for example diseases or drugs. It is clear that change happened because learning not arising easily but learning needs a consciousness, psychological activity and practicing. The process happened because there is stimulation from external individual, this result in a changing some personality aspects. Behavior change obtained in learning is through experience. Based on the opinion above, learning is a capability obtained as individual interaction effect with environment, not from physical growth effect or maturity and not from drugs. Changing was happened because learning will go on gradually and not temporarily. The capability obtained to be felt useful including various changing for individual.

Based on the opinion above, it can be said that learning definition includes four types, such as: 1) learning would be showed by the behavior change on self-individual, after learning, the student is capable to do something that can be done before learning; 2) behavior change is relatively permanent and not passing only, the behavior change obtained from their learning result had to be durable on self-individual and become personal own which can be removed; 3) behavior change is result from experience, which needs an interaction with environment; 4) behavior change is not temporary situation from body, for example disease or drugs.

Capability obtained by student after learning is called learning result. Consistent with opinion of Sudjana (2001:22), that learning result is the capability owned by individual after accepting their learning experience. The capability will be

relative permanent and useful for themselves. Learning result can be classified into five categories, such as: (1) Intellectual capability is skill capability which makes an individual to be able and fluency to interact with environment in using symbols, including: (a) capability to differ one material with other (discrimination), (b) capability to identify an object in one environment with giving a certain name as called concrete concept, (c) capability to define concept with abstract, (d) larger intellectual capabilities are the rules, this is capability form signed with giving a certain interpretation, and (e) capability of individual to know something learned and applied to resolve the problem as called *higher-order rules-problem solving*.

Dick and Carey (1996:35) categorized an intellectual skill into four types in the most common, such as: (a) *discriminations*, (b) *forming concepts*, (c) *applying rules*, and (d) *problem solving*. Different with opinion of Gagne, Briggs, and Wager (1992:43-51) which unifies between concrete concept and define with using the term of forming concept; (2) Cognitive strategy refers to student's ways to show attention, memory, and their thought. Something need to know is capability to regulate the student's way to manage their learning has lost the cognitive capability strategy with various reasons. Cognitive strategy is meta-process used to confidence learning conducted.

Therefore, this cognitive strategy is very supporting a learning strategy; (3) Verbal information is called also as verbal knowledge, that is capability to get label, fact, and other knowledge field which arranged orderly which was saved in student's memory. By information, individual is able to remember about label or name, facts, the field arranged orderly in human memory; (4) Attitude, it is inclination effecting the action taken. This capability is related with how the student response to something, so that the student can take a useful action for themselves; (5) Motoric skill is movement from muscle which relies on physical deed smoothly. This skill is very supporting student to do physical activity.

Intellectual capability, cognitive strategy, and information can be identified with cognitive domain. Attitude can be identified with affective domain, and motoric skill can be identified with physico-motor domain on Bloom's taxonomy. The classification conducted by Bloom (1981:7) emphasized on learning result, and reviewing certain learning result impacts based on the prior learning process, and describing the capability in each cognitive domain, but it didn't review characteristics within cognitive domain. Analyzing the opinion explained, learning result is a capability owned by student after experiencing a learning process. Learning result consists of three domain, these are: (1) cognitive, (2) affective, and (3) physico-motor.

Methodology

The research populations are all undergraduate students of PGSD Study Program of FKIP-UT at 4 Open University regional offices who has taken subject of Basic Concept of Science at Elementary School. Research sample in each regional office Open University is 100 people. The data analysis techniques

used is regression and correlation. This research was conducted during registration period of 2014.2 for Undergraduate Student of PGSD Study Program of FKIP-UT in Open University regional office Jakarta, Semarang, Makassar, and Serang. The research method used is survey method with correlation technique to explain about correlation between related variable: learning result of Basic Concept of Science in Elementary School with independent

variables: (1) student interest to learn science, (2) learning result of independent learning of student.

Result and Discussion

The data processed and analyzed are 175 from regional office Jakarta (34,28%); Semarang (32%), Makassar (16%); and Serang (17,71%).

Regional office	%
Jakarta	34.28
Semarang	32
Makassar	16
Serang	17.71

There are two signs (+ or -) in interpreting correlation which relate with correlation direction and strong correlation or not. Between learning result and independent learning was obtained number +0,567. It means that correlation direction is positive or higher interest will be higher than learning result, and vice versa, the correlation >0,5 meant that independent learning is strongly correlated with learning result, and also for learning result correlation and independent learning are positive, only the correlation between interest and learning result is weak (only 0,007 or less than 0,5), so it can be said to not having correlation. R number as 0,569 showed that correlation/relationship between learning result with independent learning and interest for subject of Basic Concept of Science is strong, however between interest and independent learning had a weak correlation, so it can be said there is correlation.

R square number or determinant coefficient is 0,324 (derived from $0,569 \times 0,569$) but variable from more than two variables is better. Adjusted R square is 0,316 always less than R square. This meant 31,6% variety from learning result can be explained by variety of interest and independent learning, while the remaining 68,4% was caused by other. Standard Error of Estimate (SEE) is 6,31753 or 63,1753 as unite used in evaluation of student's learning result on subject of Basic Concept of Science (PGSD4103). Smaller SEE will be the right regression in predicting dependent variable. From ANOVA test or F test was obtained F-count as 41,140 with significance level 0,0000. Because probability (0,000) is smaller than 0,05, then the regression model can be used to predict learning result, or can be said a correlation between independent learning and interest are all effected for learning result.

Coefficient regression 0,087 expressed that every additional (because + sign) as 1 interest value will increase learning result value as 0,087. Coefficient regression 0,579 stated that every addition (because + sign) as much 1 independent learning value will increase 0,579 learning result value. T-test to examine the constant significance and every *independent variable* with interest variable as much 0.428 greater than 0,05 because that variable doesn't have an effect for learning result. 0,000 independent learning variable and constant regression is less than 0,05 because independent learning variable has an effect for subject of science at Elementary School.

Generally, student in the Undergraduate Program of PGSD has an education background of Senior High School not with science major, but Social Science and Vocation Education with major in Economic, so knowledge about Basic Concept of Science for most students is less understanding. Material teaching content or main material book (MMB) has weight of University Credit Unit as 4 UCU consisting of 6 modules contained Physics material and 6 modules contained Biology material. Tutor giving the material must have special tips to motivate student in order to learn a module well, the minimum activity that must be done by student is reading a module and writing down a concepts or material that is difficult to understand when reading MMB. Then the tutor discusses or explains it in tutorial class.

The implementation of the program does met the expectation, because student come to tutorial class without the proper knowledge acquired when independent learning at home, most students relied on and expected the tutor to explain all module material and student listen and write down only about something difficult. So that, when researcher through tutor gave pre-test on the first meeting, the student tutorial gets grade average 6.

Based on low enough average pre-test, the tutor tried to motivate and uplift the spirit of student to give some tasks in order for the student to begin to read module at least the term, concept and sentences. Furthermore, tutor began activating student with a group discussion to give module material and ask to student presenting a group discussion result in front of class and not appearing group become an active participant of discussion and all students may ask a question. So that, the discussion seem to alive because all students involved in class discussion. During discussion, the tutor has had an active role as a moderator coordinating the discussion and managing a question to be answered by presenter group or switched to other participants of discussion, so that all student are ready to answer question or giving question and tutor is ready to give reinforcement if the answer given does not satisfy yet to the asker. In the last class discussion, tutor gave conclusion and closed the discussion by giving a task to student to complete questions and exercises and answering formative test without seeing answering key and learning the next module will be discussed the next week.

In the fifth tutorial meeting, the task given to student is the same question when pretest in the first week, and the grade obtained by student is generally increasing significantly. That result showed that student has been already arising of their interest for science and they began to recognize a meaning of independent learning. Independent learning conducted by student is not only suggestion or reminder from tutor of science, but all tutor giving tutorial in semester one for undergraduate program of PGSD. The change began on the second tutorial meeting, when tutor asked student about material and concept which not or not yet understood, some student answered and stated that difficulty concepts to learn independently at home or at office, can be solved in discussion with peer student but different in class at Open University. Lining with the growth of independent learning by student, it is also growing their interest for NS. So that, two aspects in this problems research can be resolved by growing student's interest in independent learning gradually, this was evidenced by the responses given when they did a post-test. Average value of pretest for interest is initially 20 only, but it increased to average 62 and average value of independent learning is initially 18 increased to 74.

Correlation between independent learning and student's learning result for science is very strong. This was caused by intention and hard working of tutor and student. Tutor always encourage student to read and learn every science module and also the student always accept an entry and suggestion from tutor and also meet all tasks given by tutor. The most important is student awareness that everything conducted by tutor only to help student in order to get success in final test of semester and pass of Undergraduate program of PGSD with satisfying grade. So that it is very common that student learning result can be maximum because student's independent learning in learn and understand the basic concept of science module.

Correlation interest with student learning result is not enough strong, this is very influenced by an active role and hard working of tutor, which initially the student may be not recognizing science but lastly they love and interest in science. It is not easy working in several weeks the tutor can change student behavior, initially they didn't like but lastly they like and interest in learning furthermore about science. However, the student should be rewarded because they have really tried to read and learn science which finally they love science very much. Not easy to do that, it takes time and interest management, student has got success to sort work or other interest for a moment focusing on science only. If that activity were not done, it may be not happened the improvement. As explained above that student had multiple roles, as a student, tutor, father/mother of household and community member.

Conclusion

Based on data analysis and discussion, then this research result can be concluded as follows:

1. Correlation between independent learning and student's learning result for science is very strong. This was caused by intention and hard work of tutor and student. Independent learning variable is 0,0000 and constant

2. regression less than 0,05, then independent variable had influenced learning result for Basic Concept of Science.
2. Correlation interest with student learning result is not strong enough, this is very influenced by an active role and hard working of tutor, which student initially may be not recognizing science but lastly they love and interest in science. Based on t-test of interest variable is 0.428 greater than 0,05, then interest variable had not effect for learning result.
3. Independent learning had strong correlation as much 0,567 with learning result for Basic Concept of Science with subject code PGSD 4103 and student interest as much 0,007 less than 0,5 had not effected learning result to Basic Concept of science.
4. Based on result of R square as much as 31,6%, variation of learning result can be explained by interest variety and independent learning, while the remaining 68,4% by other causes.

Suggestion

In tutorial implementation of Undergraduate PGSD, tutor should give much enrichment about science, thus student can really understand and lastly the enrichment will lead to student's interest for science which is good, strong, and has an effect for their learning.

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