

# IMPLEMENTATION OF INDEPENDENT CURRICULUM, TPACK, AND TEACHER CREATIVITY IN INFLUENCING ECONOMIC LEARNING ACTIVITY

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## **Abstract**

This research is a quantitative study through a survey method that aims to prove that there is an influence on the implementation of the independent curriculum, Technological Pedagogical Content Knowledge (TPACK), and teacher creativity on economic learning activities at SMAN 1 Banyumas. The proportionate stratified random sampling technique was used in this study to

take a sample of 207 students. The data analysis technique uses multiple linear regression. The results of research and data analysis that have been carried out show that: (1) There is a positive and significant effect of the implementation of the independent curriculum on students' learning activeness in economics subjects; (2) There is a positive and significant effect of Technological Pedagogical Content Knowledge (TPACK) on students' learning activeness in economics subjects; (3) There is a positive and significant effect of teacher creativity on students' learning activeness in economics subjects.

### **Keywords**

*Independent Curriculum, TPACK, Teacher Creativity, Learning Activity*

### **Introduction**

The important role of education in the development of individuals and society is closely related to the teaching and learning process and includes at least two main components in it, namely teachers and students who can support the quality of learning (Munawwir, 2019). A well-executed learning process will be able to help improve the quality of Indonesian education. However, based on data published by the World Population Review (2023), the quality of Indonesian education in 2021 occupies the 54th position out of 78 countries, which shows that Indonesian education is still far from the best ranking at the world level. The decline in the quality of Indonesian education can also be seen in the results of the 2022 Programme for International Student Assessment (PISA) report which shows that Indonesia has decreased scores on three competencies, namely literacy, numeracy and science (OECD, 2023). To improve the quality of Indonesian education, it takes good efforts from educators and students in achieving the success of the learning process. One of the things

that underlies this success is the existence of active learning that reflects the understanding, knowledge, and skills obtained by students at school (Ula & Jamilah, 2023)

Learning activity is an effort or condition where students can actively participate in learning in class (Nurhayati, 2020). Active learners are those who are able to follow learning well, understand the material, and provide two-way interaction in the learning process. Learning activity is influenced by many factors, as stated by Aunurrahman (2014: 178), namely internal factors and external factors of students. The curriculum is one of the external factors that affect the learning effectiveness of students in the learning process in the classroom. Indonesia has faced eleven curriculum changes, namely in 1947, 1952, 1964, 1968, 1975, 1984, 1994, 2004, 2006, 2013 and the independent curriculum (Abidin et al., 2023). The curriculum that's right now being utilized is the independent curriculum which was propelled by alluding to the Decree of the Minister of Education, Culture, Research, and Technology of the Republic of Indonesia in Number 56/M/2022 related to Rules for Curriculum Implementation within the System of learning Recuperation (2022). The Ministry of Education and Culture (2022) in Press Release number 437/sipers/A6/VII/2022 states that the independent curriculum will be able to encourage students to increase activeness in learning. Findings from Marbella et al., (2023) and Ramadhan et al., (2023) stated that the implementation of an independent curriculum was able to increase student learning activity.

The achievement of the success of the learning process in the implementation of the independent curriculum certainly requires the ability of professional educators, especially in 21st century learning where the era of education with the characteristics of the use of digital technology is increasing. Learners in the 21st century

must prepare themselves for the future by developing skills, creativity, critical thinking, communication and collaboration with interests, talents and self-knowledge in relation to the use of information and communication technology (Bayley, 2022; Partnership for 21st Century Learning, 2019). Therefore, professional educators need to deliver learning by combining the use of technology, basic scientific knowledge and pedagogical skills in learning so that a relevant learning approach is needed today, namely by using Technological Pedagogical Content Knowledge (TPACK) (Sari et al., 2021). The TPACK framework that connects pedagogy, technology and materials is needed for professional educators in learning so that it will help create an active, creative and fun learning atmosphere and help solve problems that may be faced during the learning process (Sarah et al., 2021: 66). Findings from Handita et al., (2022) and Witarsa & Siregar (2023) found that there is an influence of Technological Pedagogical Content Knowledge (TPACK) on student learning activity and cognition.

Learning that forms students more active and creative by implementing the Independent Curriculum in the 21st century based on TPACK is inseparable from the process that has been carried out. The process is certainly carried out with quality learning. Therefore, to develop creativity and increase student activeness in learning, teachers must first become someone who has creativity (Karwowski et al., 2020; Minah & Farid, 2022). Through this creativity, teachers can easily attract interest from students to be actively involved in learning. Creativity can also function as an effective stimulus to encourage learning ability to improve learning outcomes. Therefore, teachers are expected to maximize their role in the classroom through their creativity. Research findings from Fajrin (2020) and Badriah & Sholicha (2016) stated that there is a strong influence and relationship between teacher creativity and student learning activity.

Success in the educational process to educate the nation's life through increasing learning activity must certainly be encouraged by the existence of educational institutions such as schools. SMA Negeri 1 Banyumas is the only public high school located in Banyumas District, Banyumas Regency, Central Java. Through the results of the interviews that have been conducted by researchers with the Deputy Head of Curriculum and Economics Teachers, stated that class X still shows uneven learning activity compared to class XI. This results of interview were supported by the results of a pre-survey conducted by researchers to grade X students of SMA Negeri 1 Banyumas with 33 respondents representing, as follows:

**Table 1.** Pre-Survey Results of Economic Learning Activity of SMAN 1 Banyumas

No	Question Indicator	Answer	
		Yes	No
1	Dare to express opinions	12	21
2	Responds to teacher's questions	14	19
3	Able to ask question when not understanding the material	25	8
4	Do individual assignments	26	7
5	Read economics books	23	10
6	Respond to friends' opinions during presenting	23	10

Table 1 above shows that the learning activeness of students at SMA Negeri 1 Banyumas still shows uneven results in several aspects. This can be seen in the percentage of 63,6 percent of students not daring to express their opinions and 57,6 percent of students not answering or responding to questions given by the teacher orally in class. This shows that students still do not have

high learning activeness which occurs because students do not have confidence and a good understanding of the materials. This study focuses on analyzing the effect of the implementation of the independent curriculum, Technological Pedagogical Content Knowledge (TPACK), and teacher creativity on student learning activeness in class X economics subjects at SMA Negeri 1 Banyumas.

## Method

A quantitative approach was used in this study with a survey method located at SMA Negeri 1 Banyumas. Quantitative research according to Sugiyono (2021: 23) is research that focuses on the use of numbers analyzed by statistics. Sugiyono (2021:59) explain that the survey research method is a method of obtaining data through several techniques, one of which is the use of a questionnaire that can explain the relationship between variables in the study. The population used in this study were all students of class X SMA Negeri 1 Banyumas in the 2023/2024 academic year with a total of 12 classes totaling 430 students. The sample size used in this study was determined using the Yamane formula with an error tolerance value of 5%:

$$n = N / (1 + N(e)^2)$$

Based on the Yamane formula, the sample size in this study was 207 samples. The sampling technique used is proportionate stratified random sampling. Sugiyono (2021: 149) states that proportionate stratified random sampling is a sampling technique that is carried out randomly and proportionally from each class.

This study used primary data in the form of unstructured interview results, pre-survey questionnaires and research questionnaires. In addition, it also uses secondary data in the form of data on the number and list of names of grade 10 students, and

supporting literature that helps fulfill this research, namely books, scientific papers, and journal articles that can be accounted for. The data collection techniques used are unstructured interviews, distribution of closed questionnaires using a measurement scale, namely the Likert scale, and documentation. The data analysis technique between the dependent variable and the independent variable through a data analysis tool in the form of the SPSS version 25 for windows applications.

## I. Result and Discussion

### Result

Multiple linear regression statistical analysis was used in this study to see the relationship between independent curriculum implementation variables, Technological Pedagogical Content Knowledge (TPACK), and teacher creativity in learning activity variables. The following are the results of the multiple linear regression analysis test:

$$Y = 12351,401 + 0,270X1 + 0,220X2 + 0,334X3 + e$$

The multiple linear regression equation is described in detail in the following explanation:

1. The constant is positive at 12351,401 which indicates that if the implementation of the independent curriculum (X1), Technological Pedagogical Content Knowledge (TPACK) (X2), and teacher creativity (X3) are equal to 0 (zero) or do not change, the learning activity (Y) will be worth 12351,401.
2. The independent curriculum implementation variable in this study shows a positive regression coefficient result of 0,270 which indicates that if the independent curriculum

implementation variable increases by one, it will be accompanied by an increase in learning activity of 0,270.

3. The Technological Pedagogical Content Knowledge (TPACK) variable in this study shows a positive regression coefficient of 0,220 which indicates that if Technological Pedagogical Content Knowledge (TPACK) increases by one, it will be accompanied by an increase in learning activity of 0,220.
4. The variable of teacher creativity in this study showed the results of a positive regression coefficient of 0,334 means that if teacher creativity increases by one, it will be accompanied by an increase in learning activity of 0,334.

### Coefficient of Determination

Through statistical analysis and calculations in this study, result of 0,487 were obtained which showed that the variables of independent curriculum implementation, Technological Pedagogical Content Knowledge (TPACK), and teacher creativity were able to explain the variable of learning activity by 48,7 percent and the remaining 51,3 percent was explained by other factors that were not studied in this study.

### F-Test

This test is carried out by comparing the  $F_{count}$  value to determine the accuracy of the model (goodness of fit) with  $F_{table}$ . Here are the results of the F test:

**Table 2.** F-Test Result

$F_{count}$	$F_{table}$	Sig.	<i>Alpha</i>
66,274	2,65	0,000	0,05



This study uses an error rate of 5% or 0,05 with 1 degree of freedom (k-1) and 2 degrees of freedom (n-k) with the information that n = 207 and k =4 so that the Ftable value is 2,65. In the calculations and data analysis that has been carried out, the results show that the Fcount > Ftable value is 66,274 > 2,65 which means that H1 is accepted, namely that there is a joint influence on the implementation of the independent curriculum, Technological Pedagogical Content Knowledge (TPACK), and teacher creativity on students; learning activeness in economics subjects at SMA Negeri 1 Banyumas and H0 is rejected, so that the regression model can be used in this study.

### t-Test

This test aims to examine the influence of each independent variable on the dependent variable of the study. The following are presented the results of the t-test:

**Table 3.** t-Test Result

Variabel	t <sub>count</sub>	T <sub>table</sub>	Sig.
Implementation of the Independent Curriculum (X <sub>1</sub> )	2,488	1,972	0,014
TPACK (X <sub>2</sub> )	3,102	1,972	0,002
Teacher Creativity (X <sub>3</sub> )	3,135	1,972	0,002

This study uses an error rate of 5% or 0,05 with degrees of freedom (n-k) with information n = 207 and k = 4, then the t table value is 1,972. Looking at Table 4 above, the following results were obtained:

#### 1. Hypothesis 1

The independent curriculum implementation variable obtained a tcount > ttable value, namely 2,488 > 1,972 and a Sig value. 0,014 < 0,05, thus indicating that H1 is accepted, indicating that there is a positive and significant effect of the implementation of the independent curriculum on the active

learning of students in the economics class X SMA Negeri 1 Banyumas.

2. Hypothesis 2

The Technological Pedagogical Content Knowledge (TPACK) variable obtained  $t_{count} > t_{table}$ , which is  $3,102 > 1,972$  and a value of Sig.  $0,002 < 0,05$  so that it can be said that H2 is accepted which means that there is a positive and significant influence of Technological Pedagogical Content Knowledge (TPACK) on student learning activity in class X economics subjects of SMA Negeri 1 Banyumas.

3. Hypothesis 3

The variable of teacher creativity obtained  $t_{count} > t_{table}$ , which is  $3,135 > 1,972$  and a value of Sig.  $0,002 < 0,05$  so that it can be said that H3 is accepted which means that there is a positive and significant influence of teacher creativity on student learning activity in class X economics subjects of SMA Negeri 1 Banyumas.

## Discussion

### The Effect of Independent Curriculum Implementation on Learning Activity

Research that has been conducted shows the results that there is a positive and significant influence on the implementation of the independent curriculum on learning activity of students in economics subjects as evidenced by the acquisition of  $t_{count} > t_{table}$  of  $2,488 > 1,972$  and significance values of  $0,014 < 0,05$ . This means that the activeness of learning from students will increase if teachers are able to implement the independent curriculum properly and optimally in learning. The results of this study reinforce the theory of constructivism where learning activity is influenced by the implementation of the curriculum which plays a role in suppressing the active participation of students (Hamalik, 2022: 25). The results in this study are also in

line with the results of other studies including research from Marbella et al., (2023) which states that the implementation of the Independent Curriculum is able to increase the activeness of students in the learning process. Similar supporting research was also conducted by Ramadhan & Warneri (2023) which obtained the result that the implementation of the independent curriculum was able to increase the activeness of students in learning when compared to the 2013 curriculum. Research conducted by Tussakdiah (2023) also supports the assumption that the implementation of an independent curriculum has a significant influence in encouraging students to actively participate in every learning process.

### **The Effect of Technological Pedagogical Content Knowledge (TPACK) on Learning Activity**

Research that has been conducted shows the results that there is a positive and significant influence of Technological Pedagogical Content Knowledge (TPACK) on student learning activity in economics subjects as evidenced by the acquisition of a  $t$ -count >  $t$ -table of  $3,102 > 1,972$  and a significance value of  $0,002$  which is less than  $0,05$ . This indicates that the activeness of learning from students will increase when teachers have the ability and knowledge to apply Technological Pedagogical Content Knowledge (TPACK) in the learning process. Learning in the 21st century is characterized by the increasing use of technology, so it is undeniable that currently learning activities also require students and educators to have skills in utilizing information technology and digital technology optimally. Therefore, educators need to facilitate and provide relevant learning in accordance with changes and educational developments through combining the use of Technological, Pedagogical, Content, Knowledge (TPACK) (Sari et al., 2021). As explained by Koehler et al., (2013) that TPACK is a knowledge framework used by educators by combining technology, pedagogy, and material in the learning process. When

educators are able to apply learning well in accordance with the development of 21st century learning, it will easily increase student activity, it is in line with constructivism theory where the role of an educator is indispensable in helping to build active participation of students (Hamalik, 2022: 22). Consistent with previous research by Handita et al., (2022) found that learning models with the TPACK approach can increase student learning activities. Similar supporting research was also conducted by Khaira et al., (2021) showing that the application of TPACK-based learning can increase learning activity.

### **The Effect of Teacher Creativity on Learning Activity**

Research that has been conducted shows the results that there is a positive and significant influence of teacher creativity on student learning activity in economics subjects as evidenced by the acquisition of a  $t_{count} > t_{table}$  of  $3,135 > 1,972$  and a significance value of 0,002 which is less than 0,05. Based on this, it indicates that the activeness of learning from students will increase when teachers have creativity in managing and implementing the learning process. As explained by Rasam & Sari (2018) that teacher creativity is an activity of educators in creating new ideas that support the learning process. Therefore, teacher creativity is one of the things that is indispensable in the learning process in order to be able to determine the appropriate learning method so as to increase active participation of students (Hartati & Pramusinto, 2021). This statement is in line with the results of research conducted by Badriah & Sholicha (2016) which states that teacher creativity has a strong enough relationship with student learning activity and is in the high category. Research conducted by Fajrin (2020) also supports this opinion where there is a partial influence of teacher creativity on student learning activity. The results of this study also reinforce the theory of constructivism that educators or teachers have an important position that acts as a facilitator in the learning process that can

help encourage students to actively build their knowledge (Hamalik, 2022: 25).

## Conclusion

Based on the discussion that has been carried out, it can be seen that the implementation of the independent curriculum has a positive and significant effect on students learning activity in class 10 economics subjects of SMA Negeri 1 Banyumas. There is a positive and significant influence of Technological Pedagogical Content Knowledge (TPACK) on the learning activity of students in class 10 economics subjects of SMA Negeri 1 Banyumas. There is a positive and significant influence of teacher creativity on student learning activity in class 10 economics subjects of SMA Negeri 1 Banyumas. The results of this study show that when the independent curriculum, TPACK and teacher creativity are able to be implemented properly and optimally, it will increase the learning activity of students well. Therefore, schools are expected to be able to maintain, improve and support the implementation of the independent curriculum optimally for each educator such as the affirmation of project-based learning in each subject. Teachers as educators are also expected to be able to plan and implement learning more creatively by utilizing TPACK so that the learning process is more varied so that students will be more interested in actively participating in learning.

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All authors declared that this work is original and has never been published in any form and in any media, nor is it under consideration for publication in any journal, and all sources cited in this work refer to the basic standards of scientific citation.