

SPORT ACCESS LEARNING (SAL) TO PROMOTE SELF-REGULATED LEARNING: A NEED ANALYSIS

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ABSTRACT

This study was aimed to capture the need analysis of sport access learning (SAL) in order to promote self-regulated learning for sport education students. As many as 89 students had participated in this survey that consisted from bachelor degree and master degree of sport education at State University of Malang. This study conducted as a descriptive research using survey design to collect data related to the need analysis of SAL. The result of this study explored variety of activity in using internet, facilities in accessing internet, blended learning environment in learning, and the need of SAL. The second finding showed that the sample has adequate self-regulated learning level. In general, the SAL development is highly needed for students of sport education to enhance the self-regulated learning level. Implication of the findings in SAL were also discussed.

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INTRODUCTION

The tendency of learning nowadays and the future has changed the traditional learning approach to the learning that is called learning in the knowledge era that demonstrates science and technology of sport can be useful and accessible by many users anywhere, anytime, and by anyone through textbooks, experts, peers, children, internet, radio, television, and many more. The characteristics of learning in the century of knowledge are lecturers as facilitators, counselors and consultants, lecturers as friends of learning, learning directed by people who learn, open learning, flexible, learning mainly based on projects, problems, and learning oriented to the empirical world with concrete actions. Furthermore, other characteristics of learning are inquiry and design methods, discovering and creating, collaborative, community-focused, open-ended result, creative diversity, computers as a tool of all kinds of learning, dynamic multimedia interaction and communication. The rapid and vast development of technology has impacted the education field, where lecturer nowadays is not only required to teach students but also to consider how the environment and source of

information can support the learning process. Another impact is various learning media are being created such as text book, power point slides, video, movie, hypertext, web and many other forms. A professional lecturer should have explored which learning media can be helpful to the learning process. Learning is a process where we manage external factors to support the internal factors. The learning target is to modify the external factors as well as environment to influence and to produce the willingness to learn. One of the strategies is to provide the learning sources such as lecturer, text book, learning material, guest speaker, TV, DVD, radio, magazine, newspaper, internet, CD, environment or peer educator. The measure of a successful learning process is the interaction between a learning person and his/her learning sources. Hence, to modify the learning sources is a crucial step. The learning sources need to be created to engage the learner and to make the learning process to be more effective, efficient and interesting. Furthermore, the role of a lecturer will transform to an organizer of learning sources to make learning easier, faster, more practical and more fun. A learning sources centre equipped with informative technology should be developed. In the learning centre, all people who want to learn can access all forms of learning media, such as journal, encyclopaedia, magazine, newspaper, video, cassette and internet. Furthermore, they can learn anytime through any media.

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However, to build this centre we need the goodwill from community and a transparent management. One of the challenges for sports education in the future is associated with the use of better technology (Buck, Jable, and Floyd, 2004). Nowadays, one of the most crucial features of last several decades is the incredible progression of technology (Okan, 2016). Thus, this phenomena leads some development. Therefore, the urgency of developing learning sources is mainly to lower the gaps between learning based on face-to-face oriented in classroom to learning that combination of online and offline learning. There is the urgent need to build a centre which can reduce the gap between an ordinary learning process in the classroom and a learning process involving interactive media based on technology. We have developed the Sport Access Learning (SAL) as a learning source which can be accessed at any time so that it can be used to bridge the gap. Furthermore, various studies have shown that physical education or sport is not only limited to the face to face learning condition, but also the renewal related to the integration of technology by the physical education learner. The technology which integrated into physical education broadly associated with the use of computer technology, monitoring of physical activity, and use of multimedia (Chen and Xia, 2012), Nitendo Wii (Perlman, Forrest, and Pearson, 2012), video feedback such as audio-visual (Meureta and Meureta, 2013), PowerPoint, YouTube, Pedometers, Heart Rate monitor, and Coaches Eye (Baert, 2014), clickers (Constantinou and Ionnou, 2016), and Exergames (Gibbs, Quennerstedt, and Larsson, 2016).



(Source: documentation of researcher)

Figure 1. The Appearance of SAL

SAL is a ATM-like machine equipped with software to expand the student's access to learning sources both offline and online. The appearance of SAL displayed in Figure 1. The machine stores all information related to Sport Sciences Postgraduate Course in the State University of Malang, hence it can be used as a learning source for the students. SAL interface has main menu and submenu in various format such as Macro Media Flash, Microsoft Words and Power Point, PDF, and video.

What we have stored in SAL can be accessed in two ways, first by accessing it through the touch screen and the second is by using personal laptop since SAL also works as a server connected to the same internet connection (WiFi). It also functions as an offline learning source as it is presented in Figure 2.

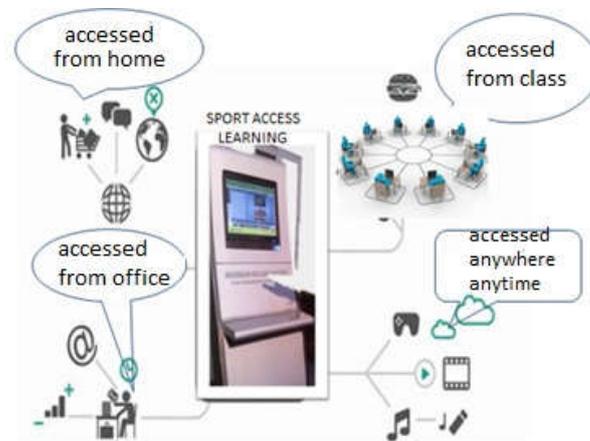


Figure 2. The Concept Model of SAL

The content of SAL in the main menu includes text, picture, video and animation of: (1) The Sport Science Postgraduate Course Profile, (2) Acknowledgement from The Head of the University, The Director and The Head of the Department, (3) Curriculum, (4) Course description, (5) Lecturers' profile, (6) Research journals from the lecturers, (7) Research journal from students, (8) Sport policies, (9) Sport and Technology, (10) E-book, and (11) Sports video. All these main menu is divided into sub-menus. The research is highly essential to be done to produce an empiric result for the quality development of the university, particularly the Sport Sciences Postgraduate Course. The result of the research will include the learning source models for SAL based on technology at offline state as well as online. The development of the model will support postgraduate students to manage and to provide learning sources. This particular model will increase the quality of the learning process and the efficiency of time to learn. Furthermore, the research result will be used as a development model of learning sources based on technology as a particular characteristic of Physical Education and Sport Sciences Course. The research will involve postgraduate students in Sport Sciences Course in the development of the instrument, in the teacher and lecturer survey of their learning syllabus and in filling the content. In general, the research will be valuable as the theory-research primary finding in the development of learning technology and to be used in another research of the function of producing learning sources (AECT, 1977; Seels and Richey, 1994; Januszewski and Molenda, 2008). This study aimed to collect the need analysis data and to determine the specifications and component of Sport Access Learning (SAL) development for graduate student of Sport Education at State University of Malang. Furthermore, the result of the research will be a web-form based that consisted of teaching materials, presentation and learning based on computer as the learning sources.

MATERIALS AND METHODS

This study was conducted as a descriptive survey related to need analysis of SAL.

As many as 89 student from bachelor and master degree of sport education program at State University of Malang had participated in this study. The sample composed of 43% bachelor degree and 57% master degree. The questionnaire consisted of two parts, which the first part gained data about internet usage of the student and the second one was conducted to explore the self-regulated learning aspects of students that was build using Linkert scale. This study used a semi-structured questionnaire consisting of the general characteristics of the subjects, activities in using internet, facilities in accessing internet, blended learning environment in learning, the need of SAL, and structured questionnaire assessing self-regulated learning level of Sport Education student at State University of Malang. Based on reliability analysis, Cronbach's Alpha of the second part questionnaire that consisted of 15 questions were 0,865 that can be stated reliable.

RESULTS AND DISCUSSION

In this section, the findings are presented in two parts. The first part explored variety of activities in using internet, facilities in accessing internet, blended learning environment in learning, and the need of SAL are displayed in Table 1.

Table 1. Summary of need analysis questionnaire based on internet usage, facilities, Blended Learning (BL), and Sport Access Learning (SAL)

No	Component	N	%	No	Component	N	%
Internet Usage				Blended Learning			
1	Duration			1	Online learning participation		
	Under 2 hours	30	33,7		As a student	75	67,2
	2 – 3 hours	17	19,1		As a teacher	13	15,1
	3 – 4 hours	19	21,3	2	Usability		
	4 – 5 hours	8	9		Very useful	63	71,1
	Over 5 hours	15	16,9		Useful	26	28,9
2	Place				Useless	0	0
	Home	69	77,5	3	Acceptance		
	Campus	49	55,1		Strongly agree	49	55,1
	Warnet (Internet Cafe)	7	7,9		Agree	40	44,9
Facilities					Disagree	0	0
1	Hardware			4	Composition		
	Personal Computer (PC)	3	3,4		Face to face 100%	30	33,3
	Laptop	34	38,2		Face to face 75%, online and offline	15	16,7
	Handphone (smartphone)	64	71,9		25%		
2	Monthly cost				Face to face 50%, online 25%, offline	45	50
	Under Rp 100.000	71	79,8		25%		
	Rp 100.000 – Rp 200.000	9	15,7		Face to face 25%, online 25%, offline	0	0
	Rp 200.000 – Rp 300.000	3	3,4		50%		
	Over Rp 300.000	1	1,1	Sport Access Learning (SAL)			
3	Internet access at faculty			1	Usability		
	Effortless and fast	18	20,2		Very useful	41	45,6
	Easy and slow	54	60,7		Useful	46	52,2
	Difficult and slow	17	19,1		Useless	2	2,2
4	Internet access at class			2	Content		
	Effortless and fast	11	12,4		Textbook	0	0
	Easy and slow	59	66,3		Textbook, audio	0	0
	Difficult and slow	19	21,3		Textbook, audio and video	14	15,7
5	Electronic learning sources				Multimedia interactive: textbook,	12	13,5
	Very sufficient	8	8,9		audio, video, and animation		
	Sufficient	61	68,9		Multimedia interactive: textbook,	63	70,8
	Deficient	20	22,2		audio, video, animation, and internet		

The second part described about self-regulated learning level of participants that displayed in Table 2. According to Table 1, it was found that majority of the participants stated that they only use active internet less than 3 hours per day (33,3%) and mostly they accessed internet when they are in home (77,5%) and campus area (55,1%).

Internet cafe (*warnet*) now becomes less popular in young people. Besides that, based from current survey result in Indonesia, mostly regions are dominated by WiFi broadband internet connection and cellular access (mobile broadband) is mostly used in East Java (APJII, 2013). The next component discussed are facilities that consisted of hardware, monthly cost, internet access and electronic sources. More than 70 percent of respondents used mobile phone (smart phone) to access internet. This finding can be correlated with the survey result of smartphone users in Indonesia that increased 12 million from 2015 to 2016 (Das, et al, 2016) and is estimated to reach 62,69 million in 2017 (Statista, 2017). In addition, this number is projected to increase about 10 million per year.

According to Table 1, as many as 71(79,8%) respondents spend less than Rp 100.000 to buy data service in each month while only one person that spend more than Rp 300.000 per month. Depending on the current survey, mobile data in Indonesia costing only 50 percent of what other Asean country pay to access the internet or in other words mobile data cost in Indonesia is very affordable (Das, et al, 2016). Thus, this survey also leads a consequence that the connection speed is below the average (very low).

The data related to the accessibility of internet speed at faculty and area near the classes also be displayed in the Table 1. According to the result findings, internet access in classes and faculty area are categorized as easy and slow with more than 60% respondents choosed that option. This also can be a limitation to provide better opportunity for student in accessing

Table 2. Distribution of Self-Regulated Learning Responses

No	Question	Responses										Mean	Std. Dev
		SA	A	N	D	SD							
1	Question 1	40	45%	40	45%	9	10%	0	0%	0	0%	4,361	0,654
2	Question 2	26	29%	52	58%	9	10%	1	1%	0	0%	4,156	0,652
3	Question 3	16	18%	47	53%	25	28%	0	0%	0	0%	3,879	0,669
4	Question 4	22	25%	44	49%	22	25%	1	1%	0	0%	3,927	0,728
5	Question 5	16	18%	44	49%	26	29%	3	3%	0	0%	3,771	0,754
6	Question 6	21	24%	47	53%	16	18%	3	3%	0	0%	3,963	0,756
7	Question 7	9	10%	22	25%	44	49%	12	13%	2	2%	3,216	0,870
8	Question 8	11	12%	41	46%	29	33%	7	8%	1	1%	3,602	0,825
9	Question 9	13	15%	53	60%	15	17%	6	7%	0	0%	3,807	0,756
10	Question 10	24	27%	52	58%	12	13%	1	1%	0	0%	4,108	0,662
11	Question 11	14	16%	58	65%	16	18%	0	0%	1	1%	3,915	0,647
12	Question 12	21	24%	50	56%	14	16%	4	4%	0	0%	3,963	0,772
13	Question 13	24	27%	41	46%	19	21%	3	3%	1	1%	3,927	0,866
14	Question 14	16	18%	33	37%	32	36%	6	7%	1	1%	3,614	0,894
15	Question 15	29	33%	53	60%	10	11%	2	2%	0	0%	4,120	0,705

Note: SA=strongly agree, A=agree, N=neutral, D=disagree, SD=strongly disagree

Table 3. Summary of Self-Regulated Learning Responses

No	Total Skor	n	%
1	>40	0	0
2	41-50	8	9
3	51-60	51	57,3
4	61-70	24	27
5	71-80	6	6,7
Jumlah		89	100

online learning. Some studies also revealed some barriers related to the applications of blended learning in their schools or universities. One of the negative impressions came from technical field that is related to the server that went down when all students accessed the site at the same time (Gyamfi and Gyaase, 2015). The third component accessed related to blended learning environment in learning consist of participation, usability, acceptance, and composition. Based on the data displayed in Table 1, as many as 75 respondents (67,2%) said that they participated as a student in online learning, while only 15,1% enrolled as teacher. Next component discussed is the usability of blended learning which is found clearly from Table 1 that most participant stated as very useful with more than 70% participants said that. Moving to acceptance of blended learning, the percentage of two categories that are strongly agree and agree almost share the same amount of respondent, while noone said disagree. The next component discussed is the composition. According to the Table 1, there is found that 50% exactly of respondents choosed combination of face to face (50%), online (25%), and offline (25%) to be the best composition in their learning. In contrast, full time face to face learning still be chosen by 33,3% respondents. In general, most respondents agree to choose the fourth composition that combines face to face learning (50%), online (25%), and offline (25%). According to Table 1, the last component displayed is the need of Sport Access Learning (SAL). The first component presents data about the usability of SAL and the second data shows the content of SAL development. Based on the data, it can be seen that as many as 70,8% respondents said that the content of SAL wanted consists of text, audio, video, multimedia interactive, and internet. In addition, two categories that are combination of text, audio, video, and multimedia interactive and combination of text, audio, video, and animation almost split the same number of responses. Support appears through the perception toward mastery of the technology considered at high level by teachers or prospective teachers of sports education (Varol 2014; Herguner, 2016).

This indicates an important need of improvement of professional quality in terms of technology mastery. One of the key concept to experience better understanding of using technology into learning is usually connected to the self-regulated learning. This study also revealed data of self-regulated learning that consisted of 15 questions which are presented in Table 2. The mean of responses of each questions are mostly categorized as neutral response, while only three questions that have mean above 4 (agree), namely question 1, question 2 and question 10. According to Table 2 the distribution of responses commonly placed in the three categories that ranged from strongly agree, agree and neutral. Only question number 7 and 8 that have various distribution. To sum up, the mean of the responses is neutral with small amount of standard deviation. Based on the previous data summary, the next data displayed shows the categories of the respondent that is related to the self-regulated learning levels in interval data.

Based on the calculation gained from total scores there are five categories displayed in Table 3 ranging from score >40, 41-50, 51-60, 61-70, and 71-80 with maximum score is 75. According to Table 3, more than 50% of respondents categorized as moderate self-regulated learning level, whereas 24 respondents are categorized in high self-regulated learning level, and only six respondents have very high self-regulated learning level. In contrast, the data showed there is no respondent categorized as low self-regulated learning level. Results show that student have enough and high self-regulated learning level. Research on self-regulated learning and information technology had been done to show some relationships. Thus, the high level of self-regulated learning are the crucial component to integrate blended learning model in sport education students. Ting and Chao (2013) observed the application of self-regulated strategies in blended learning using Moodle and the result showed that the student with high level of competence performed better than those with intermediate level although there is no significant difference related to the gender.

Another studies showed that self-regulated learning strategy used successfully in increasing the metacognitive students in online learning environment (Quince, 2013).

Conclusion

The rapid and vast development of technology has impacted the education field, where lecturer nowadays is not only required to teach students but also to consider how the environment and source of information can support the learning process. This study indicates that mostly sport science students agree that there is needed a development of SAL and the contents of SAL wanted consist of text, audio, video, multimedia interactive, and internet. This study also explored the self-regulated learning level of student that majority of students stand in high level of self-regulated learning. In particular, the result of the research can be used as life-based learning (through classroom, offline or online) both for lecturers and postgraduate students of Sport Sciences in the State University of Malang. The students can use it to facilitate the learning sources in other courses using SAL. Future study is needed especially in developing the SAL using research and development (R and D).

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