

## Conference Paper

### The Need for Information Technology to Support *Bela Negara* on UPN “Veteran” of East Java

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#### Abstract

Universitas Pembangunan Nasional Veteran of East Java has a mission to become an “Unggul berkarakter *Bela Negara*” university. *Bela Negara* is a determination, attitudes and behavior of citizens which are done regularly, thoroughly and integrated. It was inspired by the love of the nation of Republic of Indonesia based on Pancasila and UUD 1945 in ensuring the life of nation and state. As a campus that is committed to apply the concept of *Bela Negara* characters, UPN “Veteran” of East Java is always working so that the academic community (Employees and Students) can understand and interpret the concept of *Bela Negara*. In this research we propose to apply *Bela Negara* in a mobile application using waterfall method. To perform needs analysis, data/information is collected through questionnaires. Questionnaires uses 5 variations of values Strongly Agree (SA), Agree (A), Less Agree (LA), Disagree (D), and Strongly Disagree (SD). Based on result of requirement analysis using questionnaire instrument from 51 respondents obtained 29,41% SA, 58,82% A, 11,76% LA, 0% D, and 0% SD stated that *Bela Negara* can be applied to information technology.

**Keywords:** *Bela Negara*, need for information technology, questionnaires

#### INTRODUCTION

Nowadays, defending the state is usually always associated with military or militarism, as if the obligation and responsibility for defending the state rests solely with the Indonesian National Army. Whereas based on article 30 of the 1945’s constitutions, defending the state is the right and obligation of every citizen of the Republic of Indonesia. defending the state is the effort of every citizen to defend the Republic of Indonesia against threats both from outside and within the country. Awareness to defend the state is an essential thing and must be owned by every citizen of Indonesia, as a manifestation of the rights and obligations in the effort to defend the state. Awareness to defend the state is the basic capital and the power of the nation, in order to maintain the integrity, sovereignty and survival of the Indonesian nation and state.

The 1945’s constitutions of the Republic of Indonesia regulates the State Defense Efforts, namely the provision of Article 27 Verse (3):

*“Setiap warga negara berhak dan wajib ikut serta dalam upaya pembelaan Negara.”*

means that every citizen shall have the right and obligation to participate in the defense of the State and Article 30 Verse (1):

*“Tiap-tiap warga negara berhak dan wajib ikut serta dalam usaha pertahanan dan keamanan negara.”*

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means every citizen is entitled and obliged to participate in state defense and security efforts. Efforts to defend the state shall be made within the framework of the state defense awareness as an effort to realize the Indonesian citizen who understands and appreciates and is confident to fulfill his rights and obligations. The Indonesian nation also wants to have a superior and noble civilization. Such civilization can be achieved if our society and nation apply good society and good nation, peace, justice and prosperity, as the founding fathers have inherited in the Opening of 1945's constitutions.

On the other hand, that the 1945's constitutions provides the basis and direction in the development of system and the implementation of state defense. The substance of national defense contained in the 1945's constitutions is the view of the Indonesian people in seeing themselves and their environment, the purpose of the state, the state defense system, and the involvement of the citizens. This reflects the attitude of the Indonesian people who oppose all forms of colonialism, which is contrary to the values of humanity, justice and prosperity. But this has begun to be abandoned and almost forgotten by most young generations of Indonesia. In the current era of information technology all content both from within and outside the country is very easily accessible, triggering the youth of Indonesia to forget the identity of the nation that has been stipulated in the 1945 Constitution and the Pancasila as the basis of the State. Therefore, it will be designed a technology based on mobile as a means of enrichment of science and technology that can facilitate the use and access so that understanding of State Defense through Pancasila and the 1945 Constitution can be easily understood by public audiences, especially academic community at UPN Veteran of East Java.

The purpose of this study is to determine the level of need to apply the concept of defending the state into information technology to support the academic activities, especially in UPN "Veteran" of East Java, to better understand and can implement "*Bela Negara*" in everyday activities.

## METHODS

The focus of research leads to needs analysis which is an important stage in software development. Requirement analysis includes interview survey activity and spread questionnaire to academic community. So it can be known the importance of the application of the concept of *Bela Negara* in a form of computer application.

### *Waterfall Method*

Waterfall method is widely used as a handle of making a system. This method takes a systematic and sequential approach. Called waterfall because step by step through which must wait to finish the previous stage and done in sequence (Pressman, 2002). Stages that must be done to make a system using waterfall method, see Figure 1.

Waterfall model is a simple software development life cycle that used as a basis of other model, such as prototyping model, evolutionary model, and spiral model. As seen in Figure-1 there are six step in waterfall model (Figure 1):

1. Feasibility Study

The main aim of feasibility study is to determine whether it would be financially and technically feasible to develop the product.

2. Requirement Analysis and Specification

The aim of the requirements analysis and specification phase is to understand the exact requirements of the customer and to document them properly. This phase consists of two distinct activities, namely requirement of gathering and analysis, and requirement of specifications.

3. Design

The goal of the design phase is to transform the requirements specified in the SRS document into a structure that is suitable for implementation in some programming language. In technical terms, during the design phase the software architecture is derived from the SRS document.

4. Coding and Unit Testing

The purpose of the coding and unit testing phase (sometimes called the implementation phase) of software development is to translate the software design into source code. Each component of the design is implemented as a program module. The end-product of this phase is a set of program modules that have been individually tested. During this phase, each module is unit tested to determine the correct working of all the individual modules. It involves testing each module in isolation as this is the most efficient way to debug the errors identified at this stage.

#### 5. Integration and System Testing

Integration of different modules is undertaken once they have been coded and unit tested. During the integration and system testing phase, the modules are integrated in a planned manner. The different modules making up a software product are almost never integrated in one shot. Integration is normally carried out incrementally over a number of steps. During each integration step, the partially integrated system is tested and a set of previously planned modules are added to it. Finally, when all the modules have been successfully integrated and tested, system testing is carried out. The goal of system testing is to ensure that the developed system conforms to its requirements laid out in the SRS document.

#### 6. Maintenance

Maintenance of a typical software product requires much more than the effort necessary to develop the product itself.

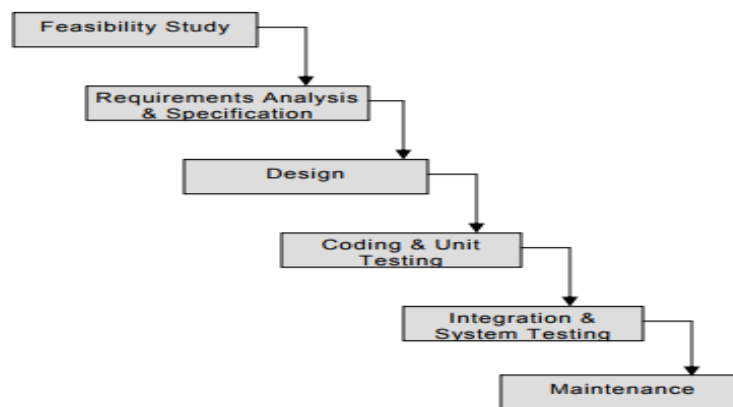


Figure 1. Waterfall Method

### *Surveys*

Surveys are a very traditional way of conducting research. They are particularly useful for nonexperimental descriptive designs that seek to describe reality. So, for instance, a survey approach may be used to establish the prevalence or incidence of a particular condition. Likewise, the survey approach is frequently used to collect information on attitudes and behaviour. Some issues are best addressed by classical experimental design where participants are randomised to either an intervention group or a control group. In the real world it is not always a very practical design. There may be good reasons, either ethical or practical, why participants cannot be randomly assigned to a particular intervention. It may also be impossible to identify a control group. Control over the randomisation process can also be difficult to achieve (MacDonald & Headlam, 1986).

Some advantage of using survey for research mean is efficient. Surveys are efficient because surveys can use a random sampling technique to recruit participants, relatively small sample sizes can be used to generate findings which can be used to draw conclusions about the whole population. They are thus a very cost-effective way of finding out what people do, think and want. The survey is a flexible research approach used to investigate a wide range of topics. Surveys often employ the questionnaire as a tool for data collection (Mathers *et al.*, 2009).

### Questionnaires

Questionnaire instrument is divided into 2 parts, are personal identity of respondents and questions or statements that support the analysis of system requirements. Respondent's identity is used as the basis of respondent group, such as study program, gender, and semester. Questions or statements that support the analysis of the needs of the system prioritize the level of students' understanding of the implementation of *Bela Negara*, as well as exploring the opinion about the importance of the application of State Defense in an information technology. It consists of 10 multiple choices and 8 essays (Table 1).

Table 1. Questionnaire Instruments

#	Statement/Question
Grading Questionnaire (value between 1 to 5)	
1.	Do you agree if the UPN "Veteran" of East Java your get the nickname "Kampus <i>Bela Negara</i> "?
2.	Would you agree if all component on the campus UPN "Veteran" of East Java know the meaning of the nickname?
3.	Would you agree if the value of <i>Bela Negara</i> on campus UPN "Veteran" of East Java has been applied?
4.	Would you agree if the value of <i>Bela Negara</i> on campus UPN "Veteran" of East Java must be applied on campus or off campus?
5.	Would you agree if every national day, you are required to follow the flag ceremony?
6.	You will sacrifice all your energy and mind in order to maintain the good name of UPN "Veteran" of East Java to reflect the value of <i>Bela Negara</i> ?
7.	Is one of the pride for yourself when communicating using Indonesian in day life?
8.	An obligation for you to be able to sing march and patriotic hymns as well as your national songs and regional songs respectively.
9.	The attitude of respect among the differences is something that must be maintained and developed, what is your opinion?
10.	Would you agree if <i>Bela Negara</i> applied to information technology?

## RESULT AND DISCUSSION

To get data from community UPN Campus "Veteran" of East Java, then conducted sampling filling questionnaire. Questionnaires were filled by students with Study Program parameters, gender, and semester. Parameter respondent and its value can be seen in Table 2. Recapitulation of data from 51 questionnaires can be seen in Table 3.

Table 2. Parameter of Respondents

Parameter	Parameter Value
Department	Chemical Engineering (3), State Administration (5), Industrial Engineering (5), Accounting (3), Architecture (5), International Relationship (5), Bussiness Administration (5), Civil Engineering (2), Information System (3), Environmental Engineering (4), Informatics (4), Communication (6), Management (1)
Gender	Male (21), Female (30)
Semester	1 <sup>st</sup> (2), 3 <sup>rd</sup> (28), 5 <sup>th</sup> (19), 7 <sup>th</sup> (2)

Table 3. Questionnaire Results

#	Statement/Question	Value				
		SA	A	LA	D	SD
1.	Do you agree if the UPN "Veteran" of East Java get the nickname "Kampus <i>Bela Negara</i> "?	15	34	2	0	0
2.	Would you agree if all component on the campus UPN "Veteran" of East Java know the meaning of the nickname?	22	23	4	2	0
3.	Would you agree if the value of <i>Bela Negara</i> on campus UPN "Veteran" of East Java has been applied?	2	29	16	3	1
4.	Would you agree if the value of <i>Bela Negara</i> on campus UPN "Veteran" of East Java must be applied on campus or off campus?	14	27	10	0	0
5.	Would you agree if every national day, you are required to follow the flag ceremony?	7	23	18	1	2
6.	You will sacrifice all your energy and mind in order to maintain the good name of UPN "Veteran" of East Java to reflect the value of <i>Bela Negara</i> ?	9	37	5	0	0
7.	Is one of the pride for yourself when communicating using Indonesian in day life?	12	32	7	0	0
8.	An obligation for you to be able to sing march and patriotic hymns as well as your national songs and regional songs respectively.	5	35	10	0	1
9.	The attitude of respect among the differences is something that must be maintained and developed, what is your opinion?	31	20	0	0	0
10.	Would you agree if <i>Bela Negara</i> applied to information technology?	15	30	6	0	0
	Sum	136	328	81	9	7
	Mean of each answer (%)	26,6	64,3	15,88	1,76	1,37
		7	1			

\*) SA: Strongly Agree, A: Agree, LA: Less Agree, D: Disagree, SD: Strongly Disagree

Based on the Table 3, about 27% of respondents stated SA, 64% A, 16% LA, 2% D, and 1% SD. And obtained 29.41% SA, 58.82% A, 11.76% LA, 0% D, and 0% SD states that the *Bela Negara* can be applied to information

technology. Figure 2 shows the percentage number of each answer it shows that most of respondent answer value are strongly agree and agree. Then we calculate score each statement/question by scoring each parameter value in order 5 to 1 respectively to parameter value SA, A, LA, D, and SD. And the result can be seen on Figure 3, it shows that all the statement/question have value more than three, it means that each statement/question have conclusion agree in positive manners.

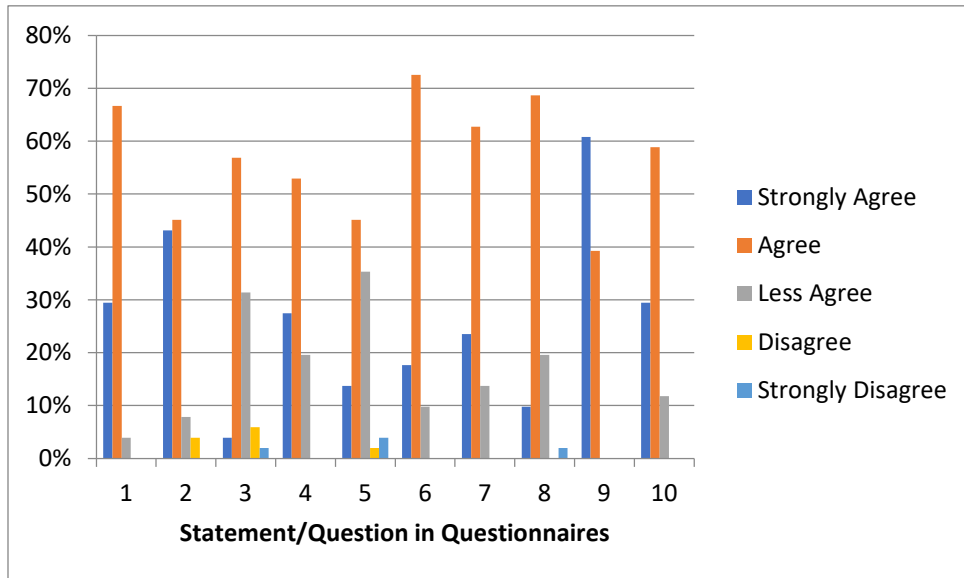


Figure 2. Percentage number of each statement/question answer

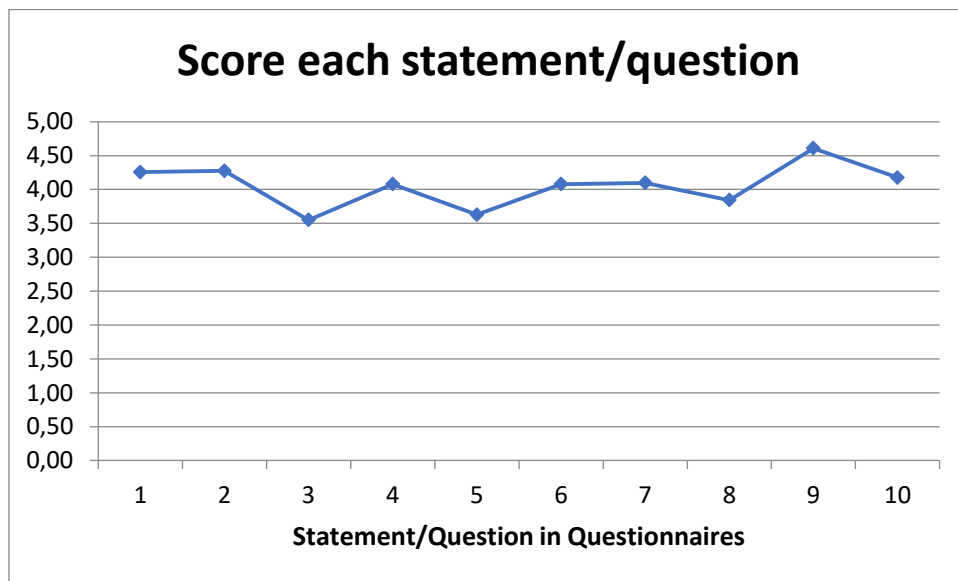


Figure 3. Score of each statement/question

**CONCLUSION**

After the data collection of opinions through the media questionnaire and analysis of the results of the questionnaire obtained the conclusion that the UPN "Veteran" of East Java students positively about the

implementation of the concept of defending the state in the form of an information technology. This is the basis of next research, which will be built a mobile application that contains about things related to state defense, such as Pancasila, the Preamble of the 1945 Constitution, the 1945 Constitution, and national songs. And do not rule out in the future added an artificial intelligence in the application so that the application does not act passively but act actively.

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