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Development of Constructivistic Economic Learning Tools with Advance Organizer

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A R T I C L E I N F O

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ABSTRACT

The purpose of this development is this development is to produce a Constructivistic Economics Learning Tool with an Advance Organizer. The development model used is the Borg & Gall model. The stages of development research on the Borg & Gall model consist of ten steps, namely: (a) research and data collection, (b) planning, (c) initial product development, (d) initial product trial/limited trial, (e) improvement of the initial product, (f) wider field trial, (g) improvement of the product resulting from wider field test, (h) final product trial, (i) revision or refinement of the final product, (j) dissemination and implementation. The development process involves subject matter experts, instructional design experts and learning media experts to provide feedback and suggestions for improvement. The results of this development research are the Constructivistic Economics Learning Tool Product with Advance Organizer has a material feasibility level of 93.33%, learning design feasibility 91.43%, and learning media feasibility 94.29%. While the small group trial rate is 90.69% and based on field trials 91.07% with very feasible qualifications and does not need to be revised.

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1. INTRODUCTION

The development of a country is supported by good quality human resources (Awwaliyah & Arcana, 2021; Hernandeni et al., 2018; Ritonga, 2020). Improvement of human resources can be done in various ways, one of which is by improving the quality and quality of education (Azis, 2014; Hasibuan & Prastowo, 2019; Susanti, 2020). The quality of education in schools is directly related to various factors including teachers, students, curriculum, environment, and infrastructure. It is necessary to improve the quality of the process and student learning outcomes in order to obtain a good quality education. These efforts are the duties and responsibilities of all parties, including the government, educational institutions, and the community, including educators or teachers (Husain & Kaharu, 2020; Sarif et al., 2021; Syarifudin, 2020).

Learning in general only emphasizes one method (eg the lecture method) (Amaliah et al., 2014; Maulidah & Kamal, 2020; Subdari et al., 2020). In modern education, the

teaching system is no longer on active teachers, but students are made objects and subjects of education. To create a learning process in which two-way communication as well as teachers and students take part in the learning process in the classroom (Izza et al., 2020; Lazwardi, 2017; Siswondo & Agustina, 2021).

The constructivism learning model is one of the views on the learning process which states that the learning process begins with the occurrence of cognitive conflicts (Achzab & Budiyanto, 2017; Bukhari, 2019; Rodiyana & Puspitasari, 2019). This cognitive conflict can only be overcome through the knowledge that children will build themselves through their experiences from the results of interactions with their environment. In the constructivist classroom, students are empowered by the knowledge that is within them (Rufii, 2015). They share strategies and solutions, debate with each other, think critically about the best way to solve each problem (Mad Noor Madjapuni, 2019; Puspita & Ristiana, 2020; Tias, 2020).

Kusdiastuti et al., (2020); Matthews et al., (2015); Moreira, (2008) said that the Advanced Organizer learning model serves to explain, integrate, and link the knowledge being studied with the knowledge possessed by students. Furthermore (Ernaeni & Gunawan, 2019; Lesh, 2020c; Nisyah et al., 2020) said the purpose of the Advanced Organizer learning model is to link meaningful materials to be studied with the structure that students have. The strength of this model is that it can provide a learning experience with a cognitive structure that is used to understand the material presented, in reading and using other media.

By improving the cognitive structure that has been owned will make it easier for students to obtain and master new information. The Advanced Organizer learning model has advantages that are used to overcome student difficulties, namely directing and helping students to recall information related to the material to be studied, assisting students in instilling new knowledge (Abubakar, 2020; Lesh, 2020a; Lesh, 2020b). The Advanced Organizer learning model is a mental aid that is presented before new material, which can be used to help students remember and recall old knowledge with new material being taught (G. Gunawan et al., 2019; Lesh & Johnson, 2020; Matthews et al. ., 2015).

A number of studies on the development of constructivist economic learning tools with the Advanced Organizer have positive results on the learning process, the results of research conducted (Ernaeni & Gunawan, 2019) conclude that the Advanced Organizer Model: Its Effect on Creative Thinking Ability helps teachers to develop their learning materials. Likewise, the results of the study (Mustika, 2019) concluded that the components of the textbooks developed were effective in improving learning outcomes. Consider the things above. it is very necessary to develop an economic learning package.

Following up on the above conditions, namely making constructivist economic learning tools with the Advanced Organizer into an attractive learning model and assisting the teacher's task in increasing the effectiveness of learning, an innovative learning model called the Advanced Organizer is needed. One of the learning models that includes a series of planned learning experiences that are arranged systematically, operationally, and directed to help students master specific learning objectives is the constructivist economic learning tool with the Advanced Organizer.

2. RESEARCH METHOD

This research uses development research. While the development model used is the Research & Development (R & D) development model from Borg and Gall (1983) which consists of ten steps. The steps for using the Research and Development (R&D) Method according to Borgdan Gall (1983).

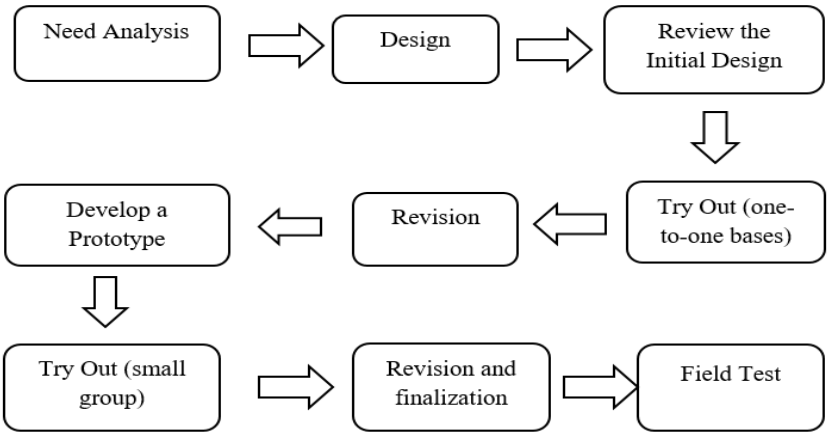

Figure 1. Steps of Borg and Gall (1983)

The development steps compiled by Borg and Gall are very clear, sequential and complete so that researchers feel this model is suitable for use in this study. Each step has been sequenced, has a clear purpose and is equipped with explanations. In addition, the research and development of Borg and Gall has a close relationship with the world of learning. Borg and Gall have explained that when we develop products in learning, we should study the stages used in the learning process. By understanding the stages, we will be able to correctly identify the needs in products that are developed on target. Design research and development is not based on trial and error. That will take a long time. Product development in practice requires a fair amount of validation by experts so that the resulting product is truly the right one. Therefore, the researcher deliberately chose the research and development model by Borg and Gall in developing the Constructivistic Economics Learning Tool With Advance Organizer. The products produced in this research are expected to be able to integrate well and provide a real positive role.

3. RESULTS AND DISCUSSIONS

The data are presented starting from the results of content experts for Economics, learning design experts, media experts, individual trials, small group trials, field trials, and peer trials. The data obtained from the results of this feasibility assessment are presented for analysis based on the assessment formula. Based on this analysis, it will be known the shortcomings or inadequacy of the learning content, the feasibility of the learning design and the feasibility of the media that has been prepared by the author. The next step is to revise or improve whatever is suggested by the assessor so that this product is suitable for use by Economics subject teachers. Thus, this product will be useful for students in the school.

3.1 Learning Content Expert Data

Content expert data is obtained from supervisors and people who are competent in their fields so that a reference or reference can be made for improving the Constructivistic Economics Learning Tool with the Advance Organizer of students. Content expert questionnaire data can be seen in table 1:

Table 1. Content Assessment Analysis

Indikator	Skor
The level of relevance of textbooks with the curriculum.....	5
The accuracy of the unit title with the material description in ea	5
Introductory clarity on each theme	4

Clarity of content outline (epitome)	4
Appropriateness of indicators and basic competencies	5
Conformity of indicators with material description	5
Conformity between basic competencies, indicators and materia	4
Clarity of description	5
The suitability of the examples presented with the learning mate	4
Clarity of completion of sample questions on the sidelines c description	5
Clarity of the contents of the summary	4
Conformity between competency test and indicators	5
The attractiveness of the components in the textbook	5
Interesting learning content	5
The attractiveness of organizing Constructivistic Economics Lear Advance Organizer using the Borg & Gall model	5
Total	70

Based on Table 1 on Learning Content Feasibility Scoring Analysis which has 15 aspects of assessment, namely the formulation of learning content, formulation of learning objectives, selection and organization of teaching materials, selection of teaching materials, selection of learning resources and organization of assessment tools with 15 aspect indicators as outlined in the questionnaire. The score obtained from the questionnaire is 70 or the percentage of eligibility is 93.33%. So the feasibility of content experts for the Constructivistic Economics Learning Tool With Advance Organizer for Class X SMAN 1 Sangkapura means that it is very suitable for students to use in learning.

3.2 Learning design expert data

Learning design expert data is obtained from supervisors and people who are competent in their fields so that a reference or reference can be made to improve the Constructivistic Economics Learning Tool with the Advance Organizer of students. The design expert's questionnaire data can be seen in table 2.

Table 2. Analysis of Learning Design Assessment

No	Indikator	Skor
1	Binding quality	4
2	Attractive cover design	5
3	Typing layout accuracy	4
4	Consistent use of title space, sub and typing material	4
5	Clarity of writing/typing	5
6	Completeness of the components in each chapter of the textbook	5
7	The accuracy of the presentation of the material	5
	Total	32

Based on Table 2 regarding the Feasibility Scoring Analysis of Learning Design which has 7 aspects of assessment, namely formulation, formulation of learning objectives, organization of teaching materials, design of learning scenarios, design of learning resources and design of assessment tools with 7 aspect indicators. The score obtained from the questionnaire is 32 or the percentage of eligibility is 91.43%. So the feasibility of the design expert on the Constructivistic Economics Learning Tool With Advance Organizer for Class X SMAN 1 Sangkapura means that it is very suitable for students to use.

3.3 Learning Media Expert Data

Learning media expert data is obtained from supervisors and people who are competent in their fields so that a reference or reference can be made for improving the

Constructivistic Economics Learning Tool With Advance Organizer for students. Media expert questionnaire data for product revision of Constructivistic Economics Learning Devices With Student Advance Organizers can be seen in table 3.

Table 3. Analysis of Learning Media Assessment

No	Indikator	Skor
1	The accuracy of the illustrations used in the cover of the textbook	5
2	The suitability of the material with the media used	5
3	Quality of paper used	4
4	Font size accuracy	5
5	Image placement accuracy	5
6	Text quality	4
7	Organizing learning message design	5
	Total	33

Based on Table 3 regarding Learning Content Feasibility Scoring Analysis which has 7 aspects of assessment, namely the formulation of learning content, formulation of learning objectives, selection and organization of teaching materials, selection of teaching materials, selection of learning resources and organization of assessment tools with 7 aspect indicators as outlined in the questionnaire. The score obtained from the questionnaire is 33 or the percentage of eligibility is 94.29%. So the feasibility of media experts for the Constructivistic Economics Learning Tool With Advance Organizer for Class X Students of SMAN 1 Sangkapura means that it is very feasible to use for students in learning

3.4 Individual Trial Data

Data were taken from Class X SMAN 1 Sangkapura, using a questionnaire from 3 selected students. This trial data serves to test the quality of the elements of learning material contained in the Constructivistic Economics Learning Tool with Advance Organizer students that are being developed and to correct the deficiencies that exist in this product.

Table 4. Analysis of Individual Trial Assessment

Aspect	**Skor Responden**			**Sum**	**Persentage (%)**
	1	**2**	**3**		
1	4	5	5	14	93%
2	4	5	4	13	87%
3	5	5	4	14	93%
4	5	5	5	15	100%
5	4	5	4	13	87%
6	5	4	5	14	93%
7	5	5	3	13	87%
8	5	5	4	14	93%
9	5	5	4	14	93%
10	5	4	5	14	93%
11	5	4	5	14	93%
12	4	5	5	14	93%
13	4	5	5	14	93%

14	4	5	5	14	93%
15	5	4	5	14	93%
16	4	5	5	14	93%
Jumlah	73	76	73	222	rata-rata (93%)

Based on Table 4 Analysis of Individual Trial Assessment, basically the Constructivistic Economics Learning Tool With Student Advance Organizer made by the author has met the requirements to motivate student learning. With the Constructivistic Economics Learning Toolkit With Advance Organizer which uses learning steps to observe, ask, seek information, reason and communicate on the Constructivistic Economics Learning Toolkit With Advance Organizer students can train students to get used to the process skills contained in the Constructivistic Economics Learning Toolkit. Advance Organizer Class X SMAN 1 Sangkapura.

Based on Table 4 Student Questionnaire Results on Learning Content Feasibility Scoring Analysis which has 7 aspects of assessment, namely the formulation of learning content, formulation of learning objectives, selection and organization of teaching materials, selection of teaching materials, selection of learning resources and organization of assessment tools with 7 aspect indicators as outlined in questionnaire. The score obtained from the questionnaire can be seen in the percentage of eligibility of 93%. So the feasibility of the Constructivistic Economics Learning Tool with the Advance Organizer for Class X Students of SMAN 1 Sangkapura means that it is very suitable to be used for students in learning

3.5 Small Group Trial Questionnaire Data

Data were taken from Class X SMAN 1 Sangkapura, using a questionnaire from 6 selected students. This trial data serves to test the quality of the elements of learning material contained in the Constructivistic Economics Learning Tool with Advance Organizer students that are being developed and to correct the deficiencies that exist in this product.

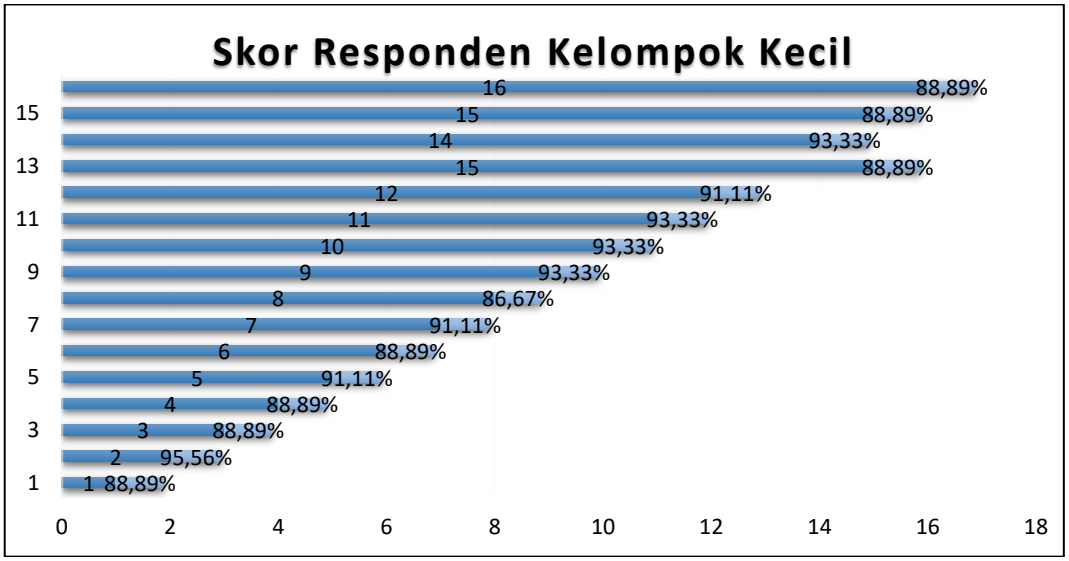

Figure 2. Student Questionnaire Results

Based on Figure 2 Student Questionnaire Results of student questionnaires, basically the Constructivistic Economics Learning Tool with Advance Student Organizer made by the author has met the requirements to motivate student learning. With the Scientific

Approach Approach that uses learning steps to observe, ask questions, seek information, reason and communicate on the Constructivistic Economics Learning Tool With Advance Organizer students can train students to get used to the process skills contained in Economics subjects.

Based on Figure 2 Student Questionnaire Results on the Feasibility Scoring Analysis of Learning Content which has 16 aspects of assessment, namely the formulation of learning content, formulation of learning objectives, selection and organization of teaching materials, selection of teaching materials, selection of learning resources and organization of assessment tools with 16 aspect indicators as outlined in questionnaire. The score obtained from the questionnaire can be seen in the percentage of eligibility of 90.69%. So the feasibility of the Constructivistic Economics Learning Tool with the Advance Organizer for Class X Students of SMAN 1 Sangkapura means that it is very suitable to be used for students in learning.

3.6 Field Trial Questionnaire Data

Data were taken from Class X SMAN 1 Sangkapura, using a questionnaire from 21 selected students. This trial data serves to test the quality of the elements of learning material contained in the Constructivistic Economics Learning Tool with Advance Organizer students that are being developed and to correct the deficiencies that exist in this product.

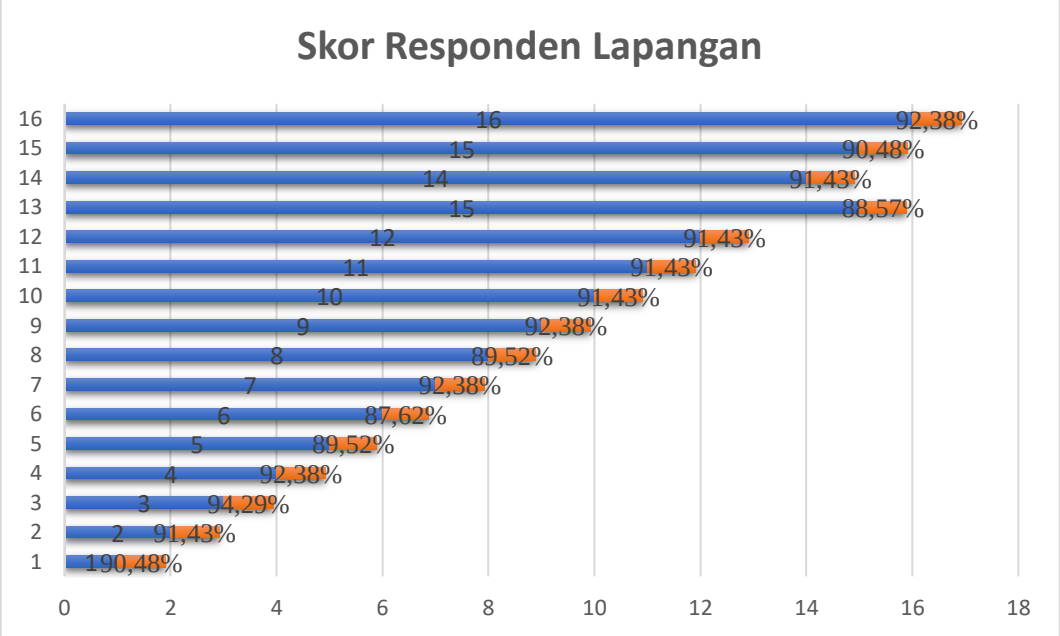

Figure 3. Student Questionnaire Results of the Student Questionnaire Field Test

Based on Figure 3 Student Questionnaire Results of the Student Questionnaire Field Test, basically the Constructivistic Economics Learning Tool With Student Advance Organizer made by the author has met the requirements to motivate student learning. With the Constructivistic Economics Learning Toolkit With Advance Organizer which uses learning steps to observe, ask questions, seek information, reason and communicate on the Constructivistic Economics Learning Toolkit With Advance Organizer students can train students to get used to the process skills contained in Economics subjects.

Based on Figure 3 Student Questionnaire Results on the Feasibility Scoring Analysis of Learning Content which has 16 aspects of assessment, namely the formulation of learning content, formulation of learning objectives, selection and organization of teaching materials, selection of teaching materials, selection of learning resources and organization

of assessment tools with 16 aspect indicators as outlined in questionnaire. The score obtained from the questionnaire can be seen in the percentage of eligibility of 91.07%. So the feasibility of the Constructivistic Economics Learning Tool With Advance Organizer Class X SMAN 1 Sangkapura means that it is very feasible to use for students in learning.

3.7 Peer Trial Data

The product trial for the development of the Constructivistic Economics Learning Toolkit with Advance Organizer for students was carried out in Class X SMAN 1 Sangkapura with Ms. Retno, S.Pd. Data obtained from friends in the field of study, namely Economics (colleagues) are used to find out weaknesses, product deficiencies so that further steps can be taken to improve this product.

Table 5. Peer Questionnaire Results

No	Indikator	Skor
1	The accuracy of the illustrations used in the cover of the textbook	5
2	The suitability of the material with the media used	5
3	Quality of paper used	5
4	Font size accuracy	5
	Total	20

Table 5 can be seen clearly that the score obtained is 20 from 1 respondent, when viewed the percentage of eligibility is 100%. These results show the Constructivistic Economics Learning Tool With Advance Organizer Class X SMAN 1 Sangkapura Students Using Constructivistic Economics Learning Tools With Advance Organizer can help students in the learning process.

The constructivist learning approach is carried out in four stages, namely orientation, elicitation, reconstruction of ideas, using ideas in many situations and reviewing how the ideas have changed. The implementation of constructivist learning is modified with various methods, techniques, teaching aids and learning resources available in schools. All the components of creativity that comprise.

from generating ideas, asking questions, giving opinions, advancing in presentations, never giving up, being rich in humor and self-confidence, efforts are made to improve with various strategies that have been designed for each lesson. The implementation of a learning community is implemented in the formation of groups gradually from large numbers and each meeting the number is decreasing but still the principle of heterogeneity in gender, academic level and different partners (Galuh Mahardika & Sariyatun, 2020; Hariani, 2021; Riyanti , 2020).

To encourage students to come up with learning ideas / ideas contextually designed by optimizing teaching aids (modeling). Students are motivated to be able to ask questions and give opinions by providing opportunities to analyze questions in discussion sheets, review source books and the teacher poses real-life problems (Adnan et al., 2019; Ari, 2020; Maiyena & Imamora, 2020).

In economics, the constructivist learning process carried out by researchers is to divide students into 4 groups. The division of large groups consisting of 9-10 students based on rows of seats. Student-centred application of constructivism by applying the source study and modeling method (Ina et al., 2020; Munib, 2018; Supardi et al., 2019). Activities carried out by students include studying discussion sheets, opening material books, making observations on available props. Students also classify the same and different answers, determine the idea that is closest to the truth and make conclusions. Students apply what has been discussed by observing economics subjects.

The goal is something that is very necessary, because the goal is the starting point we want to do something. Without knowing the destination, we will not know the direction we

will take. Without goals we would have no hope. For that purpose must be formulated and the formulation of these objectives must also be determined.

Advance organizers have the main goal of strengthening cognitive structures and increasing retention of new information (Ausubel, 1960; Bright, 2020; Monteiro et al., 2020). Ausubel describes advance organizers as an introduction to material that is presented in advance and is at the highest level of abstraction, so that the goal is to explain, integrate and connect previously owned material.

Thus the appropriate formulation is to explain, integrate and so on related to cognitive abilities, such as explaining, identifying similarities and differences and getting to know these materials.

Based on the advance organizer model, the focus is on the cognitive domain (Birabil, 2020; Gunawan et al., 2020). And these goals have been determined in the syllabus, so which goals are considered in accordance with the advance organizer, of course, are goals that include the cognitive domain. The most important thing is that the goals must be informed so that students know what they have to achieve. And psychologically, more than that, by informing students' goals, they have hope.

With the hope that students will be able to direct their learning in accordance with the goals achieved. Thus they are motivated in learning. Then with their busy lives they are more active and indirectly the material being taught can be mastered (Elfeky et al., 2020; Gunawan Gunawan et al., 2020; Han, 2021).

The first phase, the presentation or presentation of the Advance Organizer itself. This first phase consists of three activities, namely explaining the purpose of the lesson, briefly presenting the basic framework (advance organizer), explaining the meaning of each attribute contained in it, and stimulating student knowledge and experience that already exists and is adapted to the context being taught with how to give some examples.

Based on the findings in the field with the existing theory regarding the objectives Economic learning with the advance organizer learning model is compatible, although not completely, namely: (1) Informing what must be achieved by students, namely explaining the objectives of the lesson, (2) With the hope that students are able to direct their learning in accordance with the goals to be achieved. Thus they are motivated in learning. Then, with their busyness, those who want to achieve their goals are more active and indirectly the material being taught can be mastered (Kusdiastuti et al., 2020; Nisyah et al., 2020; Oktaviani et al., 2018).

The most urgent thing in the advance organizer learning model is the planning and organization of materials. The organization must be organized, integrated between the main framework and content. The organization of the material in the form of basic frameworks with the highest organizational structure that becomes the body of the material, is an explanation of the basic concepts of the material, interrelation

Basic concepts with material structure. The basic framework of learning materials briefly, explanation of each symbol with examples of learning materials, presentation of the most common ideas, presentation of subordinate content of learning materials, teaching about the links between constructions that are in line with the characteristics of organizing subject matter, development of the subject through elaboration material hierarchically, integrative reconciliation treatment, questions and answers, examples, comparisons and so on related to the ideas presented. Economics subject teachers have compiled the concept of learning by pouring it into the Learning Implementation Plan and to facilitate its implementation, have arranged the organization of the material and ended with an evaluation.

If the organization is carried out as above, the student's learning conditions will be as follows: knowledge is motivated again, can strengthen cognitive structures, can connect the material being studied with the basic framework that has been introduced in the first presentation, can analyze various problems related to the material. These, can be an

integrative hook of information in mind, can help establish similarities, differences between facts, concepts from the subject matter presented, interactions can be maintaine.

The most effective organization is to use concepts, terminology and propositions that have been previously known by students (Amanah et al., 2017; Ausubel, 1960; Cutrer et al., 2011). Organizing shows an overview of the content of the material that must be conveyed, in the form of related concepts or statements so that advance organizers are generally based on the concept of propositions, generalizations, principles and laws contained in the study of subjects. In economics, the teacher has compiled an example of organizing learning materials that he did.

In general, what advance organizers want are: (1) the main idea is put forward by the teacher, (2) the important material content is a related concept or statement, and (3) the teacher explains the relationship between the concept and the statement (Han, 2021; Kusdiastuti et al., 2020; Nisyah et al., 2020).

Then in the second phase, the steps that must be passed in implementing the advance organizer model are a further exploration phase regarding the framework that has been submitted as a learning task or subject matter. The essence of the material presented is not enough just to be explained by the definition, but the teacher elaborates further. Here the teacher and students jointly develop the advance organizer framework into material that can logically be understood by students, especially regarding the interrelationships of the elements contained in it. It may be necessary to repeat the material so that the material becomes familiar and familiar to the child.

In the third phase, it was also stated that the third phase was aimed at strengthening the cognitive structure of students. This third phase is more emphasized on student activity. Students have to exchange a lot of ideas in this phase. Students are also expected to be able to use integrative principles to answer and relate the material they have learned to new material. Students must be able to act as active catchers and be able to think critically.

When described in the table the process is as follows:

Table 6. Phases of the Advance Organizer Model

First Phase: Presentation of Advance Organizer	Second Phase: Presentation of Learning Task or Material
1. Clarification of learning objectives 2. Advance organizer presentation 3. Encourage students to be aware of their knowledge and experience.	1. Presenting materials lesson 2. Keeping students' attention on material 3. Organizing Purposely 4. Prepare lesson materials logically and deliberately
Fase Ketiga: Strengthening Cognitive Organization Menggunakan prinsip integrative reconciliation	

Based on the findings in the field with the theory stated above, there is a match but the implementation in the field still needs development. Among those that are appropriate are: (1) Submission of material through an organization that has been prepared (like the diagram above) based on a basic framework, explaining each symbol, by providing examples of material. Presenting the most general ideas, subordinate content, the links between constructs that are in line with integrative reconciliation, and maintaining interaction with students makes students' knowledge motivated again, cognitive structures are stronger, can connect the material being studied with the basic framework that has been introduced to the class. the first percentage, can analyze various problems related to the material, can help determine similarities and differences between facts, concepts from the subject presented and interactions can be maintained, (2) Submission of material in accordance with the organization that has been prepared in the plan In learning, of course, in accordance with the requirements of the advance organizer above, it can answer and connect the material that has been studied with new material. Students must be able to

act as active catchers and be able to think critically, and (3) In the organization what needs to be developed is the determination of the basic framework and subordinate content and things that become hooks in schema construction. This can be seen in the schema differences. But that doesn't mean it's a mistake, but it needs development.

4. CONCLUSION

Based on the results of research on Development of Constructivistic Economics Learning Tools with Advance Organizers in Class X Economics Learning at SMAN 1 Sangkapura, it can be concluded several things as follows: (1) Development of Constructivistic Economics Learning Tools with Advance Organizers in Class X Economics Learning SMAN 1 Sangkapura was developed based on teacher needs analysis and students through a needs questionnaire provided by the developer, (2) The results of the validation of material experts, media experts, and design experts on the product development of Constructivistic Economics Learning Devices With Advance Organizers in Class X Economics Learning at SMAN 1 Sangkapura with very feasible criteria to be developed, and (3) Based on the results of research on the development of Constructivistic Economics Learning Tools with Advance Organizers in Class X Economics Learning at SMAN 1 Sangkapura, it can be concluded that the learning media of Constructivist Economics Learning Tools Sticks With Advance Organizer are used to develop skills in designing creative, innovative and interesting learning.

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