

Mental Map Republic of Indonesia by Students of SMA Sekolah Indonesia Singapura

N Nandi*, A Siviyani and L Somantri

Department of Geography Education, Universitas Pendidikan Indonesia, Jl. Dr. Setiabudi 229, Bandung 40154, Indonesia

*nandi@upi.edu

Abstract. Mental map is a process that allows someone to collect, organize, memorize, recall and explain the information about relative location as well as the sign of geographic environment. Mental map is closely related to Geography and Cartography. Learning geography helps develop and enhance the mental map, knowledge, and also the nationalism and patriotism in students. The aim of this research was to analyze the actual knowledge of the students of Sekolah Indonesia Singapura in mental mapping of the Republic of Indonesia as well as of their nationalism. The research was conducted in Sekolah Indonesia Singapura using survey method with mental map and nationalism as the variables. The data was collected through questionnaire, documentation review and literature review. The population of the research consisted of all students of a Senior High School in Sekolah Indonesia Singapura with the total sample of 37 students chosen with saturated sample as the method. In data analysis, percentage graphic was preferred to show the result. Based on the result, the mental map of the Republic of Indonesia and the nationalism that both countries objectives.

1. Introduction

Geography is a global phenomenon that affects the entire aspects of education, cultures, social, economics and politics. The existence of globalization eases the access of information flow to be known directly in live feed throughout the world. According to Appelbaum and Robinson (2015) in Theory of Globalization, "Globalization is reshaping how we have traditionally gone about studying the social world and human culture and field of globalization studies is now emerging across the disciplines." [1]. In fact, globalization generates many complex spatial issues. Among those problems are the cross global and local cultural issues, global economic gap and the increasing environmental issues [2].

The influence of globalization in education advances the education system; therefore, the students are expected to compete in global education in order to grow accordingly with the needs of current era developments. Hence, education is one of the benefactors determining individual quality in order to compete in many aspects of life.

Mental map is a way to express individual's perception towards their environments that can be translated and analyzed. Mental map is able to describe the activities and behaviors of individuals in context of space and environment [1]. In simple definition, mental map or cognitive map can be perceived as the point of view or human's perspective upon a place that is subjective and does not fulfill the rules of cartography and its visualization (generally as sketch).



There are many Indonesian citizens who stay in a long period of time in Singapore because of working purpose and even marriage purposes. Sekolah Indonesia in Singapore is a school that is within the responsibility of Indonesian Embassy for Singapore. Sekolah Indonesia is the only school in Singapore that belongs to Indonesian government. Sekolah Indonesia is equal to the school in the home country. The school applies the exactly same curriculum used in Indonesian schools. As one of the efforts to increase nationalism for the students, Bahasa Indonesia is used as the legal language in the teaching process and daily basis [3].

Nationalism is important to develop a nation. The purpose of nationalism is to embody the individuals [4]. Based on a field study that has been carried out on high school students in Sekolah Indonesia Singapura, some students do not even know the boundaries, location of province, and knowledge of national unity of the Republic of Indonesia. This is because mental map of the students lacks knowledge of Indonesian state. Moreover, the condition of the students showed insufficiency in mental mapping ability.

2. Methods

This research used descriptive methodology by conducting survey as the tool to gather information. Survey is one of the methods to gather information in a big amount of data through determined variables, unit, or individuals in the same time [5]. This research used qualitative approach. The data population in this research included all students of Sekolah Indonesia Singapura high school. There are 37 students in this school [3]. The sample in this research was saturated sample. Saturated sample is a technique of sample determination if all population is being used as sample [6]. The technique to gather the data used literature studies, documentation and survey. The analysis in this research was presented in percentage analysis.

One of the goals of geographical science is to exhibit and grow the nationalism of the students. Based on the field study conducted by the author, there are many students that do not recognize the Indonesian border line, provinces geographical location and general knowledge about Republic of Indonesia. This is caused by the students mental map lacks of knowledge about Indonesia. The importance of acknowledging the map of Republic of Indonesia is the fundamental reason that inspired the authors to conduct this research.

3. Results and Discussion

3.1. Mental map of Republic of Indonesia

The result of the research based on the mental map indicator, i.e. *anchor*, *connectivity*, *direction*, *sequence*, and *boundaries*:

3.1.1. Anchor

Table 1. Percentage of mental map at anchor indicator.

No	Anchor Indicator Question	True Answer		Wrong Answer		Total	
		F	%	F	%	F	%
1	Borobudur Temple, Lawang Sewu, Karimunjawa Island	28	76	9	24	37	100
2	Losari Beach, Toraja Custom Home, Amirul Mukminin Mosque	22	59	15	41	37	100
3	Bekantan	14	38	23	62	37	100
4	Sura and Baya Monument	34	92	3	8	37	100
	Total	98	-	50	-	148	-

Based on table 1, the anchor indicator according to the percentage criteria was high with average percentage 66% or the majority of respondent were able to answer correctly. Based on gender for anchor indicator, female respondents had higher percentage in comparison to male respondent which is 75% or most of them were able to answer correctly and so did the male respondent with 65%. This result proves that object/key sites used as the anchor had important functions surrounding [7].

Moreover, based on the class level, the result of the research of anchor mental map indicator showed that X class students performed relatively better than XI and XII students. It is proven by the average percentage of X class was 77.5% or most of them answered correctly. Meanwhile the percentage of XI class was 57% and XII class was 71%.

3.1.2. Connectivity. Usually, connectivity in mental map is visualized as a line connecting one object/site/dot with the others. The result of the research can be viewed in this table 2.

Table 2. Percentage of mental map at connectivity indicator.

No	Connectivity Indicator Question	Right answer		Wrong Answer		Total	
		f	%	F	%	F	%
1	Yogyakarta-Penyu Bay Tourism Line	18	49	19	51	37	100
2	Commuter Line Jabodetabek	12	32	25	68	37	100
	Total	30	-	44	-	74	-

The result of connectivity indicator was considered fair/enough with average percentage is 41% or half of the respondent answered correctly whereas 59% or most of the respondent answered incorrectly. This shows that the like used by human or vehicles are moving from one spot to the desired spot [8]. The student had trouble in determining the connectivity within the questions and the mental map lacked connectivity issue [9]. The result based on sex showed that male respondent connected object/site/dot better than female respondent with average percentage of 40%. Meanwhile female respondent score 35.5% or lower. Based on class, the research showed connectivity of XII class was higher than XI and X Class with the average of 53.75% or most respondents answered correctly.

3.1.3. Direction

Table 3. Percentage of mental map in Direction Indicator.

No	Direction Indicator Question	Right Answer		Wrong Answer		Total	
		F	%	F	%	f	%
1	South Area of Maluku	21	57	16	43	37	100
2	Eastern area of Indonesia	23	62	14	38	37	100
	Total	44	-	30	-	74	100

Based on table 3, the result of whole research showed that the ability of mental map in showing direction was fair/enough with the average of 59%. The result based on gender shows male respondent was better than female respondent with the average of 67.5%. Based on class, X Class was better than XII and XII in direction. This result showed that the usage of point of compass as the point to lead, citing the cardinal direction usage and it can be understood by most of the respondent [10].

3.1.4. Sequence. Sequence is an indicator that determines the accuracy of mental map [11]. Sequence known as the accumulation of identifying objects (anchor), connectivity, directions, and limits of the phenomenon that from an area in map (boundaries). Besides, sequence is related into the object position in mental map and real map. The result of the research can be viewed in the table 4.

Table 4. Percentage of Mental Map at Sequence Indicator.

No	Sequence Indicator Question	Right Answer		Wrong Answer		Total	
		F	%	F	%	f	%
1	Sura and Baya Monument position	34	92	3	8	37	100
2	Komodo Island Position	28	76	9	24	37	100
	Total	62	-	12	-	74	-

In this sequence indicator, the respondents were able to locate and determine the position of an object in Republic of Indonesia area corresponding in the mental map and actual condition [12, 13].

The result of the average percentage is high reflected in the percentage of 84% or most of the respondents answered correctly. Based on gender, female respondents performed better than male respondents. Based on the class, X class was better than XI and XII.

3.1.5. Boundaries

Table 5. Percentage of mental map in *Boundaries* indicator.

No	Question Boundaries Indicator	Right Answer		Wrong Answer		Total	
		F	%	f	%	f	%
1	Province that bordered by Hindia ocean	22	59	15	41	37	100
2	The eastern border of Indonesia	23	62	14	38	37	100
	Total	45	-	29	-	74	-

A boundary is a mental map indicator that has important role because it determines the space observing limit that will create whole mental map as the manifestation of a region. In mental map, the area limit is not always being shown as a borderline but also objects outside the borderline [12]. Based on this research, Boundaries percentage was high 61% or most of the respondents answered correctly. Based on gender, male respondent answered better than female and based on class, X class was better than XI and XII class.

Based on the whole research of mental map that used questionnaire given to the whole SMA Sekolah Indonesia Singapura with 37 respondents, consisting of 22 male students and 15 female respondents, showed that the average respondents answered correctly 62% from the total 10 mental map questions given in the questionnaire. Therefore, the conclusion was it had high mental map criteria as shown in table 5 [9].

This showed that SMA Sekolah Indonesia had a good mental map about NKRI; however, it is not optimum. Therefore, the mental map potency of SMA Sekolah Indonesia Singapura will be optimum if it is developed through good geographical lesson in school or other lessons that enrich their knowledge about NKRI. Respondents capable in answering 10 questions of the questionnaire of mental map can be viewed in the figure 1.

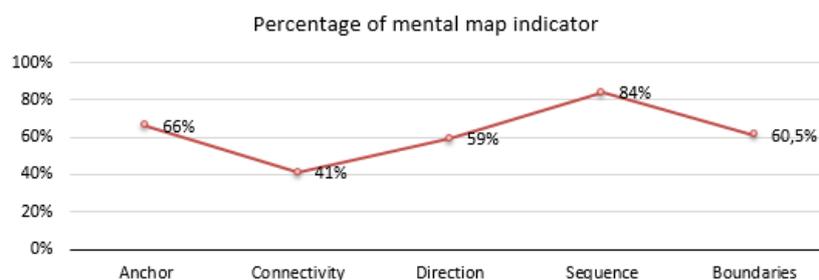


Figure 1. Percentage of mental map indicator.

The average percentage contribution from each indicator of mental map towards the respondent amount that answered correctly can be viewed in the figure 2.

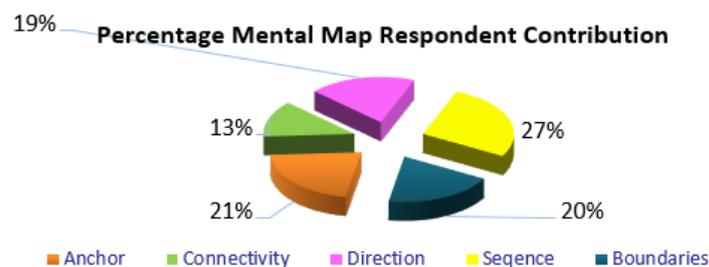


Figure 2. Percentage Mental Map Respondent Contribution.

3.2. Nationalism

The result of nationalism research using questionnaire that was given to 37 respondents with the proportion 22 male and 15 female respondents showed that respondents were relatively able to answer correctly 65% from 15 instrument nationalism question that is being tested. Therefore, it was included as high criteria. Meanwhile, out of 37 respondents, the average 66% were able in answer correctly, leading it to be considered to have good knowledge and nationalism towards NKRI. The result of the research based on Nationalism indicators are:

3.2.1. *Understand the Indonesian Geographical Area.* Indicator to acknowledge Indonesian geographical area is a base of nationalism. The result of geographical indicator research can be viewed with the table 6.

Table 6. Nationalism through Indonesia Geographical Knowledge.

No	Indonesia Geographical Knowledge Question	Correct Answer		Wrong Answer		Total	
		f	%	f	%	f	%
1	Astronomical Position	27	73	10	27	37	100
2	Nation Border	27	73	10	27	37	100
3	Southern Island of Indonesia	15	40,5	22	59,5	37	100
4	Oceania	34	92	3	8	37	100
	Total	103	-	45	-	148	-

Based on this research, it showed that Indonesian-related geographical knowledge of SMA Sekolah Indonesia was high with the average percentage of 70% or most of them answered correctly. Based on gender, female respondent is slightly higher; 70% of them performed better than male respondent with the percentage of 69.5%. Based on class, X Class was higher than XI and XII with the average percentage of 72.5%.

3.2.2. *Knowledge of social cultural and demography of Indonesia.* The next nationalism indicator is social cultural and demography of Indonesia. The knowledge about demography and social culture could be obtained through social science in elementary and junior high school in geography lesson. The result of this research can be viewed in the table 7.

Table 7. Nationalism through Indicator of demography and social culture of Indonesia.

No	Question of demography and social culture of Indonesia Indicator	Correct Answer		Wrong Answer		Total	
		f	%	f	%	f	%
1	Custom home	20	54	17	46	37	100
2	Society	29	78	8	22	37	100
3	Plate Dance	26	70	11	30	37	100
	Total	75	-	45	-	111	-

The indicator to understand the demography and social culture of Indonesia resulted in high average percentage, which is 67.5% or most of the respondents were able to answer the questions correctly. Based on gender, female respondents result was 73%, which was higher than male respondent. Whereas based on class, XII class was better than X and XI Class with the average percentage of 77%.

3.2.3. *Understanding NKRI maps.* NKRI maps indicator is one of important indicator to acknowledge the feeling of nationalism. In the nationalism instrument, this indicator had the biggest percentage with more amounts of questions in comparison with the other indicators. This indicator contributed 33% towards overall questions.

The indicator questions used to acknowledge the map of NKRI included the knowledge about objects, airports, provincial geographical location mountain, and ocean. Based on the result of research, half of the respondents answered the question correctly. Based on the result of the test, it was shown

that the ability to answer was fair/enough. The result of NKRI mental map indicator can be viewed in table 8.

Table 8. Nationalism based on Understanding NKRI Map.

No	NKRI Map Question	Correct Answer		Wrong Answer		Total	
		f	%	f	%	f	%
1	National Park	14	38	23	62	37	100
2	Airport	20	54	17	46	37	100
3	Nation border	14	38	23	62	37	100
4	Volcano / mountain	14	38	23	62	37	100
5	Arafuru Sea	17	46	20	54	37	100
Total		79	-	106	-	185	-

The result of this indicator showed the percentage of 43% or half of the students answered correctly. Based on gender, female respondents had higher percentage of correct answers than the male respondents which reached the percentage of 47%. Male respondents got lower score which only reached 50%. Based on class, X class is higher than XI and XII with the average percentage of 46% or half of the respondents answered correctly. Meanwhile, XI and XII class differences were insignificant.

3.2.4. Implanting nationalism value. Indicator to implant nationalism value had different questions from the rest of the indicator. It is due to see the nationalism value of respondent and how they apply it in the daily basis. Based on the result of the research, 80% or most of the respondents had nationalism value applied in their daily basis.

Based on the overall result in the indicator of implanting nationalism, SMA Sekolah Indonesia Singapura students had high nationalism value. The percentage of every criteria of answer showed that respondents agree with the concept of implanting nationalism which reached the percentage of 80%. Those who disagreed had the average percentage of 20%. The result of implanting nationalism indicator can be viewed in the figure 3.

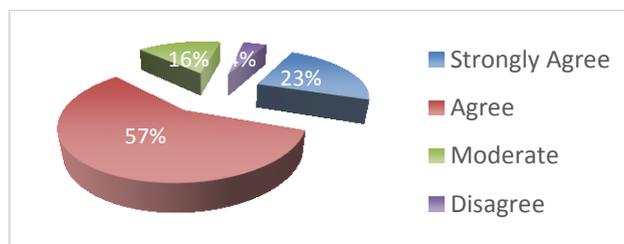


Figure 3. Average percentage of answer criteria.

The result based on the NKRI map knowledge indicator was high at the percentage of 43%. Based on gender, female respondents were better than male respondents with the average percentage of 47%. Based on class, X class was higher than XI and XII class with the average of 46% or half of the respondents. Meanwhile, the differences of XI and XII were insignificant.

The result of the research showed that SMA Sekolah Indonesia Singapura students had high mental map of NKRI. In this research, mental map can be identified based on anchor, connectivity, direction, sequence and boundaries. From overall indicator, most of the respondent were able to identify sites/key object (Anchor), determining the direction precisely (Direction), and identifying the outer border of an area (Boundaries) [14]. However, only half of the students that were able to construct the interaction between objects very well and most of the students are able to identify the association of objects precisely (sequence). The indicator to implant nationalism is in three questions with four criteria of answer to identify the nationalism of SMA Sekolah Indonesia in Singapura.

The result showed 80% or most of the total respondents answered correctly. Based on the research, 76% of the respondents preferred speaking Indonesia to English and only 23% of them disagree with the majority. For the result of cultural of Indonesia questionnaire, the average percentage of 79% or most of the student favored local culture of Indonesia rather than foreign culture in their daily basis. Based on Pancasila value of guidance, 84% of total respondents or most of the students agreed with the implementation. Based on class, X class was higher than XI and XII at the nationalism indicator. This result is in line with the value that has to be developed by school in determining the character education applied by Department of National Education, which one of the value is nationalism [4].

4. Conclusions

Nationalism indicator measured were knowledge of Indonesian geographic, demographic and social culture, map of Indonesia, and raising nationalism value. Based on these indicators, a knowledge of Indonesia in the students could be considered as relatively good. Based on nationalism indicators, it can be concluded that the nationalism of Sekolah Indonesia Singapura students were demonstrated by their knowledge in geographical, demographic and social cultures of Indonesia, map of Indonesia, as well as their nationalism value. Nationalism value of students was considered high although the students live in Singapore (overseas). This result corresponds to value of nationalism stated by the Ministry of National Education and competency of geography in high school level, which indicated the behaviour of nationalism, pride as Indonesian people, and responsibility towards the integrity of NKRI based on Pancasila and Undang-Undang Dasar 1945. In addition, this research was expected to contribute for Indonesian regional cartography and geography lessons in developing mental map.

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