



## Teachers' Perceptions about the Implementation of Independent Learning Curriculum in Science Education

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### Abstract

This study aims to: Describe teachers' perceptions about the implementation of the independent learning curriculum in science education and describe the constraints felt by teachers in implementing the independent learning curriculum as well as solutions to overcome these obstacles. This type of research is a case study. The sample in this study was a science teacher at SMP DR Wahidin Sudirohusodo Medan, who were selected using a purposive sampling technique and developed using a snowball sampling technique. Data collection was carried out through interviews and questionnaires. Data analysis techniques were carried out in an interactive descriptive manner. The results of this study indicate that the teacher's perception is positive because they welcome the implementation of the independent learning curriculum, supported by adequate socialization and training so that they can apply the concept of learning science in accordance with the independent learning curriculum. Constraints experienced by teachers in the form of technical and non-technical constraints. There are several factors that become obstacles, namely, the first is the inadequate quality of the teacher's human resources, the second is that the facilities and learning resources are minimal or the infrastructure is inadequate and the teacher is clueless, the third teacher is comfortable with the old standard and has no experience in learning independent study.

**Keywords:** teacher perception, curriculum, independent learning

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## INTRODUCTION

Perception is a process that involves the entry of messages or information into the human brain, through human perception continuously making contact with their environment. This relationship is carried out through the senses, namely the senses of sight, hearing, touch, taste, and smell. (Slameto, 2010). With the perception of the individual will be aware of the circumstances around him and also the state of himself. Perception is divided into two forms, namely positive perception and negative perception. Positive perception is an individual's assessment of an object or information with a positive outlook or in accordance with what is expected of the perceived object or from existing rules. Meanwhile, negative perception is an individual's perception of certain objects or information with a negative view, contrary to what is expected from the perceived object or from existing rules. (Bimo Walgito, 2010). In December 2019 the Minister of Education and Culture (Permendikbud) put forward a new

policy in the world of education a new curriculum, namely the independent curriculum. Where the independent curriculum is interpreted as a learning design that provides opportunities for students to study in a calm, relaxed, enjoyable, stress-free and pressure-free way, to show their natural talents. Regarding the concept of an independent learning curriculum, this raises different perceptions from teachers who are spearheading the implementation of an independent curriculum in education units. The teacher is a very important key in formal education in general for students, educators are often a good role model. So that a teacher must have appropriate attitudes and skills for the development of students as a whole. (Ramayulis, 2012).

The implementation of independent learning in the form of efforts given to each education unit is free to innovate which is also of course adapted to the area of each education unit as an openness of the learning process from home which can later provide a learning experience without having to be required by completeness standards and graduation standards (Tiwikrama & Afad, 2021). This independent learning program is in line with the flow of progressivism education, where this school opposes the authoritarian style of education that occurred in the past. The implementation of independent learning is expected to be able to improve the quality of learning, especially learning Biology. The implementation of this independent learning will certainly lead to some changes in the learning system, which were previously only done inside but now can be done as comfortably as possible in order to facilitate the process of interaction between teachers and students. The learning system in the independent learning program will later be designed in such a way that it can shape student character and create fun learning without having to be burdened with standard values and high achievement targets (Hidayat, 2015). The Ministry of Education and Culture's Director of Basic Education Education, Research and Technology, Rachmadi Widiarto, also emphasized that "the spirit of independent learning will provide greater space for students to explore their science competencies". Freedom of learning can also be said as autonomy in the field of education. With the independent learning curriculum initiated by the Minister of Education and Culture the perceptions of teachers vary, there are pros and cons, but the independent learning curriculum is a freedom given to teachers and students in innovating and being creative in the learning process, this concept is a response to needs of the education system in the era of the industrial revolution.

Besides that, with an independent learning curriculum, it is freedom of thought. Freedom of thought is determined by the teacher, in the concept of independent learning, between teacher and student is a subject in the learning system. This means that the teacher is not used as a source of truth by the students, but the teacher and students collaborate in driving and seeking the truth. Thus, even though the teacher's perception is different, at least the teacher must be creative so that students can be guided and directed according to the concept of independent learning. The concept of independent learning is no longer limited by the curriculum, but students and teachers must be creative to gain knowledge. Students are really trained to be independent. (Cahyanti, 2021). On the other hand, with the existence of perceptions in implementing the independent learning curriculum, teachers are more challenged separately, teachers must be creative so that students can be guided and directed according to the concept of independent learning. The concept of independent learning is no longer limited by the curriculum, but students and teachers must be creative, to respond to the knowledge students are truly trained to be independent. With the independent learning curriculum initiated by the Minister of Education and Culture the perceptions of teachers vary, there are pros and cons, but the independent learning curriculum is a freedom given to teachers and students in innovating and being creative in the learning process, this concept is a response to needs of the education system in the era of the industrial revolution. Besides that, with an independent learning curriculum, it is freedom of thought. Freedom of thought is determined by the teacher, in the concept of independent learning, between teacher and student is a subject in the learning system. This means that the teacher is not used as a source

of truth by students, but teachers and students collaborate in driving and seeking the truth. This is in line with previous research conducted by Ainia in her journal saying that "The independent learning curriculum focuses on freedom and creative thinking. One of the programs presented by the Ministry of Education and Culture in launching independent learning was the start of the driving school program. (Aina, 2020). In line with the opinion of Sibagariang et al, that "the concept of an independent learning curriculum can then be accepted considering the vision and mission of Indonesian education in the future for the creation of quality human beings and able to compete in various fields of life". (Sibagariang, 2021). In this case what needs to be developed is the teacher as the main key to the success of independent learning for both students and the teacher himself.

Thus, even though the teacher's perception is different, at least the teacher must be creative so that students can be guided and directed according to the concept of independent learning. The concept of independent learning is no longer limited by the curriculum, but students and teachers must be creative to gain knowledge. Students are really trained to be independent. In accordance with the problems above, teachers in the field of science studies at SMP DR.Wahidin Sudirohusodo Medan have a high awareness of the importance of the readiness of the independent learning curriculum in science learning, where the teacher views that the independent learning curriculum is very important, because it can change students much more good, and students in education will be happier, students will be more formed good character, independent. On the other hand, with the existence of perceptions in implementing the independent learning curriculum, teachers are more challenged separately, teachers must be creative so that students can be guided and directed according to the concept of independent learning.( Alaika, 2020).The concept of independent learning is no longer limited by the curriculum, but students and teachers must be creative, to respond to the knowledge students are truly trained to be independent. Based on this background, the researcher aims to examine how the perceptions of science teachers at SMP Dr. Wahidin Sudirohusodo Medan implement the independent learning curriculum, especially in science lessons. The novelty of this study when compared to similar previous research is that in this study science teachers at SMP Dr. Wahidin Sudirohusodo Medan gave the same perception with different opinions. This is interesting and can be used as a reference in evaluating the independent learning curriculum so that it becomes better.

## METHOD

This research was conducted at SMP DR. Wahidin Sudirohusodo Medan. The approach taken in this study is a qualitative type with the case study method. The case study was conducted by researchers by conducting interviews with science teachers at SMP DR. Wahidin Sudirohusodo Medan about the implementation of independent learning in science subjects. The sampling technique was carried out using a purposive sampling technique. Where this technique is carried out with certain considerations, for example the person who is considered to know best about what we expect, or maybe he is the ruler so that it will make it easier for researchers to explore the social object/situation being studied. (Sugiono, 2016). The sample used in this study were 6 science teachers consisting of 2 biology teachers, 2 chemistry teachers and 2 physics teachers. The data collection method used by researchers, namely triangulation, is defined as a data collection technique that combines data collection techniques and existing data sources. If the researcher collects data by triangulation, the researcher actually collects data while testing the credibility of the data, namely checking the credibility of the data using various data collection techniques and various data sources. Technical triangulation means that researchers use different data collection techniques to obtain data from the same source. Researchers used observation, in-depth interviews, and documentation for the same data source simultaneously.

The combined triangulation techniques used are: Observation, Interview, and Documentation. Next, the researcher verifies the data, where the process of verifying the

provisional conclusions can be carried out by repeating the research steps, namely by retracing all the research steps that have been carried out, including examining data collected from the field, reductions made based on field notes and provisional conclusions that have been formulated. . The final step is to make a final conclusion in a concise, clear and straightforward manner so that it is easy to understand. The conclusions from the research results obtained in the field are related to the following matters: 1) Theme/topic and research title, 2) Research objectives, 3) Problem solving, 4) Data in research, 5) Findings from results of data analysis in research, and 6) Relevant theory/science.

## RESULTS AND DISCUSSION

Perception is the key to seeing how good and bad the quality of a product is, because perception is a clear statement from the executor or user of a product so that it becomes a reference for producers in developing their products in the future and becomes a reference for potential users of the product. Teacher perceptions are one example, by knowing the science teacher's perceptions about the implementation of the independent learning curriculum in junior high schools, it can become a reference for curriculum developers on what should be developed and give teachers the opportunity to learn again by being given education and training because they know the perceptions of science teachers.(Siti,2020). The results of research conducted by researchers on the perceptions of teachers in the field of Science Studies in the implementation of the Freedom to Learn curriculum are as follows:

### Perceptions of Science Teachers in the Implementation of the Free Learning Curriculum

Indicators Perceptions of science teachers in the implementation of the independent learning curriculum are divided into: Teacher understanding, Reduction of curriculum content and Constructivism Learning. The following is the result of the description of each indicator.

**Table 1.** Teacher Understanding

No	Teacher Name	Lesson	Teacher Understanding
1	NS	Biologi	The independent learning curriculum initiated by minister Nadiem Makarim, in my perception has been very helpful and freed teachers, especially I highlighted that the simple lesson plans really helped liberate teachers not only to waste paper to print so many lesson plans, and I am very grateful for the concept sir Nadiem Makarim.
2	SH	Biologi	I, as a biology teacher, in implementing the independent learning curriculum, I prefer to follow the concepts that will be initiated by the Minister of Education first and as much as possible I have to understand the curriculum.
3	IS	Fisika	The curriculum issued certainly has the understanding of each of the teachers in the field of science studies, there are those who agree and some do not agree, but even so the science teacher must continue to study the curriculum.
4	VS	Fisika	The concept in implementing the independent learning curriculum for me as a teacher already has a concept, one of which is to help students develop their personality, broaden knowledge, and train skills in various fields.
5	DA	Kimia	I, as a science teacher, certainly have a concept, although I have not fully mastered what the contents

No	Teacher Name	Lesson	Teacher Understanding
6	MI	Kimia	of the independent learning curriculum will be, one of which is that in delivering material, I will be closer to students like friends and help students broaden their knowledge. As a chemistry teacher, I am happy with the concept of independent learning because students become more active and collaboration between students and teachers is more established.

Based on the results of the interviews above, it can be concluded that there are concepts in the independent learning curriculum for science teachers at SMP DR. Wahidin Sudirohusodo Medan who want to take part in socialization first and there are also concepts that have been prepared by the science teacher. This finding is slightly different from the results of research conducted by Wingsi Anggila entitled "Teacher Perceptions of Social Sciences in the Implementation of the Independent Learning Curriculum at Public Middle Schools in the Tanjung Kemuning District, Kaur Regency", where in the results of the research teachers in the Social Sciences study field at Megeri Middle School in the Tajung District Kemuning Kaur District has not yet understood the independent learning curriculum and is waiting for socialization first.

**Tabel 2.** Reduction of Curriculum Content

No	Teacher Name	Lesson	Reduction of Curriculum Content
1	NS	Biologi	Based on the explanation from the Minister of Education and Culture Nadiem Makarim, the first thing I caught was that the national exams in 2020 were abolished, then the lesson plan concept was shortened to one sheet remaining and then the plan was that the concept of independent learning would be applied in the educational environment, not only focusing on the teacher as a learner, but students as learning object he is able to develop his creativity in working to create new results in the world of education.
2	SH	Biologi	The concept of Freedom to Learn which was initiated by minister Nadiem Makarim, in my perception has been very helpful and freed teachers, especially I highlighted that simple lesson plans really helped liberate teachers not only wasting paper to print so many lesson plans, and I am very grateful for the concept sir Nadiem Makarim.
3	IS	Fisika	The simplified RPP is good because there are 3 points, there are learning objectives, learning activities and assessments in my opinion are more concise
4	VS	Fisika	Regarding simplified lesson plans, I don't mind, I just usually use the sentences for KD, KI now only writes the code so it saves money, now it is hoped that by writing the code the teacher will understand. Then, the forms of assessment are also abbreviated, first there are several sheets because all assessments are written there. Steps to adjust the development of RPP with the concept of Freedom to Learn, such as holding workshops, improving teacher quality, improving

No	Teacher Name	Lesson	Reduction of Curriculum Content
5	DA	Kimia	staff, teacher competence, teaching competence. For example, coaching from supervisors and Kasidik, then often meetings once a month are Subject Teacher Consultations (MGMP) the perception of a simplified lesson plan, in my opinion, the lesson plan drafted by Mr. Nadiem, for the current situation online is suitable, but if it is used for daily use it is not suitable. The term RPP is simplified as a key so only important points, for example the latest one only contains learning objectives, learning activities and assessments, whereas in RPP it's just an assessment if you want to elaborate a lot. Personally, I actually don't agree because apart from that, later on, the permanent teacher, even if the teacher doesn't ask for it, will still complete the attachment, although in fact the attachment used to be in the main lesson plan, if now it's spelled out in the attachment, this is only in terms of assessment, not yet. in terms of others, for example there are methods, and others. If I agree with the former.
6	MI	Kimia	The concept of Freedom to Learn which was initiated by minister Nadiem Makarim, in my perception has been very helpful and freed teachers, especially I highlighted that simple lesson plans really helped liberate teachers not only wasting paper to print so many lesson plans, and I am very grateful for the concept sir Nadiem Makarim.

Based on the results of the interview above, it is explained that the understanding of the application of independent learning is based on the explanation from the Minister of Education and Culture Nadiem Makarim that the application of independent learning changes some of the structure of the learning process where the National Examination or national exams are eliminated then the lesson plan concept is shortened and the learning concept is not only focused on the teacher but also focuses on to students as learning objects in order to be able to develop creativity in working in the field of education.

This is in line with research conducted by Moh. S. Rahman with the title "Teacher Perceptions of the Freedom to Learn Policy Regarding Simplification of Learning Implementation Plans (RPP) at MTs Negeri 1 Manado" where the results of his research stated that regarding reducing curriculum content in the independent learning curriculum really helped teachers in administrative matters that did not require a lot of time in preparing the RPP.

**Tabel 3.** Constructivism Learning

No	Teacher Name	Lesson	Constructivism Learning
1	NS	Biologi	I, as a biology teacher, in the learning process use constructivism learning theory, this is in accordance with the new curriculum issued by the Minister of Education and Culture. Apart from that, I also think that the existence of an independent learning curriculum will help students understand learning material in more depth, hone students' skills in asking questions and

No	Teacher Name	Lesson	Constructivism Learning
2	SH	Biologi	finding solutions, students can understand concepts comprehensively and become active thinkers. In my opinion, as a biology teacher here, some teachers already understand the independent learning curriculum, but there are still some teachers who have not applied this theory.
3	IS	Fisika	In conveying the material in the independent learning curriculum, I will use it via the internet and the way of learning will be more relaxed, nuanced outside the classroom as well as in the classroom, especially in learning physics, I need to study outside the classroom
4	VS	Fisika	The theory that I made in independent learning is that the way of learning will make students more enthusiastic about studying.
5	DA	Kimia	The concept of Independent Learning, if I agree, is because with the concept of independent learning, especially students are not pressured, maybe they also adapt to the students' circumstances and the material, even learning is not limited by space and time, as a chemistry teacher when students need it, the teacher must serve well.
6	MI	Kimia	acts as a facilitator in the learning process. As a chemistry teacher, I agree with the concept of independent learning because students are required to construct their thoughts in understanding the subject matter and the teacher

Based on the results of the observations and interviews above, it can be concluded that the perceptions of science teachers in implementing the independent learning curriculum would be better off using constructivism theory in learning. However, most of the teachers do not fully understand the independent learning curriculum because they still use the old curriculum.

This finding is supported by research conducted by Ida Bagus Nyoman Mantra entitled "Teacher Perceptions of the Importance of Independent Curriculum Development and Implementation Training", where the results of his research stated that teachers need to have the ability to develop and implement curriculum and design classes, in order to improve teaching quality and learning process. Therefore teachers need to be given continuous training on curriculum development so that they are able to understand well the current learning curriculum.

### **Obstacles That Occur in the Implementation of the Independent Learning Curriculum in Science Subjects**

Based on the results of observations and interviews in the field, the inhibiting factor in the implementation of the independent learning curriculum lies in human resources, which hinders every preparation and policy that has been implemented. Besides that the authors conclude that the facilities and infrastructure at SMP DR. Wahidin Sudirohusodo Medan are indeed limited so that in the learning process science teachers always use lecture and discussion learning methods, even so science teachers still try to use the facilities and infrastructure in implementation of independent learning curriculum. Based on the observations and interviews above, currently there are very few teachers who have a passion for learning and self-development, have a strong commitment to goals and are creative in

managing learning. This makes teachers stutter in dealing with new policies that are so transformative, even though one of the conditions that must be possessed by independent teachers is to be independent and creative, and always want to continue to learn and develop.



**Figure 1.** Researchers are conducting interviews with science teachers

Based on the views of DR.Wahidin Sudirohusodo Middle School teachers in Medan, in looking at the advantages and disadvantages of implementing independent learning, the advantages possessed by students can explore their thoughts with new innovations, so that they can explore the potential that exists in them. However, the drawback in implementing independent learning is the unavailability of electronics or media that students can use in the process of implementing independent learning and with the enactment of this application of independent learning, teachers rarely exercise direct control over students which results in less control over students in carrying out the learning process properly.

## CONCLUSION

Based on the results of observations and interviews conducted at SMP DR.Wahidin Sudirohusodo Medan regarding the perceptions of teachers in the field of science studies in implementing the independent learning curriculum, it can be concluded as follows: 1. Teachers in the field of science studies at SMP DR.Wahidin Sudirohusodo Medan, have positive perceptions and receive appreciation very good about the Merdeka Learning curriculum. This can be seen from the results of observations and interviews that have been conducted. The results of the study also explain the importance of massive outreach to all parties at the education unit level, so that curriculum implementation can be carried out as expected. Besides that, the perception of science teachers has several indicators in the implementation of the independent learning curriculum, including: reduction of curriculum content, constructivism learning and the teacher's personal experience. There are several factors that become obstacles, namely, the first is the inadequate quality of the teacher's human resources, the second is that the facilities and learning resources are minimal or the infrastructure is inadequate and the teacher is clueless, the third teacher is comfortable with the old standard and has no experience in learning independent study. And it is hoped that the solution to overcome these obstacles is that the government and schools must facilitate training to increase teachers' understanding of the independent learning curriculum, especially in science learning and facilitate in the field of technology needed in implementing the independent learning curriculum.

## RECOMMENDATION

This article is recommended for teachers, especially science teachers, to better understand the implementation of the independent learning curriculum. In addition, for the government it can be used as a reference to see an overview of teacher perceptions regarding the independent learning curriculum so that they can make solutions to any obstacles that occur in implementing the independent learning curriculum for teachers.

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