



DETERMINATION OF CRITICAL THINKING AND INDEPENDENT LEARNING: ANALYSIS OF CONFIDENCE AND MOTIVATION

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Abstract: In this study, the author raises various themes related to the factors that influence critical thinking and its impact on Independent Learning. This study is interesting to discuss because the author wants to see in depth the effect of Critical Thinking and Independent Learning on Self-confidence and Motivation, in this study the author uses library research methods. The results of this study illustrate that critical thinking is needed as intellectual capital in achieving educational goals. Besides that, motivation is also a crucial factor in the critical thinking process, because every element of education requires encouragement from both inside and outside to move optimally so that the regulations that have been set can be implemented optimally and of course have an impact on independent learning which is the reference for the ideal concept of education. at the moment. In the context of education, critical thinking is very influential on independent learning. Freedom of learning supports many innovations in the world of education, especially the progress of various educational institutions including schools or madrasas, by also forming teacher competencies. Teachers who are independent in teaching are aware of the needs of their students according to the environment and culture of the students.

Keywords: Critical Thinking, Confidence , Independent Learning, and Motivation

INTRODUCTION

Background of the problem

Currently, the world today has entered the era of the 5.0 generation industrial revolution which is marked by increased connectivity, interaction and development of digital systems, artificial intelligence, and virtual. With the increasingly convergent boundaries between humans, machines and other resources, information and communication technology certainly has an impact on various sectors of life. One of them is the impact on the education system in Indonesia. (Lase, 2016)

The country's success in facing the challenges of the Industrial Revolution 5.0 is determined by the quality of its education. In this situation, every educational institution must prepare a new orientation and literacy in the field of education. therefore the Minister of

Education and Culture issued a policy on Freedom of Learning as an effort to improve the quality of education in Indonesia.

Human Resources involved in education must have high quality who are able to think critically, creatively, systematically, able to solve problems, and have good morals. Critical thinking skills are very important to have, because critical thinking can be used to solve problems and as a consideration in making correct decisions. Critical thinking is a process, aimed at making reasonable decisions about what to believe and what to do.

In addition, an internal factor is needed in both educators and students to achieve educational goals through a critical thinking process and this independent learning policy, namely self-confidence and motivation. These two factors are very important and must be owned by every student to foster a desire to continue to seek knowledge which is driven by a strong motivation in the learning process. (Nasir et al., 2022)

For this reason, this article discusses the influence of self-confidence and motivation on critical thinking and their impact on independent learning.

LITERATURE REVIEW

Critical Thinking

Based on some of the opinions above, it can be said that critical thinking is the ability to maximize its potential to produce policies. The ability to think critically will make it easier for the individual to analyze problems in life, and make it a policy resource for personal and community needs. (Arif Musthofa & Ali, 2021)

Critical Thinking is an intellectual thinking process in which a person consciously and deliberately evaluates the quality of his thinking, the thinker uses visionary, independent, clear, and rational thinking. Halpen expressed his opinion about the concept of critical thinking is to mobilize all abilities and potential cognitive strategies in determining goals. Based on the above definition, it can be concluded that the characteristics of critical thinking are, (1) analyzing facts, generalizing, organizing ideas, drawing conclusions in solving problems; (2) active, systematic to understand and evaluate arguments; (3) the search for meaning which involves mental processes to understand an experience. Facione (in Solomon and conceptualizes critical thinking as a variable consisting of two main aspects, namely aspects (1) critical thinking skills or critical-thinking skills and (2) critical attitudes or critical-thinking dispositions. Furthermore, problem solving cannot be done by origin, need concrete steps. Here are the steps for solving the problem (problem solving): a) Realizing the existence of a problem; b) Understand the nature of the problem clearly; c) Propose a hypothesis; d) Collecting data; e) Data analysis and synthesis; f) Trying to draw conclusions; g) Evaluating the whole problem solving process. (Masitoh, 2019).

According to Robert Ennis in Alec Fisher critical thinking is "Critical thinking is thinking that makes sense and focused reflection to decide what should be believed or done". This opinion can be interpreted that essentially when humans think they are learning to use their thinking abilities intellectually and at the same time thinking about alternatives and solutions to problems they face so that when people think they can decide what to do because decision making is part of critical thinking. According to Johnson (2006: 183), critical thinking is defined as a directed and clear process that is used in mental activities such as problem solving, making decisions, persuading, analyzing assumptions and conducting scientific research. Critical thinking is the ability to argue in an organized way, the ability to systematically evaluate the weight of personal opinions from the opinions of others. (Rachmadtullah, 2015)

Critical thinking is the ability to analyze and evaluate information obtained from observations, experience, reasoning and communication to decide whether the information

can be trusted so that it can provide rational and correct conclusions. (Karim & Normaya, 2015) Critical thinking indicators used in this study can be seen in Table 1:

No	Indicator	Indicator Description
1	Anterpretation	Understanding the problem indicated by writing what is known and the question is asked correctly.
2	Analysis	Identify the relationships between statements, questions, concepts given in the problems shown by making mathematical models correctly and giving proper explanations.
3	Evaluation	Using the right strategy in solving problems, complete, and correct in doing calculations.
4	Inference	Can draw conclusions from what was asked correctly

Critical Thinking has been widely studied by previous researchers, including: (Susilawati et al., 2020), (Sarimanah, 2017), (Ismail et al., 2022), dan (Nuryanti et al., 2018).

Independent Learning

Recently, the "Independence of Learning" program initiated by the Ministry of Education and Culture (Kemendikbud) has received much attention. The Ministry of Education and Culture states on its website that the program is related to (a) National Standardized Examination (USBN), (b) National Examination (UN), (c) Learning Implementation Plan (RPP), and (d) New Student Admission Regulations (PPDB). (Suhartoyo et al., 2020)

Merdeka Learning is a new policy program of the Ministry of Education and Culture of the Republic of Indonesia (Kemendikbud RI) launched by the Minister of Education and Culture Nadiem Anwar Makarim. Nadiem made the policy of independent learning not without reason. This is because the 2019 Program for International Student Assessment (PISA) research shows that the results of the assessment of Indonesian students only occupy the sixth position from the bottom; For the fields of mathematics and literacy, Indonesia occupies the 74th position out of 79 countries. In response to this, Nadiem also made a breakthrough in assessing the minimum abilities, including literacy, numeracy, and character surveys. Literacy does not only measure reading ability, but also the ability to analyze the content of reading and understand the concepts behind it. For numeracy skills, what is assessed is not mathematics, but an assessment of the ability of students to apply numerical concepts in real life. One remaining aspect, namely the Character Survey, is not a test, but a search for the extent to which the values of character, religion, and Pancasila have been practiced by students. (Nofri Hendri, 2020)

Independence should be imposed on the way children think, that is, do not always be "pioneered", or told to admit the ideas of others, will still make it a habit for children to seek knowledge on their own by using their own minds..." Ki Hadjar Dewantara (Book of Taman-Student Memorial 30 Years, 1922-1952). Children are basically able to think to "find" a knowledge. What does independence mean in his statement? In an article in the book Education, he stated "In education it must always be remembered that independence is of three kinds: independent, independent of others, and self-regulating". Standing alone means independence in learning to recognize children as owners of learning. Children have the authority and initiative to learn. Learning children do not have to gather in a unit such as a class or study group. (Nofri Hendri, 2020)

The concept of independent learning implies the existence of freedom of thought. According to Nadiem Makarim, the essence of freedom of thought must be initiated by

educators. This view must be seen as an effort to respect changes in learning in educational institutions, both in elementary schools and universities. (Simatupang & Yuhertiana, 2021a)

The concept of independent learning according to Nadiem Makarim is: (Mustagfiroh, 2020)

- a) Teaching will be more flexible which is usually inside the classroom to outside the classroom
- b) The learning atmosphere will be more comfortable, because students can discuss more with the teacher, learn with outing class
- c) form the character of students who are brave, independent, clever in socializing, civilized, polite, competent
- d) In the future, students who are ready to work, competent, and virtuous in the community will formed.
- e) a happy learning atmosphere without being burdened with achieving certain scores or grades.

This Independent Learning has been studied by many previous researchers, including: (Industri, 2020), (Denny et al., 2022), (Nasir et al., 2022), and (Yamin & Syahrir, 2020).

Confidence

Confidence is a very important thing that should be owned by everyone. The existence of a person's self-confidence will be able to achieve all the desires in his life (Lengkana, Tangkudung, & Asmawi, 2018). So it can be said that self-assessment is a positive assessment. This positive assessment will later lead to a motivation in the individual to be more willing to respect himself. (Mulya & Lengkana, 2020).

Self-confidence is an attitude or belief in one's own abilities so that in their actions they are not too anxious, feel free to do things according to their wishes and are responsible for their actions, are polite in interacting with others, have an achievement drive and can recognize their strengths. and self-deprivation. Lauster describes that people who have self-confidence have the characteristics of selflessness (tolerance), do not need encouragement from others, are optimistic and happy. (Tanjung & Amelia, 2017)

Characteristics of Self-Confidence According to Thursan Hakim the characteristics of a confident person include: a. Always be calm in doing everything b. Have adequate potential and abilities. c. Able to neutralize tensions that arise in various situations. d. Able to adapt and communicate in various situations. e. Have a mental and physical condition that is sufficient to support appearance. f. Have sufficient intelligence g. Have a sufficient level of formal education. h. Have social skills. i. Have a good educational background. j. Having life experiences that forge mentally strong. k. Always react positively in the face of various problems.

Self-confidence is a feeling and belief in one's ability to be able to achieve success by standing on one's own business and developing a positive assessment for oneself and the environment so that a person can appear confident and be able to face everything calmly. Self-confidence plays a role in making a meaningful contribution to the process of one's life. Self-confidence is one of the main assets for success to live life with optimism and the key to a successful and happy life. (Fitri et al., 2018)

So it can be concluded that self-confidence is a belief in oneself with the ability to achieve a goal in life. A person will never be a person who is truly confident, because that confidence arises only with regard to certain skills he has. People who lack confidence in their abilities and self-confidence have a negative self-concept, because they often close themselves off. Meanwhile, motivation is an impulse that occurs because of a stimulus from outside, it can also be because there is an impulse within him to want to achieve more.

Self-confidence has been studied by many previous researchers, including: (Achdiyat & Lestari, 2016), (Abraham, 2014), (Nasir et al., 2022) and (Amri, 2018).

Motivation

Motivation is one of the most important dynamic aspects. It often happens that students who lack achievement are not caused by their lack of ability, but because there is no motivation to learn so that they do not try to direct all their abilities. In the traditional learning process that uses an expository approach, the teacher sometimes forgets the element of motivation. The teacher seems to force the students to accept the material that is conveyed.

Learning motivation is a condition that exists in an individual where there is an urge to do something in order to achieve the goal. According to Mc Donald in Kompri motivation is a change in energy in a person's personality which is characterized by the emergence of affective (feelings) and reactions to achieve goals. Thus the emergence of motivation is marked by a change in energy in a person that can be realized or not. (Emda, 2018)

Motivation is a desire that arises from within a person or individual because he is inspired, encouraged, and driven to carry out activities with sincerity, pleasure, and sincerity so that the results of the activities he does get good and quality results. (Farisi et al., 2020)

A person's success in the learning process depends on himself and also on the environment. A great desire from within oneself to succeed will make a person more active in learning. This desire is called motivation. Sadirman also suggests that motivation can be understood as a driving force from passive to active and emerges with the aim of achieving what is desired. (Palittin et al., 2019)

Motivation is a series of efforts to provide certain conditions, so that someone wants and wants to do something and if they don't like it, they will try to negate or avoid the feeling of dislike. So motivation can be stimulated by external factors, but motivation grows within a person. The environment is one of the external factors that can foster motivation in a person to learn.

According to Kompri (2016:232) learning motivation is a psychological aspect that is experiencing development, meaning that it is affected by physiological conditions and psychological maturity of students. Some elements that influence motivation in learning are:

- a) Student aspirations and aspirations. The ideals will strengthen students' learning motivation both intrinsic and extrinsic.
- b) Abilities of Students A child's desire needs to be accompanied by abilities and skills in achieving them.
- c) Student Conditions Student conditions which include physical and spiritual conditions. A student who is sick will interfere with attention in learning.
- d) Student Environmental Conditions. The student environment can be in the form of the natural environment, residential environment, peer association and social life.

There are 2 roles in motivation. First, motivation is a psychic driving force in a person which will lead to a desire to learn and also ensure that the learning process continues for certain purposes. Second, motivation provides enthusiasm and also a sense of pleasure in the learning process which can generate energy for learning. If someone has high energy in learning, it will indirectly affect that person in learning, namely the more active he is in learning. Whether or not someone is active in learning is also what will ultimately affect the learning outcomes. This means that students with high motivation have high learning energy so that it can lead to high learning outcomes as well, and vice versa. (Siregar dan Nara, 2011).

Motivation has been widely studied by previous researchers including: (Pratama et al., 2010), (Suciningrum et al., 2021), dan (Muhammad, 2017).

Table 2. Previous Research

No	Author (Year)	Previous Research Results	Similarities to this article	Difference with this article
1	(Arif Musthofa & Ali, 2021)	Critical Thinking has a significant influence on Islamic Education in Indonesia	Critical thinking is influential in the educational aspect	Critical thinking affects self-confidence and motivation
2	(Masitoh, 2019)	Critical thinking can improve intellectual in solving problems in the basic concepts of education management	Critical thinking is influential in the aspect of education	Critical thinking affects self-confidence and motivation
3	(Rachmadtullah, 2015)	Critical thinking and concepts can improve student learning outcomes	Critical thinking can improve the quality of education	Critical thinking affects self-confidence and motivation
4	(Suhartoyo et al., 2020)	Independent Learning affects the contextual learning process	Independent Learning has an influence on the achievement of educational goals	Independent Learning has a significant effect on self-confidence and motivation
5	(Nofri Hendri, 2020)	Independent Learning is a solution in solving various educational problems in Indonesia	Independent Learning affects the quality of education	Independent Learning has a significant effect on self-confidence and motivation
6	(Simatupang & Yuhertiana, 2021a)	Independent Learning affects the learning paradigm in education	Independent Learning has a significant influence on the quality of learning	Independent Learning has a significant effect on self-confidence and motivation
7	(Mulya & Lengkana, 2020)	Self-confidence, motivation have a positive and significant effect on learning achievement	Self-confidence is very influential in a person	Self-confidence affects Critical Thinking & Free Learning
8	(Tanjung & Amelia, 2017)	Self-confidence has a significant effect on a person	Self-confidence has a significant effect on a person	Confidence affects Critical Thinking
9	(Fitri et al., 2018)	Self-confidence influences a person's actions	Self-confidence has a significant effect on a person	Self-confidence affects Critical Thinking & Free Learning
10	(Emda, 2018)	Motivation has a positive effect on students and the learning process	Motivation affects students' internal factors and learning	Motivation influences critical thinking and independent learning
11	(Farisi et al., 2020)	Motivation and work discipline have a positive effect on employee performance	Motivation affects one's performance	Motivation influences critical thinking and independent learning
12	(Palittin et al., 2019)	Motivation affects student learning outcomes	Motivation has a significant effect in the world of education	Motivation has an effect on Independent Learning and critical thinking
13	(Melyana & Pujiastuti, 2020)	The Effect of Confidence Against Mathematical Critical Thinking Ability	The Effect of Confidence Against Mathematical Critical Thinking Ability	The Effect of Confidence Against Mathematical Critical Thinking Ability
14	(Kusumawati & Sutisna, 2021)	Independent Learning Affects Students' Independent Learning	Independent Learning affects learning outcomes and goals	Independent Learning affects students' self-confidence
15	(Mudzakir, 2021)	Independent Learning has a positive effect on students' interest in learning	Independent Learning affects students' internal factors	Independent Learning affects self-confidence

RESEARCH METHOD

The method of writing scientific articles is by using qualitative methods and literature review (Library Research). Assessing theory and the relationship or influence between variables from books and journals both offline in the library and online sourced from Mendeley, Scholar Google and other online media.

In qualitative research, literature review must be used consistently with methodological assumptions. This means that it must be used inductively so that it does not direct the questions posed by the researcher. One of the main reasons for conducting qualitative research is that it is exploratory. (Ali & Limakrisna, 2013)

FINDINGS AND DISCUSSION

The Effect of Confidence on Critical Thinking.

Confidence affects Critical Thinking, and the dimensions or indicators of Confidence are: (Tanjung & Amelia, 2017) a. Always be calm in doing everything b. Have sufficient potential and ability. c. Able to neutralize tensions that arise in various situations. d. Able to adapt and communicate in various situations. e. Have a mental and physical condition that is sufficient to support appearance f. Have enough intelligence g. Have a sufficient level of formal education. h. Have social skills. i. Have a good educational background. j. Having life experiences that forge mentally strong. k. Always react positively in the face of various problems.

Affect the dimensions or indicators of Critical Thinking, namely interpretation, analysis, evaluation and inference. (Karim & Normaya, 2015) A person's learning success can be seen based on affective abilities (Hidayat, 2017). In growing mathematical critical thinking skills, it is necessary to have an important component that students must have, namely an attitude of trust and confidence in their own abilities, this is so that students avoid worry and doubt. Self-confidence is a psychological state of individuals who can make themselves feel confident to take an action. In addition, self-confidence can encourage a person's motivation to achieve success in solving a problem at hand. So that the higher the individual's confidence in his abilities, the stronger the enthusiasm in completing the work done.

Self-confidence affects Critical Thinking, where the dimensions or indicators of Confidence include: (1) students with good self-confidence will tend not to be afraid to take risks in solving problems; (2) students tend to have many ideas in working on the problems at hand. Meanwhile, students with poor self-confidence will tend to answer improvised questions according to the knowledge gained and prioritize memorization, so that these students do not dare to make decisions when solving problems. (Melyana & Pujiastuti, 2020)

Self-confidence affects Critical Thinking, this is in line with research conducted by: (Tresnawati et al., 2017), (Korayah & Harta, 2015), dan (Pradja & Tresnawati, 2018).

The Effect of Motivation on Critical Thinking

Motivation affects Critical Thinking, where the dimensions or indicators of Motivation contain three main components, namely moving, directing, and supporting human behavior, namely (a) To move means to generate strength in individuals, leading someone to act in a certain way. For example, the strength in terms of memory, effective responses, and the tendency to get pleasure. (b) Directing or channeling behavior. Thus it provides a goal orientation. Individual behavior is directed towards something. (c) To maintain or sustain behavior, the surrounding environment must strengthen the intensity and direction of individual drives and forces influencing the dimensions or indicators. Critical Thinking is an indicator that has been put forward by Ennis, namely concepts, generalizations, skills and problem solving. (Zanthy, 2016)

Based on research conducted by Anita in 2015 showed that the relationship between learning motivation and students' critical thinking skills. The level of students' critical thinking skills is closely related to the student's learning motivation. (Anita, 2015)

Motivation has an effect on Critical Thinking, if motivation is perceived well by customers / consumers then this will be able to improve the quality of Critical Thinking. (Anita, 2015)

Motivation has an effect on Critical Thinking, this is in line with research conducted by: (Sulistianingsih, 2017), (Hasnan et al., 2020), dan (Dwi Sanderayanti, 2015).

The Influence of Self-Confidence on Free Learning

Self-confidence affects Critical Thinking, where the dimension or indicator of Self-Confidence is an attitude or belief in one's own abilities so that in their actions they are not too anxious, feel free to do things according to their wishes and are responsible for their actions, polite in interacting with others. others, have an achievement drive and can recognize their own strengths and weaknesses. Lauster describes that people who have self-confidence have the characteristics of selflessness (tolerance), do not need encouragement from others, are optimistic and happy. (Tanjung & Amelia, 2017) affect the dimensions or indicators of Freedom to Learn which are of three kinds: independent, independent from others, and self-regulating". Standing alone means independence in learning to recognize children as owners of learning. Children have the authority and initiative to learn. Learning children do not have to gather in a unit such as a class or study group. (Nofri Hendri, 2020).

Based on the concept above, self-confidence has a very significant influence on independent learning which means that children can be independent and creative to realize their ideas or ideas optimally. There is harmony between the policy of independent learning and the concept of independent learning. From the explanation above, it is emphasized that there is independence and flexibility in exploring to the fullest the abilities and potentials of students who naturally have diverse abilities and potentials. (Kusumawati & Sutisna, 2021)

Self-confidence has an effect on Independent Learning, this is in line with research conducted by: (Ainia, 2020), (BASTARI, 2021), dan (Widodo, A., & Nursaptini, 2020).

The Effect of Motivation on Free Learning

Motivation has an effect on Independent Learning, where the dimensions or indicators of motivation.

First, motivation is a psychic driving force in a person which will lead to a desire to learn and also ensure that the learning process continues for certain purposes. Second, motivation provides enthusiasm and also a sense of pleasure in the learning process which can generate energy for learning. If someone has high energy in learning, it will indirectly affect that person in learning, namely the more active he is in learning. Whether or not someone is active in learning is also what will ultimately affect the learning outcomes. This means that students with high motivation have high learning energy so that it can lead to high learning outcomes as well, and vice versa (Siregar and Nara, 2011). Influence on independent learning that gives full autonomy to institutions, educators and students to develop different skills and competencies. (Simatupang & Yuhertiana, 2021b).

The four changes above were certainly initiated to support "freedom of learning". Changes to the exams (USBN and UN) were made to improve the quality of graduates, as well as to free students from various unnecessary learning activities. The reshuffle of the lesson plans made by the teacher was carried out for efficiency and to free teachers from all learning administration that was not really needed. And, changes to the Zoning PPDB were made so that student admissions in schools could be implemented more flexibly. (Suhartoyo et al., 2020)

Motivation has an effect on Independent Learning, this is in line with research conducted by: (Muhajir et al., 2021), (Merdeka, 2021), dan (Mudzakir, 2021).

The Effect of Critical Thinking on Free Learning

Critical Thinking as a variable consists of two main aspects, namely aspects (1) critical thinking skills or critical-thinking skills and (2) critical attitudes or critical-thinking dispositions. Furthermore, problem solving cannot be done from scratch, requires concrete steps. Following are the steps for solving the problem (problem solving): a) Realizing the existence of a problem; b) Understand the nature of the problem clearly; c) Propose a hypothesis; d) Collecting data; e) Data analysis and synthesis; f) Trying to draw conclusions; g) Evaluating the whole problem solving process (Masitoh, 2019). Has a significant influence on the concept of independent learning.

In an effort to improve students' critical thinking skills and develop the concept of independent learning, it will increasingly make a major contribution to the activities of the teaching and learning process. (Susanto & Daya, 2022)

Critical Thinking has an effect on Independent Learning, this is in line with research conducted by: (Bahar & Herli, Sundi, 2020), (Hadiapurwa et al., 2021); (SUWARDI, 2021).

Conceptual Framework

Based on the formulation of the problem, theoretical studies, relevant previous research and discussion of the influence between variables, the framework for thinking in this article is as follows.

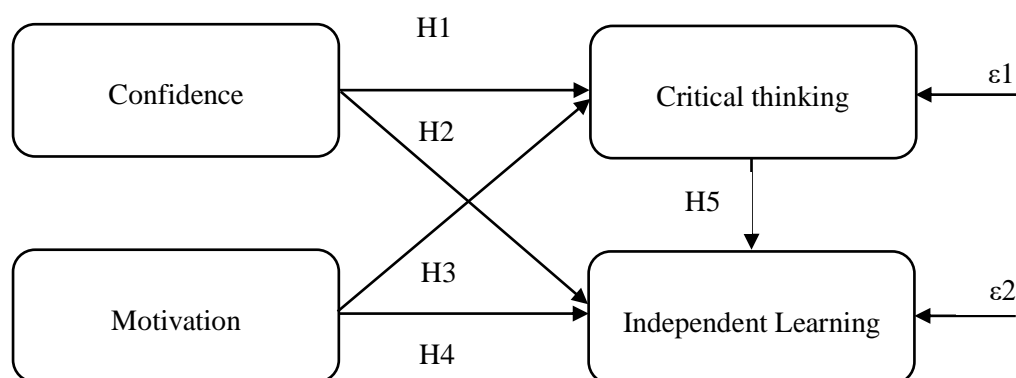


Figure 1. The Framework

- a. Based on the conceptual framework above, then: Critical thinking and Independent Learning affects self-confidence and motivation
- b. Apart from the two variables that affect motivation and self-confidence, there are many other variables that influence them, including:
 - 1) learning achievement: (Jannah et al., 2021), (Hapsari & Zulherman, 2021), (Rozikin et al., 2018), (Praseptia & Zulherman, 2021), (Syafari & Montessori, 2021), (Wijaya et al., 2019), (Astriyani et al., 2018) and (Jaya, 2019)
 - 2) creativity: (Effendi, 2016; Faishol et al., 2021; Hulu, 2020; Isnawati, N. & Samian, 2018; Novianto et al., 2018; Urip, 2021; Wiyono, 2018)
 - 3) interest in learning: (Lestari, 2015; Nurhasanah & Sobandi, 2016; Pratiwi, 2017; Ratnasari, 2017; Sirait, 2016; Yunitasari & Hanifah, 2020; Yuwanita et al., 2020)

Based on the conceptual framework picture above, then: Self-confidence and motivation affect Critical Thinking and Independent Learning either directly or indirectly.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on theory, relevant articles and discussions, hypotheses can be formulated for further research: 1. Self-confidence affects Critical Thinking. 2. Motivation affects Critical Thinking. 3. Self-confidence affects the Freedom of Learning. 4. Motivation has an effect on Independent Learning. 5. Critical Thinking affects the Freedom of Learning.

Suggestion

Based on the conclusions above, the suggestion in this article is that there are many other factors that influence Critical Thinking and Free Learning, apart from Critical Thinking and Free Learning in all types and levels of education, organizations or companies, therefore further studies are needed. further to look for other factors that can influence Critical Thinking and Independent Learning other than those studied in this article such as: interests, developments of the times (5.0) and regulations.

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