

## The Relationship of Time Management and Smartphone Using for Learning Source on Students Achievement

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**Abstract:** This study aimed to determine the relationship between time management and student's academic achievement the relationship between the intensity of Smart phone using as a learning source and student's academic achievement the simultaneous relationship between of time management and the intensity of Smart phone using as a learning source on student's academic achievement. This was a correlational study with ex-post facto research design. This research was conducted in information technology education undiksha singlaraja. The sample used was 164 students. There were two variables investigated two independents variables and a dependent variable. The data were obtained throughout distributing questionnaires. A parametric test was conducted with the prerequisite tests, namely, normality, linearity, heteroscedasticity and multicollinearity tests. The hypotheses were conducted by using product moment analysis and multiple regression test. This study reveals that, there is positive and significant contribution of time management on student's academic achievement which is 2.6% there is positive and significant contribution of the intensity of Smart phone using as a learning source on student's academic achievement which is 2.5% and there is no significant contribution of time management and the intensity of Smart phone using as a learning source on student's academic achievement which is 3%.

**Key words:** Time management, Smart phone using, students academic achievement, hypotheses, moment analysis, significant contribution

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### INTRODUCTION

The university as the formal institution of education has the responsibility to create a high quality of human resources which are able to face the global demands. It is hard to create an individual who is full of creativity, hard defeat and valuable. There are sort of processes that should be done to achieve it. Students do lots of assignment and activities which can affect their academic achievement. A good academic achievement is very important to the student's, since, it will show either a student passes the learning or not. In order to support the academic requirements, the standard of the assessments will be a tool of measurement. Sangsiry *et al.* (2004) students academic achievement is affected by academic competency test which covers students understanding while listen to lecturer's explanation, time management and students learning strategies.

The students incapacity to manage themselves such as controlling and manage the time effectively will lead them to find more difficulties in achieving a better academic achievement. Erdem believes that an effective time management is one factor that influences students

Grade Point Average (GPA) (Maria, 2013). While, a large number of students do many activities in campus such as extra-curricular, joining in students community, etc. This will affect students time for learning, so then, the students have to be aware and more focus on their learning. Time management is simply the students capability to manage their own time for learning.

Information technology education department takes a crucial role for students academic activities as well as not academic activities. Students mindset in using the Smart phone technology is various but the fact is students mindset to use the smart phone technology for learning is still low. Smart phone refers to a mobile tool communication which has the same qualification like a mini computer. It is armed with PDA (Personal Digital Assistant) OS (Operational System) QWERTY keyboard, internet access, e-Mail, GPS (Global Positioning System), camera, slot memory, MP3, office application and many others sophisticated application which can support students learning activities. Most of the students refer their Smart phone just for social media activities and entertainment. The inappropriateness using of Smart phone will affect students academic achievement.

Based on the interviewing section and pre observation to 14 students of Information Technology Education Department, it was found that 35.7% students found difficulties to concentrate while learning activity, 35.7% students did not preparing or even reading the material discussed 64.3% students did procrastination habit and 50% students had no idea about the topic discussed. The students were just able to memorize 70% in the first ten min of learning while in the last ten min the just remembered the topic by 20%. Then, it is a common thing when they forget every single of material that they have got previously (Sufren, 2009). There is a tendency that the lack of students time management for academic purposes and the ineffective used of Smart phone as the source of learning will affect students academic achievement in information technology education department. Based on those phenomena, the writer is interested to investigate the research entitled the relationship both time management and smart phone using for learning source on students achievement.

**Academic achievement:** Some one cannot get his or her achievement without any effort. Djamarah (1994) achievement is the thing that we get through a great work with a pleasure willingness to do so. Based on the dictionary entitles Kamus Besar Bahasa Indonesia, the word “akademik” is derived from “akademis” which means as a high educational institute that already organizes the students at least in 3 years. The academic achievement is inseparable with the learning process. Academic achievement is as the result of the activity that we already done, do the research with full of effort in the high academic institute field (Alfani, 2007). In this research, the academic achievement refers to GPA (Grade Point Average) of the students of information technology information department. The factors that influence the academic achievement can be classified into two, namely internal factor and external factor. Slameto (2003) one of the internal factors is time management and the external factor is the use of the learning facilities that influence the students academic achievement.

**Time management:** Peter F. Ducker argues that, time is most precious thing that the people should manage well and the good time management reflects his or ability to manage the other thing (Setiawati, 2015). Time is the consideration for a good work potency that should be managed well. That is why, a schedule is very important to help someone to manage the time to be efficient. According to Atkinson (1994), time management is one of a skill that has close relation with all of effort and activities which are arranged well to help individual to

manage their time wisely. Macan (1994) time management would be more efficient if individual classifies and distinguishes between the needs and the wants and try to view that the assignment is the most priority. The ability to use the time in effective, efficient and productive is as the result of the good habit in managing the time well (Gea, 2014). The basic concept of time management is the use of time effectively in order to some activities such as a task.

The ability to manage the time is very necessary in the learning process to guide the flow of the learning process. The time management controls the discipline of the students to use the time as effective and efficient as possible and deal with the target of the learning. The time management consists of some aspects namely planning the decision and priority, the organization preference, the time management and the control to the time. The willingness of making the decision can help individual to focus with the decision or target that is going to be achieved and construct a plan that the individual should do in the limit of time.

Stating the decision means that someone makes a plan about the target that should be achieved in the limited time. Considering the task as the priority means classifying the task into its difficulties and its important. Preference of the organization is based on the tendency of individual who implements the balances for both of the environment of the activity and the approach of the task. Atkinson (1994) the individual can does his activities with a good organization and it helps him to work easily, avoids the urgent activity, improves the self-motivation, increases the discipline in doing the task and classifies the thing into its importance. The mechanism aspect covers the activity of controlling such as making schedule. The schedule helps the students to remind them for their task and the allocation time for doing those tasks. According to Tylor, the function of the schedule is to avoid the overloaded of the activities, reminder and to avoid rushing (Puspitasari, 2013). The control of the time refers to the confidence of controlling time and managing the some aspect that may influence to the use of time such as managing the spare time. The students can use their spare time to learn a new material or just repeat the material that they already got to get a better academic achievement.

**The intensity of smartphone using as a source of learning:** Essentially, learning is the process of making improvement for every individual. The example of learning experience is based on the interaction between the individual and environment. The function of learning environment and the aspect that support the learning

environment and optimized the academic achievement can be called as a resource of learning. Rohani (2004) the resources of learning can be classified from the development, namely, learning resources by design (learning resource that is designed to fulfill the needs of the learning or after the selection), learning resource by utilitarian (an unplanned resource for the learning process) is all of the resource of learning (environment) around the school that is used by the students to learn and the characteristic is incidental. The resource of learning allows the individual to enrich their knowledge and skill.

The innovations that are made by the human especially in the educational field allow the media as one of the learning sources. PTGPU (2011) the function of recourses of learning are increasing the learning productivity through quicken the process of learning and help the students to manage the time as well as increase the confidence in order to present the material or information make the students to be more independent build the learning process with the scientific based make the learning to be more effective support the learning process by providing a wide and meaningful information. The classification of learning process that is used as the alternative technology is Smart phone that, the Smart phone is supported by internet, services and some applications that complete the needs of the students.

Now a days, Smart phone is becoming the prior need because of its characteristics, benefits and it is a portable technology that makes the people be addicted on it. Based on the function, Smart phone has some applications that support the academic activity such as application of browsing, application of social media and communication of office application, schedule application, calculation application, saving data application, documentation application and translation application (Rustrini *et al.*, 2015). The term intensity means the ability of individual to do creativity or any special and specific activity to reach the aim. Smart phone can be used as a resource of learning in all of learning situation and it can develop the comprehension and understanding of the students through emphasizing the learning process as an action such as searching the learning resources by using the Smart phone to solve the problem during the learning process. The students can use the Smart phone to explore the literature deeply through its application. The attitude of using Smart phone in the learning process can be seen through the attitude of students in maximizing the function the application in Smart phone to find a lot of information that support the learning process. Wulandari (2014) the attitudes that,

might be seen in using Smart phone are the necessary means the application of the service of the Smartphone are able to support the learning process giving assumption means the students give a comment to the application in his Smart phone rather, it is good or bad freedom means the user of the Smart phone has an unlimited access right in using the Smart phone's features flexibility means the Smart phone has sophisticated features that make the user use the Smart phone easily pleasure means the user feel comfort to use the features in the Smart phone happiness means the the feeling of the user while using the features in the smart phone. The attitude of using a high technology communication tool, Smart phone, it is a tool that supports the leaning which is relevant and flexible to help individual shares their knowledge and information with the others.

## **MATERIALS AND METHODS**

This present research was a correlational research. The used of an ex-post facto study indicates that the researcher does not try to control or manipulate the variables under investigation. This research was conducted in the information technology education department, ganessa university of education during the academic year 2015/2016 (in the last odd semester) till 2016/2017 (the beginning of even semester).

There were two variables involved in this present research, namely time management (X1) the intensity of Smart phone using as a source of learning (X2) as the independent variables while the dependent variable is students academic achievement (Y). The sampling technique used was accidental sampling technique. The writer just found the sample accidentally. The method of data collection was documentation, survey and interview. Documentation was used to collect the students data, the survey method with likert scale was used to collect the students data of time management, the intensity of Smart phone using as a source of learning and students academic achievement. While, the interview techniques was used to find out the obstacles that faced by the sample deeply. Before making the instruments, the researcher made the blueprint first. There were 50 items for time management questionnaire and 70 items for the intensity of Smart phone using as a source of learning questionnaire. Then those question naires were tested to 35 students, who were not chosen as the sample to check the validity and reliability.

After conducting the tryout into 35 students, it was found the valid items for time management question naire was 35 items and the reliability was 0.930. For the intensity of Smart phone using as a source of learning question

naire, it was found 40 valid items and the reliability was 0.990. Then, the valid questionnaires were spread out into 164 students as the sample of this research. The data were analyzed by using parametrix analysis with the prerequisite tests, namely, normality test, linearity test, multicollinearity test and heteroscedasticity test. The hypotheses testing were done by product moment analysis and multiple regression analysis. Koyan (2012) the normality test is used in order to know whether, the data has normal distribution or not. The normality test that, is used in this study is Kolmogorov Smirnov test. Linearity test is used to discover whether, the shape of correlation between the independent variables and the dependent variable is linear or not. Multicollinearity test of data should be conducted to know whether, there is a high correlation among independent variables. If there is no problem with the multicollinearity, then it can be continued for the next analysis. This test is done by using regression analysis-product moment correlation, by looking at the value of VIF (Variants Inflations Factor) and the tolerance. Koyan (2012) the product moment analysis was used to determine the relationship among the variables while the regression analysis was used to determine the contribution of the independent variables toward dependent variable.

## RESULTS AND DISCUSSION

This part discusses the finding of time management analysis, the intensity of Smart phone using as a source of learning analysis and student's academic achievement analysis. The descriptive data analysis can be seen in Table 1. After conducting the descriptive analysis of time management, it was found that the maximum score was 158, the minimum score was 103 and the mean was 130.30. For the more detail classification for time management, it was presented in Table 2.

Based on the descriptive analysis of the intensity of Smart phone using as a source of learning on the 164 student's it was found that the maximum score was 195 the minimum score was 127 and the mean was 155.49. For the more detail classification for the intensity of the Smart phone using as a source of learning, it was presented in Table 3.

Based on the descriptive analysis of the 164 student's academic achievement, it was found the maximum score was 3.94 the minimum score was 2.33 and the mean was 3.01. For the more detail classification for student's academic achievement, it was presented in Table 4. Before conducting the hypotheses testing, firstly it was conducting a series of prerequisite tests as follows.

Table 1: Descriptive statistics of all variables

Variabels/Statistics	X1	X2	Y
N	164	164	164
Mean	130.30	155.49	3.0121
Median	130	156	2.93
Mode	128	158	2.75
SD	10.640	14.598	0325

Table 2: The classification of time management

Scores	Category	F	%
140≤x	Very good	33	20
116.67≤x<140	Good	112	68
93.33≤x<116.67	Average	19	12
70≤x<93.33	Poor	0	0
x<70	Very poor	0	0

Table 3: The classification of the intensity of smartphone using as a source of learning

Scores	Category	F	%
160≤x	Very high	59	36
133≤x<160	High	98	60
107≤x<133	Moderate	7	4
80≤x<107	Low	0	0
x<80	Very low	0	0

Table 4: The classification of students academic achievement

Scores	Category	F	%
3.00≤x	Very high	72	44
2.33≤x<3.00	High	92	56
1.67≤x<2.33	Moderate	0	0
2.33≤x<1.67	Low	0	0
x<1.00	Very low	0	0

**Normality test:** Based on the normality test analysis, the significant level of the time management was 0.611. Then the significant level of the intensity of Smart phone using as a source of learning was 0.554. While for the students academic achievement, its significant level was 0.050. All the variables had normal distribution since sigle value of all variables were higher than 0.05.

**Linearity testing analysis:** Linearity test was conducted to find out whether the shape of correlation between independent and dependent variables was linear or not. The linearity was done by F test in SPSS 21 for windows Program and Ms. Excel 2010. The whole result of linearity test was presented in Table 5. Based on Table 5, it was found Sigle dev from linierity was 0.382>0.05 and Sigle linierity was 0.041<0.05. According to those result, the relationship among the variables was meaningful.

**Multicollinearity testing analysis:** Data multicollinearity test was conducted toward time management and the intensity of Smart phone using as a source of learning. The result analysis could be seen in Table 6.

Based on Table 6, it was found that VIF was 1.774 lower than ten and still around one while the tolerance was 0.564 it was almost close to one. According to this result, there was no multicollinearity happened among the

Table 5: Linearity test with F test

Variables		Linierity			Dev from linierity		
Independent	Dependent	F	Sig.	Note	F	Sig.	Note
X <sub>1</sub>	Y	4.528	0.036	Linier	1.201	0.221	Meaningfull
X <sub>2</sub>	Y	4.284	0.041	Linier	1.067	0.382	Meaningfull

Table 6: Multicollinearity testing analysis

Collinearity statistics		
Variables	Tolerance	VIF
X <sub>1</sub>	0.564	1.774
X <sub>2</sub>	0.564	1.774

independent variables. Next step was to conduct the hypotheses testing by using product moment and multiple regression analysis. From the hypothesis testing using pearson product moment analysis between time management and students academic achievement, the coefficient was 0.161. It was belonging to low category with the determination coefficient was 0.026. In order to find the significance, it was done by t-test which the  $t_{count}$  was 2.706 and  $t_{table}$  was 1.975. If the  $t_{count} > t_{table}$ , it meant  $H_0$  was rejected. Thus, it can be concluded that, there was a positive and significant contribution of time management toward students academic achievement in information technology education department. The contribution was 2.6%.

Based on hypothesis testing using pearson product moment analysis between the intensity of Smart phone using as a source of learning and students academic achievement, the coefficient was 0.159. It was belonging to low category with the determination coefficient was 0.025. In order to find the significance, it was done by t-test which the  $t_{count}$  was 2.048 and  $t_{table}$  was 1.975. If the  $t_{count} > t_{table}$ , it meant  $H_0$  was rejected. Thus, it can be concluded that, there was a positive and significant contribution of the intensity of Smart phone using as a source of learning toward students academic achievement in the information technology education department. The contribution was 2.5%. It implied that the higher intensity of using smart phone as a source of learning, the higher score will the students have or reverse.

In order to test the last hypothesis, the simultaneous contribution of time management and the intensity of Smart phone using as a source of learning on students academic achievement, it was conducted by using multiple regression analysis. It was found the regression formula  $Y = 2.294 + 0.003X_1 + 0.002X_2$ . The coefficient correlation of time management and the intensity of Smart phone using as a source of learning on students academic achievement was 0.176. It was belonging to very low category with the determination coefficient was 0.03. In order to find the significance, it was done by t-test which the  $t_{count}$  was 2.559 and  $t_{table}$  was 3.05. If the  $t_{count} < t_{table}$ , it

meant  $H_0$  was accepted. Thus, it can be concluded that, there was no significant contribution of time management and the intensity of Smart phone using as a source of learning toward students academic achievement in Information Technology Education Department. The insignificant contribution was 3%.

Based on the data analysis before, it was found that, there was a significant contribution of time management on students academic achievement. The coefficient (r) was 0.161 with significant value (p) was 0.039 ( $p < 0.05$ ). The contribution of time management on students academic achievement was 2.6%. It could be assumed that, the better time management had by the students, the higher score they got and in reverse. Thus, time management can be used to predict the students academic achievement in the information technology education department.

In order to get a better academic achievement, the students should manage their various activities and used manage time effectively. In hope, Gie (2003) they will achieve their own goals. The students who deal with a better time management will complete any tasks in time. They are expected to have a strong self efficacy to solve the obstacles in their learning activities in order to get a higher academic achievement. Simply, time management is students capability to manage the time effectively, able to put the priority comes first, plan the schedule and make the best use of break time and then time will be more useful. The effectiveness of the time management can be seen from how the students achieve their listed plan such as the students who won't pass the university more than four year, finishing the assignments rather than playing game and listing the assignments to make them be easier to complete. Besides, the effectiveness of the time management can be seen from the reduction of time as it planned before such as when the students make their break time be more useful to learn some topics.

Based on the data analysis, it was found that there was a significant contribution of the intensity of Smart phone using as a source of learning on students academic achievement. The coefficient (r) was 0.159 with significant value (p) was 0.042 ( $p < 0.05$ ). The contribution of the intensity of Smart phone using as a source of learning on students academic achievement was 2.5%. It could be assumed that the better the intensity of Smart phone using as a source of learning had by the student's the higher score they got and in reverse. Thus, the intensity

of Smart phone using as a source of learning can be used to predict the students academic achievement in the information technology education department. This result is proven that any kind of tools belong to the external factor used to determine students academic achievement (Slameto, 2003). Smart phone is one of the tools used by students in the information technology education department to support the learning process. Smart phone provides many applications which can be used by the students to find anything even many source of learning (Sofian, 2015). Now a days, Smart phone has a big role in teaching and learning process, since, many interaction among lecturers and students done through Smart phone (Rung *et al.*, 2014). The students intensity in using smart phone as a source of learning will influence their academic achievement. Prasetyo believes that the used of gadget will influence students academic achievement (Sari, 2015). The used of Smart phone brings a dualism effect, it either positive or negative effect just depends on how students use it. The tendency of Smart phone using in the information technology education department were they maximize the use of Smart phone a source of learning, sometime many students are not able to choose the appropriate material by using Smart phone and they do not use Smart phone for having fun only or showing their prestige.

Based on the multiple regression analysis by using F-test, it was found that there was no simultaneous contribution of time management and the intensity of Smart phone using as a source of learning toward students academic in the information technology education department. This is implied that time management is a process of planning and achieving a certain goal. It also refers to the students capability of making prediction to tight their time as an attempt to self discipline. Puspitasari (2013) the essence of time management is an effective time allotment for doing listed activities such as time for learning, time for joining students organization, time for working, time for socialization, time for family or even time for theirselves. A better student in the time management should consider how to make an effective time allotment for every single activity by that, they will not wasting their time. In contrast, the ineffective used of Smart phone will taking down students academic achievement. Students have to able to manage every facility in their smart phone such as Black Berry Messenger (BBM), Whatsapp and Skype which will consume much the students time. Maria (2013) one indicator of student's academic achievement is shown from their GPA (Grade Point Average). Academic achievement is very crucial for students. It will show, how good they achieve the learning process. However, the students time management and the intensity of Smart phone using as a source of learning are not the indicator of students academic achievement. This is caused by, the

different characteristics of the students and different activities of the students. In hence, there is an intervening variable existed which influence students academic achievement. Based to the interviewing study, it was found that student with many activities or even has a part time job and have much intensity of using Smart phone outside the class is not necessary decrease their GPA (Grade Point Average). This is because, the students are able to manage the time well and maximize the use of smart phone to find many sources of learning. While, the student who to focus on class and has a high intensity of using smart phone is not necessary increase their GPA (Grade Point Average). This is caused by, the incapability of the students to manage their time affectively. Thus to make a better academic achievement, students should have more time to review the materials given by the lecturers and able to maximize the use of Smart phone a source of learning.

## CONCLUSION

Based on the previous discussions about research problems, the objectives of the research, hypotheses submission and data analysis, it can be concluded as follows there is a positive and significant relationship between time management and students academic achievement in the information technology education department. The coefficient (R) is 0.161 the significant value (p) is 0.039 and the contribution of time management on the students academic achievement is 2.6%. It can be assumed that the better time management had by the students, the higher score they got there is a positive and significant relationship between the intensity of the smart phone using as a source of learning and students academic achievement in the information technology education department. The coefficient (R) is 0.159 the significant value (p) is 0.042 and the contribution of the intensity of the smart phone using as a source of learning on the students academic achievement is 2.5%. It could be assumed that, the better the intensity of Smart phone using as a source of learning had by the students the higher score they got there is no significant relationship both time management and the intensity of the Smart phone using as a source of learning toward students academic achievement in the information technology education department. The coefficient (R) is 0.176 the significant value (p) is 0.081 and the contribution of time management and the intensity of the Smart phone using as a source of learning on the students academic achievement is 3.1%. This result implies as follows the students with many activities or even have a part time job and have much intensity of using smart phone outside the class is not necessary decrease their GPA (Grade Point Average). This is because, the students are able to manage the time well and maximize the use of Smart phone

to find many sources of learning while the student who to focus on class and has a high intensity of using smart phone is not necessary increase their GPA (Grade Point Average). This is caused by, the incapability of the students to manage their time effectively. The difference characteristics of the students and difference activities of the students and other potential factors will influence students academic achievement.

Based on the result of this present study, the researcher suggests several suggestions as follows for other researchers will involve a large number of population. It is expected the next research is just not only conducted in the information technology education department but also other departments, since, each department has different character. It is also expected that, other researchers to investigate other variables that affect students academic achievement for other researchers who will conduct the same topic, time management have to consider the multi dimensions of time management. It is also hoped they will investigate deeper for the results of present study based on the research conducted, it is found that time management is pretty important in making a plan of learning. Besides, the effective use of smart phone as a source of learning is able to lead students being better in learning process. Thus it is expected the result of this present research can be used to do self-reflection for the students in the information technology education department.

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