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Accelerated Learning Integrated by Discovery Learning in History Course: How Z Generation Learn

D A Safitri[1], N Umamah[1]* and Sumardi[1]

[1]Postgraduate of Social Science Education, Faculty of Teacher Training and Education, University of Jember, Kalimantan Street 37 Jember, East Java, Indonesia, 68121

*nurul70@unej.ac.id

Abstract. This research is motivated by the characteristics of middle school students who are dominated by generation Z. The purpose of this study is to find out the results of the development of the *Accelerated Learning Integrated by Discovery* model. This development research was adapted from Borg and Gall. The results showed that: (1) Material Validation regarding the result 89%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in the field test. (2) The Result of Design Model Validation 83%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in the field test. (3) Result of Media Validation 82%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in field tests. (4) Result of Linguist Validation 70%, it can be concluded that this product is classified as Good and does not need to be revised. In other words, this product can be used in field tests. Experimental results with indicators of effectiveness, and efficiency showed 79%. It means Good. (4) There is a difference between the baseline class and the trial class. The results of the model received a learning score of 80.00 while the baseline class received scor was 68.9. Referring to the criteria of the product feasibility analysis, it is concluded that the application of the *Accelerated Learning Integrated by Discovery* model Good and feasible to be used of students in middle school.

1. Introduction

Historical researchers show that history is an interesting thing to discuss, especially in developing the character of students [1]. But it becomes a boring and frightening experience when learning history is only a presentation and transmission of information about the past and memory and recorded [2]. The paradigm that there is an impression of history as a second class is very worrying for historical activists. Research conducted by Alfie [3] states that historical teaching strategies cannot be separated from the curriculum as a component of historical learning planning. Media for learning also gives an effect to improve teaching quality and effectiveness [18]. Planning is used to achieve educational goals. Efforts to revive historical learning must be done, namely by making changes to the history curriculum that can be adaptive to students at any age.

Students in middle school age or what are referred to as generation Z have unique and different thinking tendencies, namely the generation who is technology literate, moves quickly from one task to another, and always thinks practically. In accordance with the first generation theory proposed by William Strauss and Neil Howe (1991), states that "generation" is identified as a group based on the year of birth, age, location and life events mark the importance of development. Generation is divided into four generations of groups, namely: (1) Generations of veterans born before 1946; (2) Baby Boomers generation born in the years 1946-1964, (3) Generation X is the generation born in the years 1965-1980; (4) Generation Y is the generation born in 1981-2001. Generation is formed through shared memories and collective experience and history. Therefore, several studies have found that expressing opinions about the birth of different reference periods for each generation [17] Generation Z, as mentioned by Barnes and Nobel, generations born between 1990 and 2000 are different from the various characteristics of the previous conventional generation. Ozkan and Solmaz [4] show that the tendency of this generation has practical thinking. The education history curriculum states that it is necessary to balance the abilities of aspects of attitude, skills and knowledge to be important. Historical learning needs to be updated to prepare young people who can anticipate and adapt to the

future, therefore it is no longer appropriate to emphasize only on memorizing facts such as those encountered in learning history today, but more emphasis on student activities with process skills according to the needs of generations Z is high school students, in this study students in jember district. Then the implementation of the curriculum in schools must teach history learning to facilitate history teachers according to the 21st century as education service providers. applicable instructional illustrations are required to fulfill 21st century education activities [2]

The fact that often occurs in schools is that students study only in the low cognitive domain [5]. The observations show that educators generally provide direct understanding of the material and have not been able to train students to think independently. Learning is still teacher centered. Learners sit down and listen to what the educator says. Learning activities that facilitate students to develop historical learning outcomes proportionally and concretely and to empower scientific work do not yet exist optimally. Many students consider historical learning to be a less attractive subject so students are less motivated, passive, and bored. Proof that school history learning is not optimal based on the results of the needs analysis in the form of data on the learning outcomes of high school students in Jember Regency;

Table 1. Historical Learning Result

School	Historical Learning Result	
	Percentage of completeness	Average value
SMAN 1 Jember	70%	79
SMAN 2 Jember	64%	70
SMAN 3 Jember	53.4%	65
SMAN 5Jember	51.9%	64
SMAN ARJASA Jember	44.3%	60
SMAN Kalisat Jember	45.2%	62
SMAN Sukowono Jember	40%	60
SMAN Rambipuji Jember	43.2%	60

Based on the above data, it shows that not all students reach the Minimum Completion Standard score of 75. The factors that influence the learning process can be divided into two: internal factors and external factors. Internal factors originate from student motivation, their interests and students' thinking abilities. External factors are external factors that influence the learning environment for students including students, family, school, and community learning. School factors include teaching methods, curriculum, relationships between teachers and students, school discipline and teaching aids [10] Observations and interviews related to 8 National Education Standards (NES) in several universities in the implementation of Jember data show a cumulative value of 93.39% with score gap of 6.61%. The biggest difference score contribution is related to process standards that have an impact on student learning outcomes. On the basis of this analysis of needs, it is necessary to reform in the standard part of the process.

Some schools in Kabupaten Jember such as SMAN 1 Jember have an accelerated program. However, the problem encountered by researchers is that learning activities that occur in schools tend to give excessive learning burden so that students do not have time to do activities outside of school. There are no educational products that are able to make the learning process that can increase the willingness to explore and develop knowledge in students. Excessive learning burden tends to make trauma so that the completion of the task is only intended for survival. Learning no longer occurs because of intrinsic encouragement, but is more influenced by the element of coercion in the sense of not being natural

Other problems found in schools that do not yet have an acceleration program such as SMAN 2 Jember, SMAN 3 Jember, SMAN 5 Jember, SMAN Rambipuji SMAN Arjasa, SMAN Kalisat, and SMAN Plus Sukowono do not facilitate educational products in the form of a practical acceleration favored by students, but rather it is not educative and is only in the form of a "drill" system so that it tends to not be varied. The use of a "drill" system is not always bad, but it is not the only way to make

the learning process optimum. Educators need to have the ability to use models or methods of learning that are varied and involve students. That is, schools have not facilitated educational products, namely learning models that train accelerated learning naturally so that students accelerate mastery and understanding of the material while discovering and constructing knowledge with normal efforts and coupled with joy.

The teacher responsible for the learning plan must be able to choose and apply innovative learning models to enable students to learn the results of history as a whole. the model also applied learning is expected to manage internal factors and the external influence of student learning. One innovative learning model that can be used to improve student learning outcomes in the curriculum according to the findings in 2013, is an educational model [4].

Discovery learning model is one of the constructivist model of education, which provides an opportunity for students to explore and discover their own concept using the approach to problem solving. Students are encouraged to be able to explore, to get specific data, processing the information and draw conclusions based on available data [6]. Students can actively work on getting meaningful knowledge for themselves through activities based on the scientific method. Discovery learning can enhance the overall learning outcomes both in terms of knowledge, attitudes and skills [7] [5]However, the discovery learning models made in class by the number of students is too many will be difficult for teachers to control students' activities. Students who have the ability to dominate the high comprehension and mastery of concepts Faster [8]. Conversely, students who have low comprehension skills are still left behind [9]. In addition to learning discovery requires psychological preparation of students, in order to follow the teachings well [10] [2]. The result is that less intelligent students would be hard to think and express relationships between concepts in written or oral, that may lead to frustration. This study less attention to the emotional aspects of students. Implementation of discovery often takes a long time because students are required to obtain an independent concept [11]. The weakness of the discovery learning process can be overcome by it integrates with other elements of learning related claims. One alternative learning models that can be integrated with knowledge of learning accelerated learning (AL).

AL is an educational models growing niche that has the properties to be flexible, passionate, relates to the objectives of cooperation, humane, multi-sensory, maintain, as far as activities related to mental and emotional and physical [12]. AL was able to create a positive environment for learning and fun for the students to accommodate different learning styles of students. One of the principles of the Navy, is the importance of learning through collaboration teamwork. It can be used to improve student learning so that students can learn faster and can occur between students' own conception [13]. The second measurement Feelings students to learn writewas affective checklist entitled How are you feeling today. The aim of the Waste Determine how students feel before and after the tutorial AcceleratedLearning [14]. Pleasant learning atmosphere can be created and activated Now is the interaction between teachers and students so that learning can take place effectively. AL learning can improve cognitive ability, memory and student achievement [15] [7]. Various creative techniques for rapid learning and how to improve your memory is also becoming one of the stages in this model. However, the freedom to learn at AL engage students in learning activities that develop learning history characteristics [16].

Table 2. *Using Both Sides of the Brain, with the Right Side Being the Starting Point for Accelerated Learning*

RIGHT SIDE	LEFT SIDE
• emotion and intuition	• logic
• forms and patterns e.g. diagrams	• mathematical formulae
• images and pictures	• language
• rhythm, music and sounds	• words
• synthesis i.e. 'big picture'	• analysis i.e. details
• specific and concrete	• symbolic and abstract
• spatial manipulation	• sequence
• imagination	• linearity
• tune of a song	• words of a song

Source: [7]

Accelerated Learning Integrated by Discovery (ALID) a learning model that combines a model of Accelerated Learning is able to make a positive learning environment and fun for learners to accommodate different learning styles of students. One of the principles of Accelerated Learning, the importance of learning through collaborative teamwork. It can be used to improve student learning so that students can learn faster and can occur even distribution between the concept of learners [21]. Combined with the discovery as one of the models of constructivist learning models that provide opportunities for learners to seek and find their own concept of using a problem-solving approach.

Based on the background outlined above, the problems faced are: (1) based on the results of needs analysis in schools, so far no one has integrated the Accelerated Learning and Discovery learning models in learning activities in Jember district secondary schools (2) schools that apply the Acelerated learning model have not provided a practical effort to accelerate the likes of students , but it is not educative and there is an element of compulsion such as the "drill" system (3) the school has not facilitated educational products, namely learning models that train accelerated learning naturally so that students accelerate mastery and understanding of material while discovering and constructing knowledge with normal and coupled efforts excitement. Solution of solving problems, problems, and development of learning problems;

a. How the results of the validation of the *Accelerated Learning Integrated by Discovery (ALID)* the development model Borg & Gall on the subjects of Indonesian history class X SMA?

b. Are *Accelerated Learning Integrated by Discovery (ALID* models as a learning model class X SMA learners able to support learning Indonesian history into effective learning and efsien?

The objectives to be achieved in this study are as follows:

a. The products *Accelerated Learning Integrated by Discovery (ALID)* validated subject matter experts and instructional design experts.

b. The products with *Accelerated Learning Integrated by Discovery (ALID)* as a model of effective and efficient learning for learners in class X High School in Jember in Indonesian history courses.

The Product Specification Development:

Products produced in this development is a system that leads to a learning model. This learning model was developed from the model AL (Accelertaed Learning) and Discovery. The prototype model of learning that have so will be equipped with the preparation of learning tools that support adherence to the model, include: lesson plan (RPP) in accordance with the syllabus of the curriculum in 2013, adapted the material with teachers on curriculum workbooks, 2013, evaluation instruments and instructional videos. Design learning tools tailored to the format applicable to the curriculum in 2013. Syntax alid learning model consists of 10 steps, namely; (1) Self Concept; (2) Stimulation; (3) Problem Statement; (4) Exploration; (5) Data Collecting; (6) Data Processing; (7) Trigerring your memory; (8) Exhibiting what you know; (9) Verification; and (10) Reflection. Basic competence is developed namely KD 3.7 Analyzing the various theories about the process of inclusion of religion and culture of Islam to Indonesia. The next KD is KD 3.8 Analyzing the development of community life, governance and culture in the kingdom - the kingdom of Islam in Indonesia as well as show examples of evidence - evidence that is still valid in contemporary Indonesian society.

2. Methods

Determination of the place or location of this study using purposive sampling area, namely the selection or location where the research was done deliberately and is determined solely by the researchers based on certain considerations including the limitations of time, money, and effort.. Preliminary observations made in 8 schools in Jember district. This study be conducted in SMA Negeri Kalisat class X.

Research learning model development *Accelerated Learning Integrated by Discovery* refers to the Borg and Gall (1987) which has been modified into eight stages, namely: 1) research and information gathering, 2) planning, 3) early product development, 4) trial starters, 5) revision of its first product, 6) the main field test / unlimited, 7) revision of the second product, 8) operational field testing / effectiveness. Research and information gathering phase is an early stage in the development of procedures that cover all activities related to the collection of data for analysis requirements. The activities performed at this stage include analysis eighth Standar Nasional Pendidikan (SNP), the

results of evaluation of half analysis cognitive development of pupils, interviews with teachers and students, tracking problems arising during the study and analysis "Rencana Pelaksanaan Pembelajaran (RPP)" and its implementation and analysis of the needs of students. Results of the analysis will be used to improve and develop businesses as an alternative solution to the problem. Validator assess prototype models. Planning stage is done designing learning model *Accelerated Learning Integrated by Discovery*. Design based on the questions that were analyzed in the research and information gathering in order to create a model is a model that is designed to solve all the problems that exist. Planning is done to achieve competence, formulation of objectives, sequence of teaching and learning device format. The planning phase also consists of determining the qualifying activity will contribute to the development of research and vAlidtors, including vocational development model, subject matter experts, and practices and student learning. In addition, the procedure for the determination will be carried out during the study, that research can be done effectively and efficiently. The following product development research methods use borg and gall:
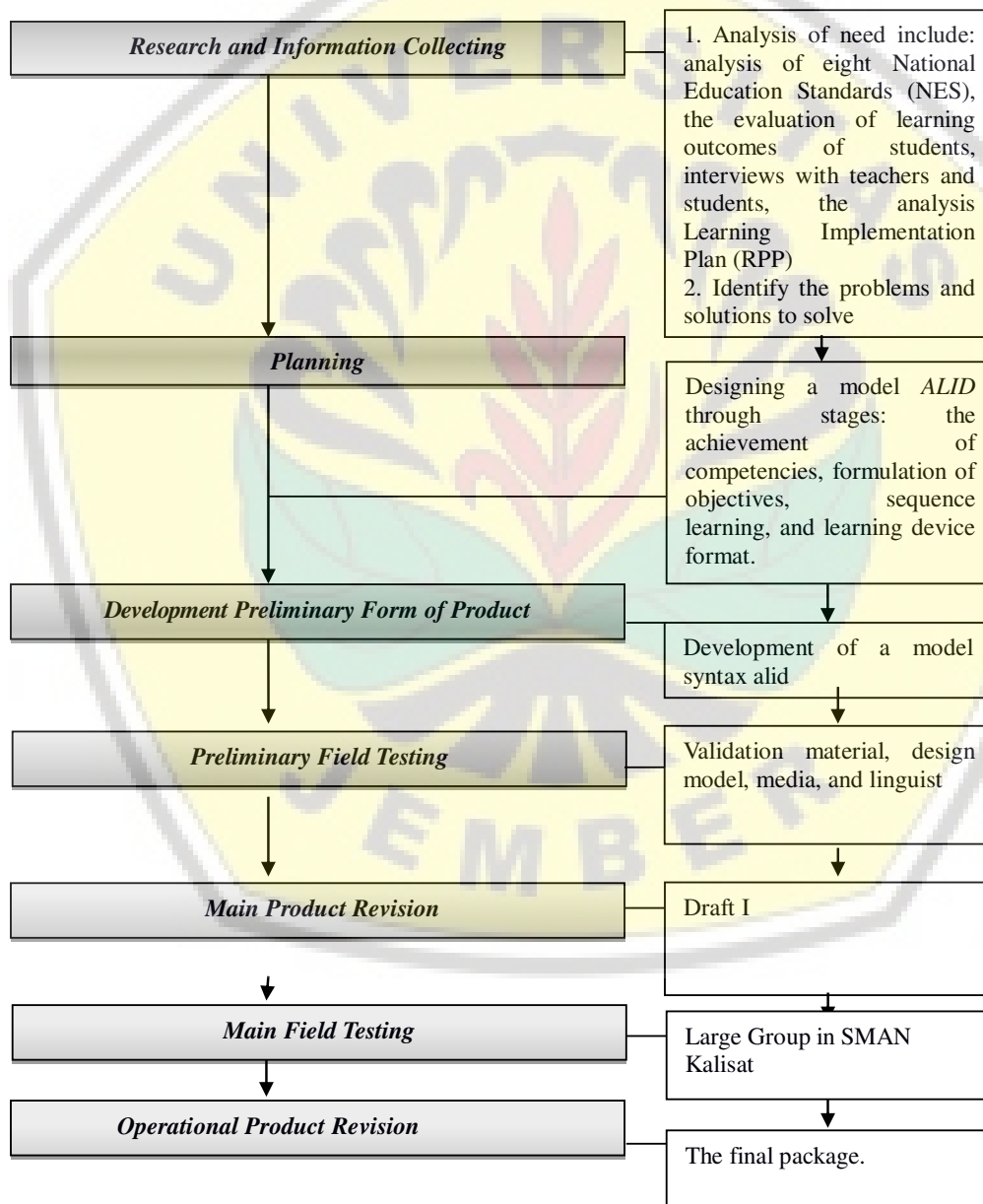

Figure 1. Borg and Gall Method in *ALID Learning Development*

Early development products is made with reference to the plans that were made earlier. This phase begins with the development of the educational model, syntax *ALID* integration phase detection in accelerated learning and getting new syntax. Development learning model that includes four components learning model are: 1) The basic theory, 2) syntax learning, social system 3) and 4) support system. The four components are presented in the form of a prototype model. The prototype model of learning, which will be equipped with teaching aids that support the preparation according to the model include: RPP (RPP) in accordance with the syllabus of 2013 designing curriculum learning tools tailored to the format applicable to the curriculum in 2013. Initial experiments conducted field to obtain initial qualitative evaluation of the design of products that have been made. Experiments carried out starting with an examination expert validation, consisting of expert validation of language, validation of content experts, validation of development model of learning, and validation of media. The test results were analyzed with descriptive qualitative and quantitative using SPSS 25.0 and T-Test formula.

Based on the ordinal data used in this research and development, the researchers intend to find the percentage of values obtained from the product developed as data analysis. If the results have been obtained, the feasibility of the product can be determined based on the table below:

Table 3. Criteria for Results of Product Feasibilty Analysis

Percentage (%)	Information
80 – 100	Very Good
66 – 79	Good
56 – 65	Good Enough
40 – 55	Bad
0 – 39	Very Bad

Source: [22

3.   Results and Discussion
3.1 *Validation Material, Design, Media, and Linguist*
The data obtained from the results of the learning material validation are:

Table 4. The Details of Material Validation model *Accelerated Learning Integrated by Discovery*

No.	Rated aspect	Score			
		1	2	3	4
1	The accuracy of the analysis procedure of interest			√	
2	The accuracy of the selection of materials / content suitable for the preparation of learning modules				√
3	The contents of learning materials are in accordance with the core competencies and basic competencies of learners High School				√
4	The contents of the material was in accordance with the learning objectives to be achieved in learning materials regarding analyzes the various theories about the entry process and the development of religion and Islamic culture in Indonesia.				√
5	The accuracy of the contents of the title selection to present learning materials with learning media.		√		
6	Topic learning material is presented clearly.		√		
7	The order of learning material systematically arranged.			√	
8	The accuracy of the description of material on the material 1			√	
9	The accuracy of the description of material on the material 2		√		
10	The accuracy of the grain illustrations appropriate to clarify the learning material		√		

11	The contents of the material on learning media can facilitate students understanding of the history of learning materials	√	
12	Material presented short, dense, and clear.		√
13	The contents can not deviate from the concept of learning.		√
14	The concept of scientific material, accurate and true.	√	
15	Suitability of references used by the material presented.		√
16	The attractiveness of the display material on teaching media.	√	
17	Correct use of words in each sentence		√
18	Conformity sentence with the level of understanding of learners		√
19	The accuracy of the benefits summary	√	
20	The accuracy of the test design exercises that use a subjective model of the test	√	
21	Conformity evaluation with the aim of learning		√
22	The accuracy of the evaluation form	√	

Source: the results of processing researchers

Table 5. The Result of Material Validation Model *Accelerated Learning Integrated by Discovery*

Material Validator	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Score
1	4	4	4	4	3	3	4	4	3	3	3	4	4	3	4	3	4	4	3	3	4	4	79
Targeted Total Score																							88

Source: the results of processing researchers

Based on the data, to calculate the percentage level use the following formula:

$$P = \frac{\sum x}{\sum x i} \times 100\%$$
[22]

Information:

P = Percentage

Σx = Total Subject Answer

Σxi = Targeted Total Score

100% = Constanta Number

The percentage of quantitative data from the material validation results is as follows:

$$P = \frac{79}{88} \times 100\%$$

P = 89 %

Referring to Arikunto [22] regarding the results of analysis of product feasibility, from the results of 89%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in field tests.

Table 6. The Detail of Design Model Validation *Accelerated Learning Integrated by Discovery*

No.	Capability Model and Aspects of Observation	Scoring scale			
		1	2	3	4
1.	**Syntax**				
	Submission of Interest and motivating learners.			√	
	Delivering Learning Materials clearly.			√	
	Giving strut on learners who need				√
	Implementation of learning with the formation of concepts and generalizations			√	
	Establishment of a study partner			√	
	Verify the findings of the learner information				√

2.	**Social system**	
Activities educator as facilitator	√	
Activities educators as a consultant	√	
Activities educators as moderator	√	
Learners work on tasks assigned by educators		√
Inter learners interact in completing the tasks assigned by educators		√
3.	**The reaction principle (Behavior Educators)**	
Attention educators to ordinances learners in completing the task	√	
Provide information and guidance for students in need	√	
Pointing learners at random to present the work.		√
Giving respond and verify the findings of learners	√	
The attractiveness of the applied learning models		√
3.	**Support system**	
Learning model application in accordance with lesson plans and learning devices.	√	
4.	**Impact Companion**	
The ability of learners in mastering the learning material	√	
The ability of learners in completing tasks and problems	√	
The effectiveness of learners in the learning		√

Source: the results of processing researchers

Table 7. The Result of Design Model Validation *Accelerated Learning Integrated by Discovery*

Material Validator	Number of Questions																				Score
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	3	3	4	3	3	4	3	3	3	4	4	3	3	4	3	4	3	3	3	4	67
	Targeted Total Score																				80

Source: the results of processing researchers

Based on the data, to calculate the percentage level use the following formula:

$$P = \frac{\sum x}{\sum x\,i} \times 100\%$$

[22]

Information:

P   = Percentage

Σx   = Total Subject Answer

Σxi   = Targeted Total Score

100%   = Constanta Number

The percentage of quantitative data from the material validation results is as follows:

$$P = \frac{67}{80} \times 100\%$$

P = 83%

Referring to Arikunto [22] regarding the results of analysis of product feasibility, from the results of 83%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in field tests.

Table 8. The Detail of Media Validation *Accelerated Learning Integrated by Discovery*

No.	Rated aspect	Scoring scale			
		1	2	3	4
	Criteria Display Media				
1	Selection and use of animation on a power point is not excessive				√
2	Power points are presented in accordance with instructional materials				√
3	Attractive display design			√	
4	Media design layout proportional			√	
5	Suitability proportion of color (color balance)				√
6	Suitability in choosing image			√	
7	Suitability in selecting the type of font			√	
8	Power point display is a combination of several components of text and images which can support the learning process of history.				√
9	The accuracy of the grain illustrations appropriate to clarify the learning material			√	
10	The contents of the material on learning media can facilitate students understanding of the history of learning materials			√	
11	Posts visible			√	
12	The order of delivery of content in the media systematically arranged			√	
13	The program can run well on a high resolution screen			√	

Source: the results of processing researchers

Table 9. The Result of Media Validation *Accelerated Learning Integrated by Discovery*

Material Validator	Number of Questions													Score
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	4	4	3	3	4	3	3	4	3	3	3	3	3	43
	Targeted Total Score													**52**

Source: the results of processing researchers

Based on the data, to calculate the percentage level use the following formula:

$$P = \frac{\sum x}{\sum x\,i} \times 100\%$$

[22]

Information:

P   = Percentage

Σx   = Total Subject Answer

Σxi   = Targeted Total Score

100%   = Constanta Number

The percentage of quantitative data from the material validation results is as follows:

$$P = \frac{43}{52} \times 100\%$$

P = 82%

Referring to Arikunto [22] regarding the results of analysis of product feasibility, from the results of 82%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in field tests.

Table 10. The Detail of Linguist Validation *Accelerated Learning Integrated by Discovery*

No.	Aspects Observations	Scoring scale			
		1	2	3	4
	Businesslike				
1	The accuracy of sentence structure			√	
2	The effectiveness of the sentence		√		
3	Kebakuan term			√	
	Communicative				
4	readability message		√		
5	The accuracy of the use of language rules			√	
	Dialogic and Interactive				
6	The ability to motivate the message or information			√	
7	Encourage critical thinking ability learners			√	
	Compliance with the level of development of learners				
8	Suitability development of learners			√	
9	Compliance with the level of emotional development of learners			√	
	Keruntutan and alignment Flow Thought				
10	Integration of each sentence			√	

Source: the results of processing researchers

Table 11. The Result of Linguist Validation *Accelerated Learning Integrated by Discovery*

Material Validator	Number of Questions										Score
	1	2	3	4	5	6	7	8	9	10	
1	3	2	3	2	3	3	3	3	3	3	28
					Targeted Total Score						40

Source: the results of processing researchers

Based on the data, to calculate the percentage level use the following formula:

$$P = \frac{\sum x}{\sum xi} \times 100\%$$

[22]

Information:

P   = Percentage

Σx   = Total Subject Answer

Σxi   = Targeted Total Score

100%   = Constanta Number

The percentage of quantitative data from the material validation results is as follows:

$P = \dfrac{28}{40} \times 100\%$

$P = 70\%$

Referring to Arikunto [22] regarding the results of analysis of product feasibility, from the results of 70%, it can be concluded that this product is classified as Good and does not need to be revised. In other words, this product can be used in field tests.

The activities carried out in the development research are based on the results of product feasibility related to linguistic validation, content expert validation, validation of learning development models, and media validation. The one to one trial phase was conducted on 10 students at the SMAN Kalisat by taking data using the questionnaire sheet. Teacher of SMAN Kalisat class X conducts experiments by applying the Accelerated Learning Integrated by Discovery model developed by researchers. Then, students are asked to fill out responses using the product model developed. The following are the results of research on student responses:

Table 12. Experiment Values

Respondents	Number of Questions												Total
	1	2	3	4	5	6	7	8	9	10	11	12	
1	4	3	4	4	3	3	3	3	4	3	2	4	40
2	2	3	2	3	3	3	2	4	4	2	4	3	35
3	3	4	3	3	4	4	3	3	4	4	4	3	42

4	3	3	3	4	2	2	3	3	4	3	3	4	**37**
5	3	3	4	3	3	3	4	3	3	4	4	3	**40**
6	3	3	3	2	3	3	3	2	3	3	3	2	**33**
7	4	3	3	3	3	4	3	3	2	3	2	3	**36**
8	2	4	3	4	4	4	3	3	3	2	2	3	**37**
9	4	3	3	4	3	3	3	4	4	3	4	3	**41**
10	4	3	4	3	2	4	4	3	3	3	3	3	**39**
Total	**32**	**32**	**32**	**33**	**30**	**33**	**31**	**31**	**34**	**30**	**31**	**31**	**380**
Total Score				**192**					**188**				**380**
Targeted Total Score				**240**					**240**				**480**

Source: the results of processing researchers

The result showed as follow **Table 13.** The Result of Experiment

Effectiveness	Efficiency
P = $\dfrac{192}{240}$ x 100%	P = $\dfrac{188}{240}$ x 100%
P = 80%	P = 78%

Source: the results of processing researchers

So that when calculated from the results of experimental data obtained on the subject of the test on students, the results obtained are as follows:

$$P = \frac{\sum x}{\sum xi} \times 100\%$$

P = $\dfrac{380}{480}$ x 100%

P = 79 %

Based the data, it can be concluded that experimental results with indicators of effectiveness, and efficiency showed 79%. It mean Good and students (Gen Z) enthusiastically by using Model *Accelerated Learning Integrated by Discovery* in History Course.

3.2   The Effectiveness od Developing Model Accelerated Learning Integrated by Discovery
To determine the effectiveness of the product model developed, researchers have tested the product on students with a 79% result, Good. In addition, to see the impact of whether there are differences in historical learning outcomes in middle school students of class X (Gen Z), the researchers gave essay tests in 2 classes at Kalisat High School. 1 class as a baseline class using the lecture model, and 1 class as a class treated by the *Accelerated Learning Integrated by Discovery* model. The results obtained can be as follows:

Table 14. Cognitive Learning Outcome Analysis by Using T Test

Test conducted	*Sig*	Concluded
Prerequisite Test;		
a. Normality Test Kolmogorov – Smirnov	*Baseline Class*= 0,19 (>0,05) *Trial Class* = 0,17(>0,05)	Normal Data Normal Data
b. Homogeneity Test Levene's Test	0,58(>0,05)	Homogeneous Data
T – Test (*Independent sample T-Test)*	0,00 (>0,05)	There are differences in cognitive learning outcomes

Source: the results of processing researchers

Table 15. Comparison of Baseline and Model Class Cognitive Values

Average Value	Baseline Class	Trial Class
Cognitive	68,90	80,00

Source: the results of processing researchers

It can be concluded that there is a difference between the baseline class and the trial class. The results of the model trials on the class that were treated with the developed model products received a learning score of 80.00 while the baseline class received scor 68.90, meaning that the product model was considered effective and able to improve learning outcomes in Basic Competence 3.7 Indonesian History Subjects.

Answering various matters relating to demands that there was an impression of history as a second class was very worrying for historical activists. Research conducted by Alfie [3] states that historical teaching strategies cannot be separated from the curriculum as a component of historical learning planning. Planning is used to achieve educational goals. Efforts to revive historical learning must be done, namely by making changes to the history curriculum that can be adaptive to students at any age. *Accelerated Learning Integrated by Discovery* model is a learning model that combines Accelerated Learning and Discovery models that are able to create a positive and enjoyable learning environment for students to accommodate different learning styles from students. One of the principles of accelerated learning, the importance of learning through collaborative teamwork. This can be used to improve student learning so that students can learn faster and even distribution can occur between the concepts of students. Thus, this model product is effective for middle school students.

In general, students can receive learning using the Accelerated Integrated Learning model by Discovery. Students argue that students can more easily carry out interactions in completing tasks, working with friends, and solving problems. Syntax model *Accelerated Learning Integrated by Discovery* closely related to constructivist learning but also humanist. This can be seen from the 10 stages developed, namely; (1) *Self Concept;* (2) *Stimulation;* (3) *Problem Statement;* (4) *Exploration;* (5) *Data Collecting;* (6) *Data Processing;* (7) *Trigerring your memory;* (8) *Exhibiting what you know;* (9) *Verification; dan* (10) *Reflection.*

Learning model developed in this study is a design or pattern learning is used as a guide in planning and embodies a process / activity history teaching in class directing in designing learning to help learners, so that the learning goals set to be achieved. Model Accelerated Learning Integrated Learning by Discovery (alid) using Borg and Gall is a pattern concept used as a guide in planning and realizing a learning process in the classroom who directs the design learning to help learners to improve acceleration of learning and learning outcomes of students. The combination of models AL and Discovery Learning in learning is done by integrating syntax acceleraed model of learning and discovery learning model as alid learning syntax. ALID learning aims to make learning constructivist and humanistic to the specifications:

1. Accelerated Learning Integrated model development by Discovery (alid) equipped with learning tools are developed and can be used as well as lesson plans and learning resources for learners.

2. Model Integrated Accelerated Learning by Discovery (alid) equipped with learning tools are developed in accordance with KI and KD a subject to be taught, the material time of the kingdom - the kingdom of Islam in Indonesia with sub material and KD 3.7 and 3.8

3. Model Integrated Accelerated Learning by Discovery (alid) developed learning model encompasses four components: 1) a theoretical basis, 2) learning syntax, 3) social system, and 4) support system. The four components are presented in the form of prototype models that meet the criteria for model development.

The use of the ALID model can answer the needs of learning contemporary history with various kinds Excellence Product ALID for Generation Z in History Course;

1. Model development *Accelerated Learning Integrated by Discovery (alid)* as supporting the demands of the curriculum in 2013 in history, learning about history that helps Gen Z infuse new knowledge of matter and solve a problem;

2. Model development*Accelerated Learning Integrated by Discovery (alid)* can improve the competence of Gen Z to learn independently and constructivist, according 21stcentury learning needs of a demanding activity; communication, collaboration, critical thinking, creativity (4C);

3. Model development *Accelerated Learning Integrated by Discovery (alid)* can build up competence of Gen Z in reflection of events - Historical events;

4. Accelerated Learning Integrated model development by Discovery (alid) can be used by researchers to conduct similar research and test the effectiveness further through experimental research.

4. Conclusions

Conclusion *Accelerated Learning Integrated by* development model study on the topics of history are:

a. Material Validation regarding the result 89 % regarding the results of analysis of product feasibility, from the results of 89%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in field tests.The Result of Design Model Validation regarding the results of analysis of product feasibility, from the results of 83%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in field tests.Result of Media Validation of 82%, it can be concluded that this product is classified as very good and does not need to be revised. In other words, this product can be used in field tests. Result of Linguist Validation regarding the results of analysis of product feasibility, from the results of 70%, it can be concluded that this product is classified as Good and does not need to be revised. In other words, this product can be used in field tests.

b. Experimental results with indicators of effectiveness, and efficiency showed 79%. It mean Good and students (Gen Z) enthusiastically by using Model *Accelerated Learning Integrated by Discovery* in History Course. there is a difference between the baseline class and the trial class. The results of the model trials on the class that were treated with the developed model products received a learning score of 80.00 while the baseline class received scor 68.90.

c. The results of the development of the models of learning consists of 10 steps *ALID* items, namely; Self Concept, Stimulation, Problem Statement, Exploration, Data Collecting, Data Processing, Trigerring your memory, Exhibiting what you know, Verification, and Reflection that changed the learning approach from *teacher centered* to *student centered* which makes students more free to follow history learning through discussion forums between students and teachers. The development of *ALID* model does not change the essense of the Curriculum 2013 but combines constructivist and humanis learning.

Acknowledgments

References

[1] Ajayi, I A. and Ekundayo, H T 2011 Factors Determining the Effectiveness of Secondary Schools in Nigeria Anthropologist. 13(1) p 33-38.

[2] Wineburg, S 2006 Historical thingking and other unnatural acts charting the future of teaching the fast. Jakarta: Yayasan Obor Indonesia.

[3] Azmi,S 2007 Accelerated learning and The Implement in Indonesia. Jurnal Likitha Pradnya 11(10) p 16.

[4] NEA. Preparing 21st Century Students for a Global Society: An Educator's Guide to the "Four Cs"

[5] Erland, J. Kuyper. 1999 Brain-Based Accelerated learning and Cognitive Skills Training Using Interactive Media Expedites High Academic Achievement Journal of Accelerated learning and Teaching. 24(3&4): p 83.

[6] Silberman, Mel. 2001 101 Active Strategy Learning. Yogyakarta : Pustaka pelajar.

[7] Lavine, Robert A 2005 Guided   Discovery Learning   with   Videotaped   Case Presentation in Neurobiology. IAMSE 15

[8]   Oloyede, Olufunmilayo I 2010 Comparative Effect of the Guided Discovery   and   Concept
      Mapping Teaching Strategies on Student's Chemistry Achievement. Humanity &   Sosial
      Sciences Journal. 5 1

[9]   F., Clark, L. H., & Kellough, R. D 1992 Teaching in the Middle and Secondary Schools 4th.
      USA: Macmillan Publishing Company.

[10] Ajaja, O Patrick 2013 Which Way Do We Go in the Teaching of Biology?Concept Mapping,
      Cooperative Learning or Learning Cycle?. International Journal of Science and Technology
      Education. 4 2

[11] Rose, Colin. 2003 Accelerated learning for 21 stXXI. Bandung: Penerbit Nuansa.

[12] Harker & Perry. 2007. Accelerating Learning in Marketing Education using Teams: Principles
      and Practice. e-Journal of Business education and Scholarship of Teaching 11 1-13.

[13] Meier,D 2002 The Aceelerated Learning Handbook. Bandung: Penerbit Kaifa

[14] Guarjado, Maritoni, S. 2004 Succes for Low-Performing English Language Learners in
      Accelerated learning Program Journal of Accelerated learning and Teaching 27 4-20.

[15] Avianti, D.A., & Lindawati K 2017 Analysis Quality Of Work Life Pada Generasi X dan Y
      Alumni   Fakultas Ekonomi dan Manajamen IPB. Jurnal Riset Manajemen dan Bisnis
      (JRMB) 2 2

[16] Barkley, E.F, Cross, K.P and Major, C.H. 2005 Collaborative Learning   Techniques.USA:
      Jossey-Bass.

[17] Borg & Gall 1987 Educational Research- An Introduction. London: Longman.

[18] Boyes, L., Reid, I., Brain K., and Wilson, J 2004 Accelerated Learning: a Literature Survey
      Unit for Educational Research & Evaluation, University of Bradford.

[19] Dale, Schunk H. 2012 Learning Theories-A Perspective Education. Yogyakarta: Pustaka
      Media. Press.

[20] Fretz, B. L. 1995 The Effects of Accelerated Learning on Tertiary Students Learning to Write.
      Educational Resources Information Center (Eric). ED 392 039, CS 215 171.

[21] Yusuf, N 2013 "The Impact of   Changging Technology: The Case of E-Learning".
      Contemporary Issues in Education Research. Saudi Arabia: King Abdul- Azis University
      Vol.6:2.

[22] Arikunto S 2012 Prosedur Penelitian: Suatu Pendekatan Praktek (Jakarta: Rineka Cipta)

[23] Priskila M, Umamah N, Puji RPN 2018 Interactive Multimedia Based On Computer Assisted
      Instruction : Development Efforts on the Learning Interest and Effectiveness in the History
      Learning **6** 7.