An Analysis on the Correlation between Interest and Learning Independence with Learning Outcomes in Teaching Skills Consolidation Course

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Abstract

Open University, which implements a distance learning system, expects its students to learn independently despite the fact that some courses require learning practices in a classroom setting. This research then discussed a classroom teaching practice conducted by a student-teacher which was under advisory of two supervisors with different responsibilities. Supervisor 1 was responsible for providing advisory to the student-teacher in making proper and good teaching preparations, while Supervisor 2 was responsible for providing advisory to the student-teacher in his teaching practice in the classroom. Thus, the main research problem of this research was formulated as (1) whether learning independence had a correlation with learning outcomes, and (2) whether interest had a correlation with learning outcomes. The research method used was survey method with correlational research technique in attempt to identify the correlation between the bound variable, namely Teaching Skills Consolidation or Pemantapan Kemampuan Mengajar (PKM) with the free variables, namely (1) students' entry interest and (2) learning independence. The total sample of this research was 30 participants who were simply and randomly selected (simple random sampling technique) out of 80 students who joined PKM subject course. The research showed that there was a positive correlation between the students' entry interest and their PKM learning outcomes with 0.01 significance value. The presence of this positive correlation between the students' interest and learning outcomes in PKM course with an indication that the higher the value of students' entry interest, the higher the value of their learning outcomes in PKM subject course and the lower the value of students' entry interest, the lower the value of their learning outcomes in PKM subject course. Also, there was a positive correlation between the students' learning independence and their learning outcomes in PKM at α =0.01 significance value. The positive correlation between the students' learning independence and the their learning outcomes in PKM subject course with an indication that the higher the learning independence, the higher the students' scores in PKM course tasks, and the lower the students' learning independence, the lower their scores in PKM course tasks. In short, the relationship between the students' entry interest and learning independence altogether with their learning outcomes in PKM subject course showed a positive correlation as the higher the value of students' entry interest and learning independence, the higher their scores on PKM.

Keywords: Teaching Skills Consolidation, independence, interest, distance learning

INTRODUCTION

Learning outcomes obtained by students are the results of interactions between various factors, both internal and external. Internal factors come from the individual himself and consist of: 1) physical factor – either inherited or obtained –, and 2) psychological factor which includes a) intellectual factors comprising potential factors such as intelligence, talent, as well as reality skills which are also known as cognitive abilities, and b) non-intellectual factors comprising certain personality traits such as behavior, attitude, interest, fatigue, motivation and emotion. Meanwhile, external factors consist of factors outside the individual such as tutor, teaching method, learning media, environment, and others.

The learning process of a distance learning system emphasizes on the interactive process and relationship between the teacher and students. The variety of interactions facilitated by the media are systematically structured and aimed at helping the students' learning, which are considered to be essential components in every learning activity. The concept of open means opening learning opportunities to people from every background setting which later enable them to have more study options to choose. The emphasis is on the provision of opportunities to get education for anyone without being hindered geographically, personally, and professionally. In particular, the administration of the distance learning concept is completed through various media such as printed, audio, or video materials as well as radio and television broadcasts. The instructional materials are designed in such a way that the students can learn independently. According to Paulina Panen (1995), distance education has unique characteristics; they are: a) the condition where the tutor and students are separated from one another, b) the use of various media to incorporate the tutors within a learning interaction, c) the learning is directed towards each and every individual. The separated condition between the teacher and students provide opportunities to every student to actively participate in determining what to be studied and how to learn it. The students do not keep relying on the directions provided by the tutor but are required to have their own creativity and initiative. They need to be responsible for their own action and can stand independently, which is a characteristic of a mature individual that needs to be developed and improved in the process of completing a distance learning system. The use of various types of media is an impact of separating the tutor and students, thus in order to link this gap various media of communication is then needed. The existence of media provides possibilities to create conditions for learning processes in a Higher Education Open distance or Pendidikan Tinggi Terbuka dan Jarak Jauh (henceforth PTJJ). The success rate then highly depends on the abilities and characteristics of the media as well as the students' abilities.

Furthermore, as the learning is directed towards individuals, which means that in the learning process the students are positioned as the main focus of all the learning activities, the students are highly demanded to be initiative and responsible for the management of their learning process. Therefore the research study problems which can possibly be identified based on the interaction between the students and this distance learning institution comprise: (1) whether there is a correlation between the students' learning independence and learning outcomes; and (2) between the students' entry interest and their learning outcomes. These questions need to be answered for the improvement of the students' learning outcomes.

LITERATURE REVIEW

1. Independent Learning

Open education provides students flexibility to choose various learning media/resources, time, place, and pace, support as well as entry and exit access for the individual's study period. Meanwhile, distance learning education system puts the students in a certain situation for their learning process that is not a physically existing classroom but a situation which the learning process focuses more on the teaching not bound to a conventionally physical classroom setting. The term distance is also defined as the distance between the students and tutor, the instructional materials employ various media either printed (module) or non-printed, computer/internet, radio and television broadcasts, with the learning process relies heavily on independent learning. Independent learning technique requires the students to learn upon their own willingness or initiative. This type of learning can be conducted individually or in groups, both in study groups and tutorial groups. The students can use learning materials provided by Open University, or use library services, follow radio and television broadcasts, as well as other learning resources available on the internet. Independent learning is strongly determined by the students' ability to learn efficiently as well as their pace in reading and understanding reading materials. In order to be able to learn efficiently, the students need to have a good level of self-discipline, high level of initiative, take proper action, responsibility, and manage their time well, as well as learn according to the schedule that they determine themselves.

The above descriptions of learning promote certain attitudes and behaviors that tend to serve for the students themselves, without being dependent on others, as these habits are the signs of autonomy or independence. According to Atwi Suparman (1999), distance learning is like going through a long and narrow tunnel, only students with the characteristics of not just smart, but also discipline, independent, have a high level of endurance, and never give up can complete their study through a distance education system, while the rest will go down by themselves and give up. This opinion justifies a notion that the level of learning independence of the students are highly associated to the success level of the students, the higher the level of learning independence the higher the learning outcomes. Willingness to deepen and develop educational insights for teachers without abandoning their task is an effort to establish a professional attitude as a professional teacher. In his professional activity, a teacher needs to have an ability to plan a learning program and promote learning, experience to plan learning and capability to conduct learning obtained through Teaching Skills Consolidation or Pemantapan Kemampuan Mengajar (PKM) subject course since PKM program is an applicable and integrated program focusing on all the theories and practices. In pursuit of the success of learning specific educational sciences, interest is an essentially important aspect because interest has a strong relationship with learning techniques and can improve the students' learning outcomes. There are many factors which influence learning outcomes. Learning outcomes cannot be separated from learning activities which are included in a learning process. Learning outcomes are strongly determined by two factors, namely internal and external factors. Internal factors are factors that come from the individual himself, such as talent, interest, intelligence, and motivation. Meanwhile, external factors are factors that come from outside the individual such as curriculum, tutor, environment, facilities, methods, and many others.

Teaching Skills Consolidation Learning Outcomes

Learning outcomes become one of the fundamental elements of a learning activity, talking about learning outcomes cannot be separated from learning activities included in a learning process. At the least, there are three fundamental elements in a learning activity which describes a learning process, namely: 1) learning objective, which is the direction at which a learning process is aimed and can be seen from the formulation of expected behaviors after completing learning experiences, 2) learning process, which is a process of behavioral change through various learning experiences, 3) learning outcome, which is a behavioral change as a result of interactions with a learning environment. In other words, learning outcomes are basically the achievement level of the expected learning outcomes after going through various learning experiences.

Opinions about learning are various, the diversity of definitions proposed by some educational experts are strongly influenced by the theories and philosophical values followed. However, a common ground can be identified from these various views proposed by experts in psychology and education which sometimes complement each other. Learning apart from being viewed as a process and function is also viewed as a result. According to Winkel, some of these changes are effects obtained from various learning processes. Next, it is explained that a learning outcome results in a change in the learner's behavior and attitude. Changes which are resulted from the learning will last a long time, which experts formulate that learning outcomes are relatively constant and traceable; they are observable and assessable.

Next, Bloom (1981) categorizes learning outcomes into three domains, namely: cognitive, affective, and psychomotor. Cognitive domain involves objectives which are related to thinking, identifying, and solving problems. Affective domain covers objectives which are related to attitude, value, interest and appreciation. And psychomotor includes objectives which are related to skills. Furthermore, Bloom continues explaining in details about behaviors grouped in simple behaviors into more complex behaviors. The cognitive aspect consists of four categories, namely: factual, conceptual, procedural, and metacognitive. The area of cognitive itself contains five stages: introduction, response, appreciation, organization, and experience. Meanwhile, in the area of psychomotor, there are five stages involved: imitation, manipulation, practice, precision, and naturalization.

Learning outcomes basically consist of new changes and abilities obtained by an individual after conducting learning activities in the form of learning outcomes of the individual after going through the learning process. With the presence of capabilities and learning experiences, it is shown that there is a set of fixed elements. Meanwhile, what is meant by learning outcome is the ability had by the students after receiving learning experiences. To identify learning outcomes, measurements can be taken on their learning efforts, in discussions on the types of learning outcomes it is said that learning itself is a means to achieve teaching objectives. Teaching objectives, in this case, cover instructional objectives, which refers to formulation of statements regarding expected abilities and behaviors. Measurements on learning outcomes can be completed through various ways such as administering tests either written, oral, or behavioral tests and the instrument to measure the learning outcomes is derived from the expected formulation of behaviors stated in the instructional objectives, later the measurement results can be represented in numbers or scores.

Teaching Skills Consolidation (PKM)

PKM is a compulsory subject course which requires the students of Faculty of Education and Teacher Training or Fakultas Keguruan dan Ilmu Pendidikan (FKIP) to conduct teaching practices. PKM is the pinnacle program needs to be completed by students of FKIP. Thus, this means that all the obtained knowledge and information from all the previous subject courses will be illustrated in this PKM activity so that it is expected that there will be changes of teaching behavior identified towards more effective teaching practices. This PKM course, which has 4 credit courses, should be followed by students who have completed and passed courses on sciences and skills as well as Productive Behavior subject course. In general, PKM is aimed at providing opportunities to the students to practice implementing knowledge, skills and behaviors obtained from various subject courses into learning activities in their classroom. In particular, the students are expected to be able to: 1) write lesson plans and 2) conduct teaching and learning activities.

According to Wardani IGAK (2003), PKM is a process of shaping skills which is based upon robust skills, knowledge, and behaviors expected to be shaped after finishing the previous subject courses. Next, it is also stated that the process of shaping teaching skills needs to be systematically completed in stages. These practices completed in stages and systematical orders are covered in the PKM program. Next, the teacher ability development/improvement program is directed towards the capacity improvement of the teachers as a profession so that the program constantly improves towards the realization of tasks and roles of an ideal teacher. Teacher is considered a profession which has basic requirements, technical skills and is supported by a solid attitude. In order to get a mastery level of professional ability, it is not enough to just only read or discuss or deepen an understanding of theoretical explanations but also to ensoul them with real experiences by conducting a collection of practical activities from a field experience program.

Teaching Skills Consolidation (PKM) Learning Outcomes

In the process of academic teaching and learning, the students' activities of open distance education are principally similar to those of public universities, which are completed according to the pre-determined instructional objectives. In general, PKM is aimed at providing opportunities to students to practice implementing the obtained knowledge, skills and behaviors from various subject courses to the learning activities in their classroom. The aspect of knowledge which is expected to have been mastered by the student-teachers involves: a) practical knowledge of implementing management theories of teaching and learning activity, b) knowledge of arranging lesson plans based on a solid theoretical basis, c) knowledge of administrating the points in lesson plans based on a solid theoretical basis, and d) knowledge of measuring the success of teaching and learning activities based on a solid theoretical basis. Meanwhile, the aspect of skills which is expected to have been mastered by the student-teachers involves: a) skill to apply theories of classroom management into teaching and learning activities, b) skill to write a management plan of teaching and learning activities, c) skill to conduct teaching and learning activities, and d) skill to measure the success of teaching and learning activities. Next, the aspect of behaviors which is expected to have been mastered by the student-teachers involves: a) professional-teacher behaviors, b) awareness to keep improving the level of professionalism, c) robustness in administering teacher professional tasks. In essence, the students are expected to write a lesson plan and administer it in a classroom setting. This process of teaching and learning is a process which is arranged in such a way in accordance to certain phases so that the administration can result in maximum achievements/impacts.

This arrangement is contained in the form of lesson plans and every lesson plan always deals with estimations about what is to be done/achieved. This applies to the administration of learning itself by predicting what actions need to be done at the time of conducting teaching and learning activities. There are various forms of lesson plan, but principally, a lesson plan is the smallest unit of a learning program including the expected objectives to achieve, learning activities, methods, and instruments for teaching, evaluation, or assessment.

Instructional purposes are designed for determining the direction of the learning activities. Meanwhile, subject contents are designed for providing substances or meanings to the objectives. Methods and instruments are designed for determining ways or techniques to achieve the objectives, while assessments are designed for measuring the achievement level of the pre-determined instructional objectives. Furthermore, the administration of learning is designed to be compatible with the pre-determined instructional objectives, meaning that the teacher is demanded to provide factual image representations of what has already been planned.

Administrating the lesson plans is the teachers' effort in using several instructional variables such as objectives, materials, methods, and evaluation in attempt to influence the students to achieve the pre-determined objectives. Three main points that need to be paid attention to by the teachers in administering teaching strategies, they are: 1) stages of teaching, 2) use of teaching models and approaches, and 3) use of teaching principles. As an attempt to limit possibilities for making mistakes in conducting the teaching practices as well as skill mastery practice, PKM implements a repeated-layered pattern. A repeated-layered pattern is an activity pattern which is started from theoretical reviews and followed by practices, discussions on the results of practices, and remedial activities.

The learning outcomes in PKM subject course are determined by two main factors, namely internal and external factors. Internal factors are factors from within the students themselves, while external actors are factors from the students' environment. Interest and independence are internal factors which can be developed by the students themselves. The theoretical framework of interest can be explained using the dimension of: 1) attention, 2) desire/objective, 3) feeling of content. Meanwhile, the indicators consist of 1) attention, with the indicators of (a) being interested in the distance higher education system, (b) being interested in the Teaching Certificate program, (c) being interested in the roles and functions of a teacher, 2) want/objective, with the indicators of (a) deepening educational insights, (b) wanting to provide educational information, (c) wanting to get satisfying results, 3) Feeling of content/happy with the indicators of (a) trying to keep the good name of the alma mater, (b) trying to succeed in deepening educational insights by making the students to be active in learning and able to improve their learning outcomes. Furthermore, independence is manifested in the presence of initiatives, taking actions and responsibilities related to the distance learning activities such as doing learning activities, understanding instructional materials, strengthening skills and knowledge; they are behaviors which strongly determine the success of learning efforts in distance education system. Rationally, if the students' interest level is high, then their learning outcome is also high. This also applies to the learning independence variable: if the students' learning independence level is high, then their learning outcome is also high. Thus, if the students' learning interest and independence variables are high, then their learning outcomes will also be high. The higher the students' learning interest and independence the better the learning outcomes. In short, it is expected that there is a positive correlation between learning interest and independence altogether with the students' learning outcomes in PKM subject course.

METHODOLOGY

The research method used in this research was survey with correlational research analysis technique. In this research, the survey method was completed with the main purpose of explaining about (correlational) relationship between the bound variable: learning outcomes of PKM subject course and the free variables: (1) students' entry interest and (2) learning independence.

Population and Sample

The population of this research was all of the students of UPBJJ-UT Teaching Certificate Study Program Jakarta, Faculty of Education and Teacher Training, Open University – Indonesia, as many as 80 students. The sample of this research was 30 students who took PKM subject course.

FINDINGS AND DISCUSSION

The learning outcomes of PKM subject course are represented in scores of the 30 respondents of this research sample. They are written in scores between 45 and 225. From the results of calculation, the minimum score obtained by the students was 115 and the maximum score was 174. From the score range, the average score was 144.10, the standard deviation value was 15.13, the mode score was 148.5, and the median score was 145.75. The set of scores from the highest frequency was (1) 8 people (26.67%) within the interval of 145-154, (2) 6 people (20%) within the interval of 135-144, (3) 5 people (16.67%) within the interval of 125-134 and 155-164, and the lowest frequency of all consisted (4) 3 people within the interval of 115-124 and 165-174. Focusing on the calculated average score, mode, and median above, it seems that the data distribution were inclined to be high because the average score value was below the mode and median score value.

Data Description of Students' Entry Interest

Students' interest data was in the form of a theoretical score, ranging from 1 to 110. The obtained data of students' entry interest was from 30 students as the sample respondents. Based on the data collected, the lowest obtained score was 62, and the highest obtained score was 103, while the calculated average score was 83.23 and the standard deviation value of 9.62, the mode score was 83.90 and the medium score was 83.28.

From the data distribution of scores regarding the students' entry interest explained above, the set of scores from the highest frequency was from (1) 9 people (30%) whose score interval was between 83 and 89, (2) 8 people (26.67%) whose score interval was between 76 and 82.50, (3) 5 people (16.67%) whose score interval was between 90 and 96, (4) 4 people (13.33%) whose score interval was between 76 and 82, and (5) 2 people (6.67%) whose score interval was between 62-68 and 97-103.

Data Description of Learning Independence

Learning independence data was in the form of a theoretical score, ranging from 1 to 105. The obtained data of students' learning independence was from 30 students as the sample respondents. Based on the data collected, the lowest obtained score was 59, and the highest obtained score was 99, while the calculated average score was 78.67 and the standard deviation value of 9.80, the mode score was 78.33 and the medium score was 78.72.

From the data distribution of scores regarding the students' learning independence explained above, the set of scores from the highest frequency was (1) 9 people (30%) within the score interval of 73 to 79, (2) 8 people (26.67%) within the score interval of 80 to 86, (3) 4 people (13.33%) within the score interval of 66 to 72 and 87 to 93, (4) 3 people (10%) within the score interval of 59 to 65, and (5) 2 people (6.67%) within the score interval of 94 to 10.

This research belongs to the correlational study design between bound and free variables. From the research results, it was proven empirically that the two observed free variables strongly influenced the bound variable. The intended variables were the students' entry interest and learning independence (free variables) and their learning outcomes of PKM subject course (bound variable).

Furthermore, from the hypothesis testing, the results showed that the three null hypotheses were rejected, and the proposed alternative hypotheses were all accepted. This can be seen from all the value of Ftest which was all higher than the value of Ftable either at $\alpha = 0.01$ or $\alpha = 0.05$. In regard to this, the proposed alternative hypotheses were: (1) there is a positive relationship between students' entry interest and learning outcomes of PKM subject course, (2) there is a positive relationship between learning independence and learning outcomes of PKM subject course, and (3) there is a positive relationship between students' entry interest and learning independence altogether with learning outcomes of PKM subject course.

Firstly, the result of testing the first hypothesis showed that there was a positive relationship between the students' entry interest and their learning outcomes in PKM subject course. This was shown by a simple linear regression equation of = 66.2619 + 0.9352 X1 of which significance has been tested at $\alpha = 0.01$. Next, through a simple calculation of correlation coefficient, the value of correlation coefficient (ry1) was 0.59 and the value of determination coefficient (r2y1) was 0.3538. This means that 35.38% variations of the students' learning outcomes in PKM subject course can be explained by the students' entry interest variable. The indicator showed a positive value of the coefficient meaning that there was a positive correlation between the students' entry interest and their learning outcomes in PKM subject course. In other words, the higher the score value of the students' entry interest, the higher their learning outcomes in PKM subject course.

Secondly, the result of testing the second hypothesis showed that there was a positive relationship between the students' learning independence and their learning outcomes in PKM subject course. This was shown by a simple linear regression equation of = 68.8704 + 0.9563 X2 of which significance has been tested at $\alpha = 0.01$. Next, through a simple calculation of correlation coefficient, the value of correlation coefficient (ry1) was 0.62 and the value of determination coefficient (r2y1) was 0.3836. This means that 38.36% variations of the students' learning outcomes in PKM subject course can be explained by the students' learning independence variable. The indicator showed a positive value of the coefficient meaning that there was a positive correlation between the students' learning independence and their learning outcomes in PKM subject course. In other words, the higher the score value of the students' learning independence, the higher their learning outcomes in PKM subject course.

Thirdly, the result of testing the third hypothesis showed that there was a positive relationship between the students' entry interest and learning independence altogether with their learning outcomes in PKM subject course. This was shown by an indication that the higher the value of the students' entry interest and learning independence, the higher the students' learning outcomes in PKM subject course. The

positive relationship between the students' entry interest and learning independence altogether with the students' learning outcomes on PK subject course was shown by a multiple regression equation = 17.8810 + 0.7629 X1 + 0.7973 X2, and the fact that the value of Ftest was bigger than that of Ftable or 20.98 > 5.49 meant that the multiple correlation coefficient of the students' entry interest (X1) and learning independence (X2) altogether with the students learning outcomes in PKM subject course (Y) was said to be significant. From the result of double linear regression above, it could be interpreted that on average every addition and subtraction one score unit of (X1) and one score unit of learning independence (X2) will be followed by an addition and subtraction of one score unit of learning outcome of PKM course (Y). This also meant that the higher the value of the students' entry interest and learning independence, the higher the students' learning outcomes in PKM subject course, and vice versa.

Next, it was also found that 60.84% of the score variation of PKM subject course learning outcomes could be explained by the variables of students' entry interest and learning independence altogether. This was shown by the correlation coefficient of 0.78 and the determinant coefficient (R2y.12) of 0.6084 obtained from a double regression equation of = 17.8810 + 0.7629X1 + 0.7973X2 of which significance has been confirmed. Meanwhile, the influence capacity of the free variables has also been confirmed using a partial correlation technique. From the partial correlation calculation between the students' entry interest and their learning outcomes in PKM subject course with the condition of the learning independence variable being controlled, the partial correlation coefficient (ry1.2) obtained was 0.5251 and the determination coefficient (r2y1.2) was 0.2757. The result of this testing provided information that more or less 17.57% of variation of learning outcomes in PKM subject course was determined by the variation of students' entry interest value, where the learning independence variable was controlled.

From the calculation of partial correlation coefficient between the learning independence variable and the students' learning outcomes in PKM subject course with the interest variable being controlled, the obtained partial correlation coefficient (ry2.1) was 0.5650 and the determination coefficient was r2y2.1 was 0.3192. The results of this calculation provided us with information that more or less 31.92% of the score variation of the learning outcomes in PKM subject course was determined by the learning independence variable, with the condition of the interest variable being controlled.

Based on the above result of partial correlation coefficient calculation, it was indicated that the learning independence variable had a greater contribution to the students' learning outcomes in PKM subject course than the contribution from the students' entry interest variable. This difference was shown by the determination coefficient r2y2.1 < r2y1.2 or 0.3192 < 0.2757. Besides, the difference was supported by the result of testing simple correlation (1) between X2 variable and Y variable and (2) between X1 variable and Y. This result was shown by each of the determination coefficient of r2y2 = 0.3836 and r2y1 = 0.3538. This meant that the contribution provided from the students' entry interest to the students' learning outcomes in PKM subject course was smaller than that from the learning independence variable.

The above conclusion was drawn based on the available facts and the strong relationship between the students' entry interest variable and learning independence with the learning outcomes in PKM subject course; either tested separately or altogether. This meant that the better achievement in the learning outcomes in PKM subject course could be predicted using an approach based on both of the free variables. The approach based on both of the free variables became very important putting both variables complementing for each other in attempt to obtain better learning outcomes in PKM subject course. Thus,

in other words, it could be stated that to obtain better learning outcomes in PKM subject course there should be supports from the high level of students' interest and learning independence to get optimal results.

CONCLUSIONS

1. There was a relationship between the students' entry interest and their learning outcomes in PKM subject course; based on the result of hypothesis testing at 0.01 significance value. From the calculation of simple correlation coefficient, the obtained correlation coefficient (ry1) was 0.59 and the determination coefficient (r2y1) was 0.3538 which meant that 35.38% of the variation of the learning outcomes in PKM subject course could be explained by the level of the students' entry interest.

2. There was a positive relationship between the students' learning interest with their learning outcomes in PKM subject course which were indicated by the fact that the higher the score value in the students' entry interest, the higher the students' learning outcomes in PKM subject course, and the lower the score value in the students' entry interest, the lower the students' learning outcomes in PKM subject course.

3. The result of the second hypothesis testing showed that there was a positive relationship between the students' learning independence with their learning outcomes in PKM subject course with the value of significance at $\alpha = 0.01$. According to the simple correlation coefficient calculation, the correlation coefficient (ry1) was 0.62 and the determination coefficient (r2y1) was 0.3836 which meant that 38.36% of the variation of the learning outcomes in PKM subject course could be explained by the level of the students' learning independence.

4. There was a positive relationship between the students' learning independence with their learning outcomes in PKM subject course which were indicated by the fact that the higher the score value in the students' learning independence, the higher the students' learning outcomes in PKM subject course, and the lower the score value in the students' learning independence, the lower the students' learning outcomes in PKM subject course.

5. The relationship between the students' entry interest and their learning independence level altogether with the students' learning outcomes in PKM subject course was shown to be positive. This was indicated by the fact that the higher the students' entry interest and learning independence level, the higher the students' learning outcomes in PKM subject course.

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