Learning Strategies and Motivation with the ARCS Model for Mobile-Assisted Seamless

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Abstract

This study aims to analyse students' motivation and learning strategies using seamless assisted mobile media. The research was conducted at the University of Nurul Jadid. This study used a qualitative approach phenomenology. The results of the study concluded that learning strategies with seamless assisted mobile media can develop student learning motivation in the aspects of attention, relevance, self-confidence, and satisfaction. In the aspect of attention, it generates enthusiasm and good attention and becomes more interested in learning. The relevance aspect shows good motivation in terms of relevance. Aspects of self-confidence produce good self-confidence, as well as aspects of satisfaction in the learning process. Seen from the results of a survey conducted on students.

Keywords:
Learning strategies, Motivation, the ARCS Model, mobile-assisted seamless

1. Introduction

The learning paradigm has undergone significant changes, where learners are allowed to choose learning methods and styles that suit their characteristics. This condition also has an impact on the interaction between learners and learners. The social interaction between the two in the learning process can occur naturally. Besides that, everyone's desire or emotional mood to learn can happen anytime and anywhere(C., Cherniavsky, J., Pea, R., Norris, C., Soloway, E., Balacheff, N. & Dillenbourg, P., Looi, C., Milrad, M., & Hoppe, 2006). Students need to be accommodated so that they can learn immediately, including the provision of learning resources, learning media and a learning environment(Csikszentmihalyi, 1996). These conditions allow students to learn with various scenarios, the learning process can occur in formal or informal conditions inside or outside the classroom, individual or social, digital and non-digital media, as well as physical or virtual environments.(Csikszentmihalyi, 2002). Wong and Looi's research identified the dimensions that characterize mobile seamless learning. Adopt a mobile seamless leraning design using analysis to place the dimensions where the constraints or design problem parameters lie, and look at relevant designs and research-based evidence from other related mobile seamless leraning systems to refine the design itself(Wong & Looi, 2011).

Motivation is used with a conscious effort to move, direct and maintain a person's behavior so that he is motivated to act to do something so as to achieve certain results or goals(Syakroni et al., 2019). To increase learning motivation, this is done is to identify several indicators in certain stages. Motivational indicators include: 1) Duration of activities, 2) Frequency of activities, 3) Presistence of activity objectives, 4) Persistence, persistence and

ability to face activities and difficulties to achieve goals, 5) Dedication and sacrifice to achieve goals, 6) Level aspirations to be achieved with the activities carried out, 7) Level of qualification of achievement, 8) Direction of attitude towards activity targets. Some experts conduct research by combining several applications in the learning process, without analyzing learning outcomes(Jia et al., 2014). We make an effort to look at the motivations that arise from the seamless learning process with the ARCS Model.

2. Seamless Learning

Seamless literally means continuity that takes place smoothly. The term Seamless Learning was not first associated with the use of technology in learning(George D. Kuh, 1996). The definitions of experts regarding Seamless Learning are indeed diverse, but in general this concept refers to the transition between contexts and learning scenarios that occur as smoothly or smoothly as possible. Seamless learning supports learners to learn when they want to learn, even in various scenarios and they can move from one scenario to another quickly and easily. Mobile Seamless Learning (MSL). The impact of technological developments changing the paradigm in education(Baharun, 2019) (Zamroni et al., 2020), learning develops already outside the context of traditional learning in general. So that makes the challenge of education in this digital era is that it is no longer just focusing on what content will be studied but has developed into how and when this learning occurs (Looi, C.-K., Seow,P., Zhang,B.H., So, H.-J, Chen, W.,and Wong, 2009) (Fauzi et al., 2018). The portability and flexibility of a mobile device has the potential to support a pedagogical transition from teacher-centered learning to learner-centered learning. Several advantages of using mobile technology in the implementation of Seamless Learning, namely: it can increase student motivation; increasing student participation in learning activities and developing social and cognitive learning processes(*Rogers, Y. and Price, S. (2009) 'How Mobile Technologies Are Changing the Way Children Learn', in A. Druin (Ed.), Mobile Technology for Children. Morgan Kaufmann, Pp.3 – 22*, 2009).

3. Motivation with the ARCS Model

Winkel argues that motivation is a driving force that has become active(Sardiman, 2009). ARCS (Attention, Relevance, Confidence, Satisfaction) Model. This motivation model was discovered and published by John M Keller in 1987. This motivation model was eventually developed to encourage intrinsic motivation in students (Islam et al., 2018).

Seamless Learning is, supporting learning to optimize learning experiences and their concern for abstract and concrete experiences(Sharples, 2006). Two reasons a person learns, namely the existence of reasons from outside (exintric) and reason from within (intrinsic). The connection with seamless learning is flow which is a type of intrinsic motivation. Flow state is a person's mental condition where he is immersed and focused on an activity he likes, so that he understands what moments will happen(Csikszentmihalyi, 1996). Furthermore, 9 indicators of flow state conditions, or flow of learning, are: a) The objectives must be clear at each step, 2) There is immediate feedback on an action or action, 3) There is a balance between challenges and skills, 4) Action and awareness (caring) combined, 5) Ignoring distractions, 6) Mistakes are commonplace, 7) Loss of Self-consciousness, 8) Time becomes distortion, and 9) Activity becomes "autotelic"(Keller, 1987). In the flow state condition, learners are involved in the learning process in all learning contexts where they are sensitive to physical changes (from non-virtual learning to virtual learning), temporal, social and technology(Muali et al., 2018). The designer of this learning needs to understand how learners enter this flow state, and how this condition can be maintained despite changes in the setting or learning context which ultimately leads to a contribution to effective and efficient learning(Keller, J. M., & Kopp, 1987).

4. Research Method

This research is a qualitative descriptive study. Qualitative research does not limit the distance between the researcher and the one being studied(Diplan dan Setiawan, 2018). This research was conducted at the University of Nurul Jadid on students of Islamic Religious Education. The data in the study were obtained through several methods of data collection, including:

a) The research instrument in the form of a student learning motivation instrument was adapted from the Course Interest Survey instrument by Keller (2002). The questionnaire is an instrument used to measure student learning motivation based on the ARCS theory (Attention, Relevance, Confidence and Satisfaction). After being adapted and adjusted to the characteristics of the use of mobile seamless learning media, the researcher used 24 statement items with a composition of 7 statement items in the domain of Attention, 4 items of statements in the realm of Relevance, 6 items of statements in the realm of confidence, and 7 items of statements in the realm of Satisfaction

b) Interview. Data collection in this study also conducted interviews with students after the chemistry learning process using Mobile seamless learning media. The interview aims to strengthen the validity of the data from the questionnaire on learning motivation;

c) Observation aims to observe the implementation of learning using mobile seamless learning media. These observations include learning interactions, student conditions and student motivation which includes Attention, Relevance, Confidence and Satisfaction.

The instrument in the questionnaire in this study adopted the ARCS theory as in the following table

Table 1. Indicators in the ARCS instrument

Motivation Aspects	Statement
Attention	• enthusiastic about the subject matter • mobile seamless learning media is an unusual way of teaching • it caught the attention
Relevance	• the learning evaluation course useful for life • To get the learning outcomes according to the target, I have to do all the assignments given
Confidence	• achieve the target value • get good grades in the learning evaluation
Satisfaction	• provides a lot of satisfaction • the learning evaluation course

5. Result and Discussion

Student learning motivation is the main analysis point in this study. In accordance with the model used, the first analysis is student attention to the learning process with mobile seamless learning, with the following results:

Table 2. The results of the attention aspect questionnaire

Statement	Percentage			
	strongly agree	Agree	Disagree	totally disagree
The use of mobile seamless learning makes students enthusiastic about the subject matter	30	70	0	0
The use of mobile seamless learning media is an unusual way of teaching, and it caught my attention	25	65	10	0

Based on the table above, it is known that 30% of students strongly agree and 70% agree with the seamless mobile learning strategy. This indicates that students are enthusiastic about the learning process. In the second question, 25% strongly agree, 65% agree, and 10% disagree with teaching strategies using mobile seamless learning. This is in line with the results of student interviews which stated that mobile seamless learning has made them more enthusiastic about learning.

Next is the level of relevance. The relevance in question can be interpreted as a relationship or suitability between the learning material presented with the student learning experience with the following results:

Table 3. Questionnaire Results for Relevance Aspects

Statement	Percentage			
	strongly agree	Agree	Disagree	totally disagree
I don't find the learning evaluation course useful for my life	0	10	35	55
To get the learning outcomes according to the target, I	30	65	5	0

have to do all the assignments given				

Based on the table above, it is known that 100% of students agree, 35% disagree, and 55% strongly disagree. That is, the relevance of the learning evaluation course gets a high point and students feel the need to study it. Next, students will also do the assignments given according to the material being studied and this has received various responses, including 30% strongly agree, 65% agree, and the remaining 5% disagree.

The aspect of self-confidence in ARCS is the student's confidence in their learning performance, so that it can increase learning motivation. Following are the results of a questionnaire on student self-confidence:

Table 4: Results of the Self Confidence Aspect Questionnaire

Statement	Percentage			
	strongly agree	Agree	Disagree	totally disagree
In the learning evaluation course, I am sure that I will achieve the target value	50	50	0	0
I am sure that I will get good grades in the learning evaluation course	40	60	0	0

Based on the table above, it is known that on average students feel confident that they will get good grades while participating in learning using mobile seamless learning. This also indicates that the use of strategies with mobile seamless learning makes students feel easy to follow learning which ultimately has an impact on self-confidence and will get good grades.

The last part of the ARCS model is satisfaction, where the results can be described in the following table:

Table 5: Results of the Satisfaction Aspects Questionnaire

Statement	Percentage			
	strongly agree	Agree	Disagree	totally disagree
I find learning evaluation learning provides a lot of satisfaction	45	55	0	0
I feel disappointed with the learning evaluation course	0	5	18	77

The point which reads "I feel that studying learning evaluation provides a lot of satisfaction", it can be seen that all students gave answers which stated that they felt the course provided a lot of satisfaction. Furthermore, for the second statement which reads "I feel disappointed with the learning evaluation course", it was found that 95% of students stated that they were not disappointed with the learning evaluation course. From the results above, it can give an idea that students feel satisfied in the evaluation learning process.

6. Conclusion

Based on the results of research and discussion, it can be concluded that mobile seamless learning media can develop student learning motivation in the aspects of relevance, attention, confidence, and satisfaction. On the aspect of relevance (relevance) shows good motivation in terms of the relevance of learning evaluation science. In the attention aspect, it generates good enthusiasm and attention and becomes more interested in evaluation learning. For the aspect of self-confidence (confidence) produces good confidence for students in studying learning evaluation. For the aspect of satisfaction (satisfaction) produces a good sense of satisfaction. Students are also satisfied with the learning process besides that students are also not disappointed with evaluation learning.

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