

# Urgency of “Sahabatelekat” Android Application to Develop Self-Identity of Students’ Friendship in Z-Generation

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**Abstract**—Sahabatelekat is one of solution offered for character education in industrial revolution 4.0 era. Sahabatelekat takes part in developing self-identity of friendship in z-generation student to facilitate student in their developmental stage in order to achieve life independently. Sahabatelekat was developed in the form of an android application that can be downloaded at play store. This application generally facilitate user to understand their self-identity of friendship, then give some tasks in the form of activities to develop their self-identity of friendship, and evaluate the development of their self-identity of friendship after various tasks are carried out. This application uses Thiagarajan’s 4D model development procedure. However, this application require various development to improve. There are number of things that still need to be refined such as enhancing various features and content so it can be more effectively use to develop self-identity of friendship in late adolescent. In addition, improvement are also needed so this application can be used in more versions of the gadget so it is not only limited to the android version.

**Keywords:** *android application, sahabatelekat, self-identity development, friendship*

## I. INTRODUCTION

The crucial problem faced by the late adolescent is finding their identity or how to deal with their identity confusion. In development terminology, chronological age of 18-22 years is included in late adolescent. This range is now included in z-generation student.

Late adolescent must have the ability to think more mature than early adolescent of course. Maturity of thinking influence how the late adolescent make decisions about the results of his exploration and commitment in their friendship. Late adolescent also have enough age to build relationship with people who are more mature in the community, so they are expected to have a social identity. In addition, they are being able to describe themselves clearly about who they are as part of their identity, late adolescent are expected to have a social identity that distinguish themselves in society.

Friendship is one of the subdomain of identity. The consideration for choosing friendship as one of the variable to be discussed is because the selection of this variable has been determined by following Marcia’s rule. Marcia’s rule at least explain that this subdomain has a variety of responses and has a significance at this chronological age.

The self-identity of friendship in late adolescent is seen as an important subdomain because it is the basis for developing the attachment in early adulthood. Thus, the experience of separating and leaving friends is not something to be seen negatively. This is an important part of one’s exploration of friendship so that the late adolescent can think or describe clearly about the identity in their friendship. Someone can identify themselves clearly if they not only explore but also take on important values, or they are committed to the result of their exploration. [1]

## II. LITERATURE REVIEW

### A. Android application

As an integrated part of education, guidance and counseling present a solution through various strategies that developed for the development of student’s self-identity of friendship. Student who are facing the final stage of adolescent need to develop their self-identity of friendship as a provision to face the future to obtain life independently in accordance with the main purpose of guidance and counseling. Therefore, the development of self-identity of friendship become one of the crucial part so the student achieve maturity character in their life according to their developmental stage. This is where guidance and counseling take an important role in student character education.

When look at the development in this 4.0 era where technology is main motor in all lines of community life, the guidance and counseling teacher naturally follow the development in what media is appropriate for developing the student’s self-identity of friendship. As we know, guidance and counseling is conducted based on the result of student need assessment. Therefore, the development of appropriate media for the provision of independently

guidance and counseling service need special attention from the guidance and counseling teacher and school counselor. If we look at one of the contents of the Permendikbud (Peraturan Menteri Pendidikan dan Kebudayaan) Number 111 of 2014 – about Bimbingan dan Konseling pada Pendidikan Dasar dan Pendidikan Menengah- it state that the activities of guidance media management are management of guidance board and leaflet management. [2]

However, if we look further, many researchers have made theories to determine a generation depend on their own era. As we know in development terminology, chronological age of 18-22 years is included in the end of late adolescent. This age is being and will be welcomed in near future by the students who are the subject of guidance and counseling services. This range is now included in z-generation student where the technology is coloring their life. Therefore, media such as guidance board and leaflet or pamphlet mentioned in Permendikbud 111 have not been worked out optimally in accordance with the development of existing technology.

If we look at some of the data available, there is data obtained from The Infinite Dial where smartphone ownership by American population in 2019 touched 84 million, while tablet ownership was 56 million [3].

TABLE I. TABLE I. RESULTS OF THE MOST WANTED MEDIA TO DEVELOP SELF IDENTITY OF FRIENDSHIP

Media	Number of Subject	Percentage	Category	Information
Android application that can be downloaded in play store	83	80.58	Very appropriate	
Module	3	2.91	Not appropriate	
CD/DVD cassette	3	2.91	Not appropriate	
Guidance board	2	1.94	Not appropriate	
Leaflet / pamphlet	3	2.91	Not appropriate	
Other	15	14.56	Not appropriate	Face to face, game, seminar, youtube

In addition, if we pay attention to the data obtained by the researcher above, then we will get a more clear picture related to the media that are most in demand by the student in this generation to develop their self-identity of friendship. Subject in the study were late adolescent including z-generation student. Data collecting technique is using a questionnaire

through whatsapp application that is answered online by the subject.

From the table above, it can be seen that the media that most wanted to develop self-identity of friendship by z-generation student is and android application that can be downloaded in play store with total of 83 subjects who choose, so it get a percentage of 80.58% which is then included in very appropriate category. This finding can be understood because students in z-generation have characteristic that are very close to technology, this is indicated by 98% of subjects having an android gadget with a range of checking gadget is minimum in every minute and maximum in every few hours. This finding is also reinforced by other research which state that 98% of the total 123 late adolescent subjects agree to develop an android application for the development of their religious self-identity. [4]

*B. 'Sahabatlekat' to develop self-identity of friendship*

As well known, the provision of guidance and counseling services must be based on the results of the needs assessment or needs of student/counselee analysis, the whole framework of guidance and counseling begin with the assessment of the development of student/counselee and environmental assessment. From there, then continue to the mapping of program components then the strategy of guidance and counseling service in accordance with the analysis of assessment result. [5]

Therefore, based on the results of need assessment through various research findings and literature studies in previous section, an application called 'sahabatlekat' can be built to develop self-identity of friendship in z-generation student. This some grids are examples of the blueprint

TABLE II. BLUEPRINT EXAMPLES OF SEVERAL INDICATORS AND COMMENTS

Aspect	Indicator	F/UF	Num	Statement	Comment +	Comment
Exploration	Sharing with Friends	F	17	I have the best friend who shares and cares.	You are very lucky to have friends to share your feelings	Get your luck by having friends as a place to share
		F	18	I often share my feelings to my friend.	share your feelings	
Commitment	Developing trust on friends	UF	27	I feel rejected by my friend.	Your trust to your friends is amazing	Don't stop building your trust on friends
		UF	28	I don't feel quite attached with my friend.		

**TABLE III. BLUEPRINT EXAMPLES OF SELF-IDENTITY OF FRIENDSHIP STATUS CATEGORY**

Status Category	Provision	Appreciation Sentence
Achieve	Total exploration score $\geq 41$ & total commitment score $\geq 56$	Congratulations! You have successfully explored and committed to the friendship that you have built. Keep up your friendship with your close friends.
Foreclose	Total exploration score $\leq 41$ & total commitment score $\geq 56$	Congratulations! You have successfully committed in the friendship you make. Let's increase your exploration with your closest friends!
Moratorium	Total exploration score $\geq 41$ & total commitment score $\leq 56$	Congratulations! You have successfully explored the friendship that you have formed. Let's increase your commitment with your closest friends!
Diffuse	Total exploration score $\leq 41$ & total commitment score $\leq 56$	Congratulations! You have made a series of efforts to explore and commit to the friendship that you have formed. Let's increase your exploration and commitment with your closest friends!

**TABLE IV. BLUEPRINT EXAMPLES OF ACTIVITY AND CONFIRMATION QUESTIONS**

Aspect	F/UF	Num	Statement	Activity	Open Confirmation Question	Closed Confirmation Question
Exploration	F	17	I have the best friends to share	Look for someone whom you feel is appropriate to share with as a friend	After searching for someone whom you feel is right to share as a friend, could you feel a positive benefit for your friendship?	Outline your explanation.
	F	18	I often confide in with friends	Meet or communicate to share your feelings with your friends	After meeting or sharing your feelings with your friends, could you feel positive benefits for your friendship?	
Commitment	UF	27	I feel rejected by friends	Write down what makes you feel rejected by friends, then think as often as possible in your mind and write as much as possible in your notes that "I have forgiven friends who reject me and do not allow themselves to be continually hurt by those feelings of being rejected."	After writing down what makes you feel rejected by a friend, then think as often as possible in your mind and write as much as possible in your notes that "I have forgiven a friend who rejected me and did not allow myself to be continually hurt by that feeling of being rejected."; Do you feel the positive benefits for your friendship?	
	UF	28	I feel not too close to friends	Write down what makes you feel not close to friends, then think as often as possible in your mind and write as much as possible in your notes that "My friend is someone close to me."	After writing down what makes you feel not close to friends, then think as often as possible in your mind and write as much as possible in your notes that "My best friend is someone close to me."; Do you feel the positive benefits for your friendship?	

In the application, there are total of 38 statements that must be responded by the subject according to their condition. Each statement contains of 4 alternative responses which are 'Sangat Sesuai', 'Sesuai', 'Tidak Sesuai', and 'Sangat Tidak Sesuai'. Each response contains a score range from 1-4 according to the characteristic of the statement whether F (favorable) or UF (unfavorable). During the process of the subject fill in the statement, they get comments that correspond to the total score in an indicator (table II). The comments can be negative or positive. Negative comments are obtained when subject have a total score of less or equal to the median in a group of statements based on indicator. While positive comments are obtained when subject have a total score of more than the median in a group of statements based on indicators. After subject completed all statements, then obtained identity status (table III). The identity status is obtained based on total score in exploration and commitment aspect. At the end of the stage, to develop self-identity of friendship so the subject is given a series of tasks in the form of activities that need to be done by the subject in their friendship (table IV). A series of activities are determined from the statement that get the lowest score. Henceforth, the activities carried out by the subject will be confirmed or followed up by fill in the open and closed confirmation question in each activity.

### III. RESULTS AND DISCUSSION

#### A. Application Development Procedures

For the development of *sahabatlekat* android application, researcher used Thiagarajan's development procedure, better known as 4D model. According to Mulyatiningsih (2016), the 4D model according to Thiagarajan has four stages, each of which is explained here in accordance with the context of *sahabatlekat* application development [6]

##### a. Defining Phase

The defining stage is carried out to establish and define development requirements. This stage includes five main steps, as follows.

###### 1) *Front-end analysis*

Front-end analysis is carried out to find out the basic problem in developing android based application. At this stage, the researcher bring up the facts in the field through survey and find alternative solutions to the problem.

###### 2) *Learner analysis*

Analysis of learner is very important to do at the beginning of planning by observing the characteristics of students through the results of a survey that has been done.

###### 3) *Task analysis*

Task analysis aims to identify the main tasks that will be carried out by student during the operation of the *sahabatlekat* application.

###### 4) *Concept analysis*

Concept analysis is carried out to identify, detail, and arrange systematically the material concepts that will be given to student according to the characteristic of the late adolescent based on the front-end analysis (point a-1). Concept analysis is made in the form of filling instrument for student's understanding of their self-identity of friendship, followed by giving a series of tasks in the form of activities to develop their self-identity of friendship, and refilling in instrument to evaluate existing development.

###### 5) *Specifying instructional objectives*

Specifying instructional objectives serves to determine the indicator of achieving of the developed application. By writing down the goal, researcher can find out what material will be delivered in *sahabatlekat* android application.

##### b. Design Phase

After getting and analysis of the defining stage, the design phase is then carried out which aims to design an android based application to provide social personal guidance related to self-identity of friendship for late adolescent so that a prototype is obtained (an example of a guidance device). This design phase includes:

###### 1) *Criterion test construction*

In the criterion test construction step, the researcher determine the standard by preparing a validation test to assess the application development standards.

###### 2) *Media selection*

In the media selection step, the researcher choose the media for service delivery that is appropriate to the material and characteristics of the students. It aims to help students in getting self-identity of friendship guidance as expected.

###### 3) *Format selection*

The choice of development format is intended to design or design the contents of an android application that includes material self-identity of friendship in the form of instruments and their analysis.

###### 4) *Initial design*

At this stage, the determination of media and media appearance of the *sahabatlekat* application is done. Then follow the required content. The initial design or android application design that has been made by researcher is then given input by the supervisor.

##### c. Development Phase

This development phase aims to produce a revised android application based on the input of

the supervisor. Activities at the development stage are as follows.

#### 1) *Expert appraisal*

The validation step of the application expert is carried out by material expert and media expert based on the instrument that have been prepared previously. The validation of media expert was carried out with expert who mastered the field of information technology who could assess the quality of the presentation and ease of sahabatlekat application. Material validation is done to assess the appropriateness of the contents of the material and the presentation of the material.

Media and material experts validate a sahabatlekat application product by filling out the validation sheets then giving advice and input and deciding product eligibility. The sahabatlekat application that is not yet suitable to be used and tested will be revised according to the input from the expert and then validate again until the expert decide that the media is suitable to be tested.

#### 2) *Development testing*

After expert validation is carried out, a field testing is conducted to find out the result of the application of the android application to the late adolescent. A testing was conducted to test the feasibility and effectiveness of the use of the sahabatlekat application. Testing were conducted on first year and second year students of guidance and counseling study program at Yogyakarta State University who include the final stage of adolescent development.

#### d. Dissemination Phase

The dissemination phase is carried out after revising and field testing, the purpose of this stage is to publish the sahabatlekat android application. In this stage the researcher uploaded the sahabatlekat application to the playstore to be downloaded by service user and socialize this application in every scientific conference.

### IV. PRACTICAL IMPLICATION

In every media development of guidance and counseling there will be weakness. Therefore, the researcher realize that the application of sahabatlekat also has some imperfectly that need to be follow up by the next researcher as well as practitioner and policy maker in the field of guidance and counseling. Hope that this sahabatlekat application can be further refined with various features and application content that can be more effectively used to develop self-identity of friendship in late adolescent. In addition, improvement need to be made so this application can also be developed on iphone, ios, web version, etc.

### V. CONCLUSIONS

Sahabatlekat application is a solution from variety of literature studies and research results that shows students on z-generation in industrial revolution 4.0 era want to develop their self-identity of friendship through an android application that can be downloaded in playstore. This android application is part of guidance media to develop self-identity of friendship in late adolescent where the domain is part of character education so that student can achieve life independence in accordance with the main purpose of guidance and counseling in education.

This application provides various features and content which is expected that through this application user can independently develop their self-identity of friendship without having to depend all times on teacher's guidance and counseling performance at school. However, of course this application cannot be separated from various imperfections. Therefore, the development of this application needs to be continued to maximize the benefits that can be obtained by its users so the late adolescent are more effectively in developing their friendship.

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