

## Development of KKNi Oriented Learning Devices Assisted by the Synectic Model

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### ABSTRACT

This study aims to produce KKNi-oriented learning tools assisted by the Synectic Model in the Indonesian society studies course, a university in Indonesia's history education program. This research was carried out in the sixth semester using Educational Research which was adapted from the development model according to Borg & Gall, which consisted of six stages: a preliminary study, planning stage, and drafting stage for learning device products KKNi-oriented, assisted by a synectic model, the product validation stage, the revision stage, and product testing, as well as the dissemination stage. The trial subjects of the KKNi-oriented learning device assisted by the Synectic model in the Indonesian society study course were 43 students in that study program. The results of the research are: (1) KKNi-oriented learning tools assisted by a synectic model of Indonesian society studies courses have been produced in a very good category based on the results of product validation by four expert lecturers and the results of student response questionnaires, and (2) KKNi-oriented learning devices assisted by Synectic models in Indonesian society studies courses are effectively used in learning, especially to train students' creative thinking skills.

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## 1. INTRODUCTION

The Indonesian National Qualifications Framework (KKNi) is a competency qualification framework that juxtaposes equalizes. It integrates the fields of education and job training and work experience to provide recognition of work competencies by the work structure in various sectors. Equalization in question is the process of pairing and integrating learning outcomes obtained through education; job training; and work experience (Selegi & Hartono; 2019). The 2013 curriculum and the KKNi are deemed necessary. Because of the KKNi; the curriculum at universities must clarify the Graduate Profile and expected Competency Achievements; while in terms of the 2013 curriculum policy; the content of teaching materials delivered must also truly refer to the needs of stakeholders as

stated in the curriculum contained in Permendikbud No. 67 years 2013 (Fathoni; 2015). Therefore; KKNI has indeed contributed to formulating the curriculum in universities.

The undergraduate curriculum based on the Indonesian National Competency Qualification (KKNI) is a set of academic documents compiled based on a combination of the scientific ontology of the study program (deductive mindset) with the competencies of the business world and the industrial world (inductive mindset) (Maba; 2016). KKNI is the embodiment of the quality and identity of the Indonesian nation in relation to the national education system; as well as national job training and the national learning outcome assessment system; which is owned by Indonesia to produce quality and productive national human resources. The government expects that human resources who have studied at universities will become productive and qualified (Jono; 2016). Therefore; to deliver a course; lecturers need to design learning devices that are in accordance with the KKNI.

Indonesian society studies course is one of the subjects given to students of the History Education Study Program in the research field. The provision of these courses is intended to equip students after graduation to be able to master various concepts and theories about society; especially the socio-cultural conditions of the Indonesian people. Thus; students are required to have creative thinking skills; meaning that students are able to express and develop ideas into a form of material framework. The ability to think creatively becomes a problem-solving solution in terms of developing ideas because the result of creative thinking is to produce something new and different (Fatmawati et al.; 2019). Creative thinking makes a positive contribution in addition to its goal of improving the quality of students; and creative thinking is also able to influence students' perspectives on solving a problem (Montag-Smit & Maertz; 2017). And one of the learning strategies that can train one's creative thinking skills is Synectic learning strategies. With the ability to think creatively; it is hoped that students of the History Education Study Program will be able to solve the problems they face scientifically. Finally; it impacts increasing the Grade Point Average (GPA) of students.

In realizing learning that can train and improve the quality of students in creative thinking; especially in Indonesian community studies courses; a lecturer must use interesting strategies and be supported by learning tools that have been prepared previously by the KKNI; so that the learning process will be more focused; and more effective. This requires students to actively participate in the learning process. In the end; learning outcomes will be part of their thoughts and experiences (Rahiem; 2020). The learning experience results will be more embedded in the mind; and such conditions require students to think more creatively.

Departing from this; researchers are interested in developing a KKNI-based learning device with the assistance of a Synectic model as an alternative solution to grow students' ability to think creatively; especially in Indonesian community studies courses. The Synectic model effectively improves the quality of learning carried out by lecturers and student learning activities. This is because Synectic is an interesting new approach to develop creativity which is usually used to develop group activities where individuals are trained to be able to work together with one another and later function as problem-solvers or as people capable of developing production (products-developers) (Al-Tabany; 2017). Thus; a well-designed Synectic model will make lecturers professional and innovative. Innovative learning models can be seen in the work of Trianto; (2009); and Gunawan et al. (2017)

The previous study was carried out to examine the lesson planning (SAP) developed based on the Indonesian National Qualifications Framework (KKNI) in the Economic Education study program (Effiyanti et al.; 2018). That research aimed to determine the needs for students' teaching materials for KKNI-based learning outcomes in the Lower-Level Organism Taxonomy course. Moreover; a study conducted by Solikha (2016) discussed the development of the KKNI-based English Education curriculum model. Furthermore; Fathoni (2015) developed the KKNI-Based Curriculum Management. From the search; it was not found the information about a development of a KKNI-based learning device; more specifically assisted by the Synectic model. Therefore; this current research was carried out under the title "Development of KKNI-oriented learning tools assisted by the Indonesian Community Studies course ". This study aims to answer the questions: (1) How to produce KKNI-oriented learning tools assisted by Synectic models in the Indonesian Society Studies course? (2) Are

the KKNI-oriented learning tools assisted by the Synectic model used in learning in Indonesian community studies courses developed effectively; especially to train students' creative thinking skills? Based on this formulation of the problems; this research was conducted with the following objectives: (1) Producing KKNI-oriented learning device assisted by Synectic models in Indonesian society studies courses; (2) Analyzing the effectiveness of KKNI-oriented learning tools assisted by Synectic models in the Indonesian Society study course; especially in training students' creative thinking skills.

## 2. METHODS

This type of research is development research known as Educational Research; aiming to develop educational products. The product resulting from this research is in the form of teaching devices for the Indonesian Society Studies course based on the KKNI assisted by the Synectic model. This Educational Research model utilized the development model of Borg and Gall (1983). They developed mini learning (mini-course) through 8 steps 1) Conducting preliminary research (pre-survey). A pre-survey was conducted to collect information (library review; class observations); identify problems encountered in learning; and summarize problems; 2) Planning is to develop learning plans for each competency with selected learning methods. Design indicators of character items; develop types of the initial product form is in the form of a learning design; observation indicators for character items; and assessment rubrics for each basic competency and character item; 4) Conduct expert judgment. Expert tests were conducted on a professor and a supervisor to test the construct validity of the instrument; 5) Revise the main product; based on input and suggestions from the expert test results; 6) Conducted a limited trial of 20 subjects for each competency and each item of character; revised based on input; 7) field trial with 25 subjects in each school. Here; a valid empirical test is conducted (tested for validity and reliability); 8) Perform final revisions to obtain ready-to-use instruments (Lusiana & Lestari; 2013). However; the current study modified the stages into six stages.

In the first stage; the preliminary study consists of two; namely a literature study and a learning survey in the literature study class to obtain information on the needs that support product development in the form of history teaching materials in Indonesian Society Studies courses based on the KKNI assisted by a Synectic model which is the development of competencies- competence in the KKNI. In contrast; the learning survey was conducted to obtain information about the learning process in the classroom and the characteristics of students; including academic achievement and learning behaviour. Information that must be obtained at this stage is the problems experienced by lecturers and students in the learning process in class. The second stage of planning is a task analysis to determine the content of the material; including analysis of graduate learning outcomes; especially in knowledge and skills; analysis of course learning outcomes; and study materials. Analysis of graduate learning outcomes (CPL) is based on knowledge and skills (general skills and specific skills); while analysis of course learning outcomes and study materials to be taught and incorporated into teaching materials to be developed.

The third stage is the development of a product draft for KKNI-oriented learning tools; including GBPP; syllabus; RPS; lecture contracts; teaching materials; observation sheets for the implementation of RPS; and questionnaires on student responses to the learning process and questionnaires on student responses to lecture contracts. The fourth stage is product validation which will be validated by four learning expert lecturers in the Department of Social Sciences. The results of the validation in the form of the feasibility of the device and suggestions and input are used as information for the revision of the next development stage. The fifth stage is the revision stage and product testing. After validation by experts; the next activity is to analyze the results of the validation of draft 1. The results of the revision in the draft I produce draft II as Product I or initial product that is ready for limited testing. The last stage of dissemination is a dissemination activity product that has been developed to be useful for the parties concerned. Dissemination can be done by submitting products to study programs related to research results; through scientific seminars related to developed products and uploading product files to the internet. Dissemination is a stage that aims to distribute the results of the development that has been carried out (Sari & Putri; 2020).

The trial subjects of the KKNI-oriented learning device assisted by the Synectic model in the Indonesian Society Studies course were class B students; batch 2014 in the sixth semester of the 2016/2017 academic year; totalling 43 people. To answer the problems posed in this study; data were collected using instruments that were in accordance with the type of data carried out; namely using observation sheets; validation sheets and questionnaires. The KKNI-oriented learning devices in the developed Indonesian society studies courses are valid if the minimum level of validity achieved is in the good category.

### 3. FINDINGS AND DISCUSSION

This present research is developed by the modified Borg & Gall's (1983) development model. To give a clear explanation of the whole stages; the following description is presented.

#### *Preliminary Study Stage*

This stage consists of a literature study and an observation of classroom learning. The data obtained from the needs analysis are as follows:

**Table 1. Taken from classroom survey and literature**

Results of the preliminary study
<ul style="list-style-type: none"> <li>• The curriculum used by the history education study program already refers to the Indonesian National Qualifications Framework (KKNI).</li> <li>• Lecturers of the historical education study program; especially lecturers in charge of Indonesian society study course; have not used KKNI-based teaching materials with the aid of the Synectic model. Lecturers get teaching materials from training and the internet; but the teaching materials used are not KKNI-oriented so they cannot train students' Synectic abilities.</li> <li>• Literature study activities as a reference for the development of KKNI-oriented teaching materials assisted by Synectic models so that they can improve students' Synectic abilities; especially in the Indonesian Community Studies course.</li> </ul>

From Table 1; it is seen that the study program has implemented the KKNI-based curriculum in their documents. This means that this institution has followed the Regulation of President Number 8 of 2012 concerning the Indonesian National Qualifications Framework; aiming at getting a reference for the students' qualifications to get recognition in the world of work (Solikha; 2016). However; in fact; the Indonesian society study course lecturers did not use the KKNI-oriented teaching materials yet; so they were still unable to apply the Synectic model and train students' Syntactic skills (Damayanti et al.; 2021). With this in mind; the researchers decided to further develop such learning devices.

#### *Planning Stage and Development of the Products' Drafts*

After conducting a needs analysis through a literature study and classroom observation; the next stage was the planning stage. Planning was done by analyzing the curriculum to determine Competency Standards and Basic Competencies and graduate learning outcomes (CPL); which include the domains of attitudes; knowledge; general skills and special skills; and formulating material from study materials. Moreover; the stage of preparing the product draft for the KKNI-oriented learning device with the aid of the Synectic model was also conducted. Based on this plan; a draft of KKNI-oriented learning tools assisted by the Synectic model was developed in Indonesian society studies courses which include:

Table 2. The products' drafts

The prepared Products	Descriptions
GBPP	The GBPP format is the development and adjustment of the GBPP based on the guidelines for preparing the Higher Education curriculum that has been provided; namely the GBPP identity; course description; course learning outcomes (CPMK); subject matter; sub CPMK; sub-subject matter; and learning reference sources/references.
Syllabus	The syllabus format is the development and adjustment of the syllabus based on the guidelines for the preparation of the higher education curriculum that has been provided; namely syllabus identity; course descriptions; course learning achievements; study materials (materials); references/learning resources.
RPS	The RPS developed refers to the 2015 National Higher Education Standards. The design of the RPS in the Indonesian Community Studies course is prepared for learning activities for one semester to meet the learning outcomes imposed on the Indonesian society studies courses; including the identity of the RPS; course descriptions; and learning outcomes graduates (CPL); course learning outcomes (CPMK); subject/study materials; learning activities; assignments; assessments; regulations/rules; and references.
Study contract	The developed course contract contains course identity; description; competency standards and basic competencies; learning outcomes; learning methods; learning materials and structures; assessment criteria; rules/regulations; and references.
Teaching materials	The teaching materials developed are printed/visual materials in books or modules related to materials in Indonesian society studies courses.
Learning Process Implementation Observation Sheet	The Observation Sheet developed is a guideline for implementing the Synectic model-assisted learning process in Indonesian society studies courses.
Student Evaluation Sheet	The student evaluation sheets developed were a learning process assessment questionnaire and a lecture contract assessment questionnaire.

Table 2 shows how the researchers did a step-by-step preparation of the product; starting from collecting the GPP; Syllabus; RPS; study contract; teaching materials; observation; until the evaluation sheet. These prepared documents consider the students' competencies after graduating as expected in the KKNI-based curriculum which focuses on competence or learning outcomes so that competencies expected of graduates are implanted through course material (Siagian et al., 2018). This means that; at this stage; the researchers also considered the government's expectation into the products' drafts.

#### ***Product Trial Phase: Validation Stage and Revision***

Draft teaching materials consisting of GBPP; syllabus; RPS; lecture contracts; teaching materials; observation sheets on the implementation of the learning process and student evaluation sheets were then tested in the trial phase. The KKNI-based learning tool draft was validated by experts in curriculum development; namely lecturers in the social sciences. The validation results in the form of

the feasibility of the device; and suggestions and input are used as information for revision at the next development stage. After validation by experts; the next activity is to analyze the results of the validation of draft I. the results of the revision of draft I produce draft II as a product I or the initial product that is ready for limited testing. The product I of KKNi-oriented learning tools assisted by Synectic models in Indonesian society studies courses that have been validated and revised will then be tested. The trial was carried out only once; which is a limited test considering the limited time. The step in this limited test stage is the initial product of KKNi-oriented learning tools assisted by the Synectic model in the Indonesian society studies course; which is tested in class B class 2014 in the sixth semester of the history education study program.

This trial is intended to see and measure the implementation of KKNi-oriented learning tools assisted by Synectic models in Indonesian community studies courses in the learning process in the form of effectiveness; legibility; clarity and usability of the elements in the KKNi-oriented learning tools assisted by Synectic models. This limited test was conducted in class B in the sixth semester of the 2014 history education study program using KKNi-oriented learning tools assisted by a Synectic model that has been developed and has been validated/feasible by experts; practitioners and colleagues (see Munarto & Mulyani; 2016; Jainuri; 2017; Karwati; 2012; and Ramadhani; 2020).

### *Dissemination Stage*

Dissemination can be done in several ways; such as submitting products to other study programs; both within the scope of social sciences and other departments related to research results; through scientific seminars related to products developed and uploading product files to the internet. The dissemination stage or operational trials see Yusuf (2015); dissemination is carried out to promote product development so that it can be accepted by users; whether individuals; groups; or systems. Manufacturers and distributors must be selective and work together to package the material in the right form (Amali et al.; 2019).

The data obtained in this development is product feasibility test data; namely limited test data. The limited test was conducted on 43 students of class B class 2014 in the sixth semester of the history education study program and limited test data from student responses to the learning process and lecture contracts. Student responses to the learning process and lecture contracts developed using KKNi-oriented learning tools assisted by Synectic models in Indonesian community studies courses. Student responses were obtained from the questionnaire results given at face-to-face lectures.

**Table 3. The result of students' responses**

<b>Responses</b>	<b>Average Score</b>	<b>Category</b>
Students' responses to the learning process	3.73	Very good
Students' responses to the lecture contract	4.44	Very good
Students' responses to the implementation of the Synectic model-assisted learning process	3.80	Very good

Table 3 provides information about the average score of students' responses to the learning process is 3.73; which has very good criteria; and the average score of student responses to the lecture contract is 4.44 has very good criteria. The lecture contract can be seen from various written works such as Lubis (2017) and Tri Mardiani (2020). The assessment of the implementation of the Synectic model-assisted learning process is carried out by one observer. The convection score for the implementation of the Synectic model-assisted learning process becomes a scale of 5. The average score for the implementation of the Synectic model-assisted learning process for the first meeting is 3.80; with a very good category. The average score for the implementation of the Synectic model-assisted learning process for the second meeting is 4.44 with a very good category.

Validation carried out by expert lecturers on KKNi-oriented learning tools assisted by the Synectic model in Indonesian community studies courses; namely GBPP; syllabus; RPS; lecture contracts; teaching materials; observation sheets on the implementation of the Synectic-assisted Learning Process;

student response questionnaire sheets and assessment questionnaire sheets study contract. Based on the results of the validation; it is known that some of the equipment is good; and some parts of the other equipment need to be revised before being used in lectures. The data obtained from the validation results by expert lecturers was converted on a scale of 4 so that the average score was 2.5 and the standard deviation (SBx) was 0.5. According to the scoring reference formula; the average score from the validation results is converted into certain criteria. To see the general picture; please see Table 4.

**Table 4. Expert lecturers I and II**

Products	Average Score	Category
GBPP	3.71	Very Good
Syllabus	3.77	Very Good
RPS	3.87	Very Good
Teaching materials	3.71	Very Good
Observation sheet	3.90	Very Good
Lecture Contract	3.68	Very Good

The mean score on GBPP 3.71 in the GBPP assessment has very good criteria. The average score on the 3.77 syllabus has very good criteria; the average score on the RPS 3.87 has very good criteria; the average score on the lecture contract 3.68 has very good criteria; the average score on teaching materials 3.71 has very good criteria. The average score on the student response observation sheet; 3.90; has very good criteria; the average score on the lecture contract assessment questionnaire sheet 3.68 has very good criteria. Therefore; according to expert lecturers I and II; the tools developed are suitable for use in the learning process of Indonesian society studies courses by making several revisions based on suggestions and input from expert lecturers I and II.

**Table 5. Expert lecturers III and IV**

Products	Average Score	Category
GBPP	3.92	Very Good
Syllabus	3.77	Very Good
RPS	3.75	Very Good
Lecture Contract	3.94	Very Good
Teaching materials	3.64	Very Good
Observation sheet	3.80	Very Good

Moreover; the mean score on GBPP is 3.92 in the GBPP assessment has very good criteria. The average score on the syllabus 3.77 has very good criteria; the average score on the RPS 3.75 has very good criteria; the average score on the lecture contract is 3.94 has very good criteria; the average score on teaching materials is 3.64 has very good criteria; the mean of the observation sheet on the implementation of the Synectic Model-assisted Learning Process 3.58 has very good criteria; the average score on the student response questionnaire sheet is 3.80 has very good criteria. Therefore; according to expert lecturers III and IV; the tools developed are suitable for use in the learning process of Indonesian society studies courses by making several revisions based on suggestions and input from expert lecturers III and IV.

The KKNi-oriented learning devices assisted by the Synectic model in the Indonesian social studies course in this development research have undergone two revisions. The first revision received some input; suggestions and validation from four expert lecturers at the development stage. The second revision received input from the limited test results in student responses and observations during the learning process. KKNi-oriented learning tools assisted by Synectic models in Indonesian community studies courses consist of GBPP; syllabus; RPS; lecture contracts; teaching materials; observation sheets on the implementation of the learning process; student response questionnaire sheets; and lecture

contract assessment questionnaires. Implementation of the KKNi-based curriculum will eliminate the teaching mindset; namely transferring knowledge from lecturers to students (transfer of knowledge); which only prioritizes aspects of knowledge and skills (scientific ontology of study programs) and very minimal development of student attitudes and behavior (Faisal; et al.; 2018). The implementation of learning emphasizes processes and products to guide students in carrying out a scientific approach; namely listening; seeing; analyzing; discovering and communicating (networking); informing student attitudes; knowledge and skills (Maba; 2016).

The personal analogy Synectic learning method carried out by Sari & Hermawati (2020) has proven effective in improving students' creative thinking skills. This shows that students are more enthusiastic in participating in learning activities to discuss actively and ask questions are more developed during learning. In addition; trials on the learning process proved that students responded positively to the learning process and the lecture contract. The advantages of KKNi-oriented learning tools assisted by Synectic models in Indonesian society studies courses include cognitive; affective and psychomotor aspects (Firianti & Husna; 2021). The cognitive aspect of the KKNi-oriented learning tool emphasizes Synectic; which consists of the ability to develop analogous thinking skills; analyze and evaluate.

#### 4. CONCLUSION

Based on the data analysis and discussion as described in the previous section; several things were found in the Study of Indonesian Society as follows: (1) This educational research has resulted in KKNi-oriented learning devices assisted by Synectic models in courses that were developed through six stages based on modifications of the Borg & Gall development procedure; namely the preliminary study stage; the planning stage; the drafting stage of the KKNi-based learning device product draft assisted by the Synectic model in the Indonesian Society Studies course; the product validation stage; the revision and product testing stage and the dissemination stage; (2) the resulting learning device has been declared suitable for use because it went through a validation stage by four expert learning lecturers in the social science education department and has gone through two revision stages which in the first revision quite followed up on suggestions and input from expert lecturer validation on the device product developed; then in the second phase of revision based on the results of the limited test the improvements made to the KKNi-oriented learning device assisted by the Synectic model did not experience much improvement and were declared suitable for use; (3) students' responses to the lecture contract and the learning process are categorized as very good with the acquisition of the learning process at 3.73 having very good criteria and the average student response score to the lecture contract being 4.44 very good based on the results of limited test data analysis; (4) the implementation of the learning process observed by the observer at the first two meetings was 3.80 with a very good category; the average score of the implementation of the Synectic model-assisted learning process in the second meeting was 4.44 with a very good category.

The researchers realize that this study has limitations. Thus; further studies are encouraged to complete the weaknesses. In order to result in a more focused analysis; future researchers can focus the development only on a particular tool used in the KKNi implementation; such as the syllabus; teaching materials; instructional media; or lesson plans. Focusing only on a particular discussion will make the findings more credible and meaningful.

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