DIGITAL INTERACTION AND APPLICATIVE CONNECTEDNESS IN BLENDED LEARNING TO INCREASE STUDENTS' MOTIVATION AT BOARDING COLLEGE

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ABSTRACT

Recently, teaching learning process in the college face the challenges, especially by the globalization and the technology use in any life aspects. Therefore, the education institution must follow those changes by implementing technology in teaching learning process. This literature study discusses about the implementation of e-learning that is combined by traditional learning. This combination is necessary because people, either students or teacher in Indonesia still must adapt to the use of technology in applying e-learning. This combination of e-learning and traditional learning is called as blended learning. By reviewing any literature, either conceptual or empirical, it can be revealed that blended learning implication in boarding college faces the challenges: organizational level, individual level, and process level. The digital interaction and applicative connectedness in e-learning may be the factors that can promote the students' motivation in boarding college.
***Keywords**:   e-learning, blended learning, traditional learning, applicative connectedness, digital interaction, motivation*

A. INTRODUCTION

The advance of technology usage is not only in the business with profit-oriented, but also in any activities of human life, including the education. The use of application of information technology in education sectors also are not only in administrative uses, but also in teaching-learning process. It can be called as e-learning, that is the learning that applied by computer aids. In which, several learning materials are given in digital, therefore it can be saved in electronic media (Clark &Mayer, 2011:10).

This e-learning concept, indeed, give the new breathe, atmosphere, and experience for teacher and student, and also good services for the community, either in elementary school, high school, and even in higher education, such as college and university.By the existing of information technologyapplication and information, especially internet, the learning can be practiced transparently and flexible (Clark & Mayer, 2011: 10). E-learning also may increase the students' experience in learning, because they can learn whenever and wherever as long as they connect to internet (Castle & McGuire, 2010; Clark & Mayer, 2011:10).Anand et al (2012) concluded that the advantages of e-learning resources and their affect on social and mental development of the individuals belonging to rural areas. So &Kuniawan (2010) even stated that the school does require an e-learning to improve its services to the community. Further, in applying online learning, Morris (2014) who studied about MOOC (Massive Open

Online Courses) stated that not all learners can access the online teaching learning, the lack of students' and teachers' experiences in online learning, the lack of cofidence and skills.

Mostly, campuses in Indonesia have practiced e-learning to improve the quality of teaching-learning process. But, based on the empirical study of So &Kurniawan (2010), it was found that e-learning practice must be supported by the appropriate infrastructure. In which, if school institution does not provide them, then the students must have sufficient infrastructure to support the implementation of it. Whereas Morris (2014) stated that in implementing online learning, the institution must focus on tutor-generated content, a linear learning experience and more structured opportunities for communication, appeals more to the masses, but may not offer the best deep learning experience, due to lack of active and participatory learning.

As stated above that the use of information technology may be found in any education level, including the at the boarding colleges. The boarding college is the college which is providing boarding house for student to live and the students must live there as long as they study there. Empirical study that completed by Maphoso&Mahlo (2014) revealed that basic facilities at boarding school is higher than non-boarding schools, in which the basic facilities have a positive correlation with academic achievement. Yet, based on the observation to one boarding college in Surabaya it can be found that the teaching learning process that use information technology is affected by either internal factors or external ones.The internal factors including: (1) the influence from senior in which will be threats and support at once for the junior; (2) boarding environment; (3) individual (students)' characteristics; (4) learning methods; (5) students' motivation and idea; (6) the short time to take a rest; (7) nutritional problem that consumed by students; (8) the deans/teachers characteristics and roles; (9) infrastructure availability; and (10) budgeting. Whereas, the external factors including: technology, social, culture, government regulation, and industry that related to the education program output.

Facing those factors that may be the challenges and support for teaching learning success and process, the use of technology that may be implemented is blended learning. By applying the blended learning, students still can complete face-to-face learning with the teachers, but they also will educate to know and use the information technology. Therefore, after they graduate from the college, they can achieve the competencies that are along with the industry.

In implication blended learning, the digital interaction and applicative connectedness must be maintenance well. Sumarsono et al (2012) applied the TPACK (technology, pedagogy, content, knowledge) methods in designing the e-learning, because TPACK can be the guidelines to optimalize the interaction of technology, content, and pedagogy via online and be implemented in the blended learning that are packaged in learning management system (LMS). While Brennan (quoted by Morris, 2013) explored the implication of MOOC (massive open online courses) that adopted blended learning, in which it may encourage student-centered learning and non-linear learning experiences, in which problems, ideas and solutions are developed through sharing the best of the web, creating materials and communicating through a variety of channels, including social media networks.

Based on the explanation above, it can be comprised that the advance of information technology in education sectors may improve the teaching learning process, including in the boarding college or higher education. The teaching learning process that take benefit from the technology use can practice e-learning. Eventhough commonly the boarding college has better and higher basic facilities,but in practicing e learning, there are any challenges that must be faced by institution, lecturer, and the students. Therefore the practice of e learning in the boarding college still have to combine with the traditional learning. The method that may be applied in implementing blended learning must be efficient and effective and also must consider the digital interaction factors and applicative connectedness in order to be able to encourage the positive teaching learning activities and process.

B. METHODS

This study is applied the qualitative literature review. Therefore, this study review literature that related to the topic of the study either empirical literature or conceptual literature.

C. BLENDED LEARNING MODEL

Etymologically, blended learning consists of two words,*blend* and *learning*. *Blend* is the combination of things, while *learning* may be termed as a process or its outcome in which necessary changes in the behavior of the learner are brought through experience-direct or indirect" (Upadhya& Singh, 2007:71), in which the outcome may be classified to three

domain: cognitive (informations, knowledge), affective (feelings, emotions), and psychomotor (behavior) (Murray &Christison, 2011:140; Kaufhold, 2002:3). Based on the root of the phrase, Garrison & Vaughan (2008: Ch.1) explained that blended learning is the thoughtful fusion of face to face and online learning experiences. Further, Tshabalala et al (2014) explained that blended learning is, "the mixture of traditional delivery including: lectures, group discussions, apprenticeships and experiential learning, together with e-learning methods, which accommodate various learning needs of a diverse audience in a variety of subjects". Blended learning is also defined as the traditional learning that are completed by electronic media (Bersin, 2004:xv). Therefore, in blended learning, there is a cohesive unity that unify or combine the face-to-face learning with online components (Tucker, 2012:11) such as cd-room, virtual class, voice-mail, e-mail, video streaming, etc (Thorne & Mackey, 2007:113) that may be completed wherever and whenever (Rovai& Jordan, 2004).

Blended learning is the flexible approach in design that supports the mixing of time and place to study. This model is comprised from the advantage of traditional learning and virtual learning, therefore by implementing blended learning, the teaching learning process will be able to be more effective, because the conventional learning is supported by e-learning, which use information technology media (Rovai& Jordan, 2004). Further, Jusoff&Khodabandelou (2009) explained that blended learning does not only minimize the distance between students and lecturer, but it may increase the interaction between them.

Because blended learning is the learning model that comprises traditional learning and e-learning, then there are six things that must be considered when establishing it: ease to navigate, content/material learning, appearance/layout, interest, applicability, and cost effectiveness (Soekartawi et al, 2002). The several concepts and definition of blended learning above, it can be explained that there are three key assumptions of blended learning are (Garrison & Vaughan, 2008: Ch.1):

1. Thoughtfully integrating face-to-face and online learning.

2. Fundamentally rethinking the course design to optimize student engagement.

3. Restructuring and replacing class contact hours.

There are ten benefits of blended learning: (1) save time; (2) save money; (3) spend less time grading; (4) spend more time in class to do something loved; (5) increase one-on-

one interactions with students; (6) give students opportunities to practice standardized exams online; (7) facilitate group work that works; (8) communicate more effectively with all students; (9) build community and relationship; and (10) have fun (Tucker, 2012:16).

Moreover, Tucker (2012:13) explained that generally, in blended learning practice there may be six models:

1. Face-to-Face Driver

   This model involves the students and lecturer, in which, they are not only face-to-face for sake in classroom or laboratory. Yet, student is also involved and engaged in the outdoor activities by integrating online technology.

2. Rotation

   Rotation means that in the teaching learning process, there is an integration between online learning and face-to-face learning at once in the class while lecturer motoring them.

3. Flex

   This model is applied by use internet media in delivering learningto students. In which, the students may grouped in discussion group.

4. Online Lab

   Online lab is the learning that conducting in the computer laboratory. In this model, all learning materials is provided in the form of softcopy, while lecturer and students interacted via online. For this case, mostly the lecturer will be supported by an assistant to monitor the student in order that the learning process can be conducted well.

5. Self Blend

   Self blend is the model of blended learning in which the students follow online courses to complete traditional learning that are not always running in the classroom, but also it can be outdoor.

6. Online Driver

   Online driver is the online learning. In this model, the lecturer may upload the learning material in internet. Therefore the student may download anywhere, in order that the

students may learn and study independently, and then followed by face-to-face learning based on the time that agreed by lecturer and teacher.

In order to be able to establish the effective blended learning, there are six steps in running blended learning: (1) determining the various learning material; (2) defining the design of blended learning; (3) determining the formulation and link from online learning; (4) testing and validating the design of blended learning; (5) implementing blended leaning in right way; and (6) evaluating the implementation of blended learning (Soekartawi et al, 2002).

Based on the explanation about blended learning above, then the blended learning can be illustrated as the figure 1.
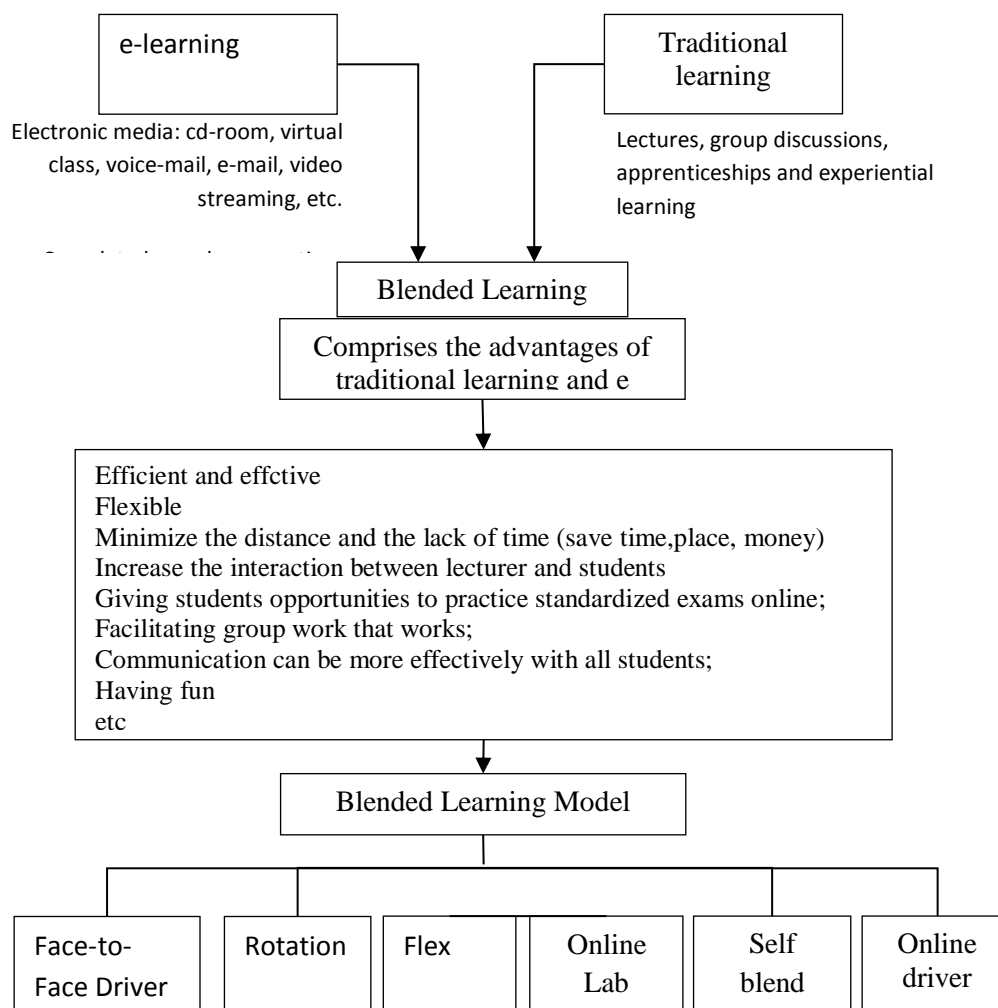

Figure 1. Blended Learning: Benefits and Model

D. DIGITAL INTERACTION IN BLENDED LEARNING

Either interaction between lecturer and studens or interaction among studens in the teaching learning process is indeed. In which happens in traditional an e learning. In blended learning, the interaction of them may be supported by applying media. Figure 1 can explains the formulation, concept, and definition of in which in blended learning, the interaction between lecturer and students does not only occur face-to-face, but also via online. It seems that the interaction can be completed in many ways, because in online or digital interaction, there are several medias that can be used, such as email, chat, etc.

Related to blended learning, Jusoff&Khodabandelou (2009) explained that blended learning may increase the interaction between lecturer and students. The digital interaction in blended learning may support the traditional learning that may be lack of flexibility, lack of time, lack of competence and confidence. The study that completed by Chang et al (2015) revealed that an interactive learning to adjust the time of teachers' explanation and students' homework, allowing teachers to have time for one-to-one instruction. It can enhance students' learning responsibilities and flexibilities to make classroom teaching become a mutual learning mode between teachers and students, which commands the attention of educational circles.The digital interactive learning may improve teachers' teaching skill and students also can make good use of teaching software within limited time to pay more attention to classroom learning can be used to improve learning concentration and effectiveness; immediate interactive assessment and learning feedback are more likely to help teachers to control students' learning statuses for not only teaching the right candidates but also promoting good interaction between teachers and students.

E. APPLICATIVECONNECTEDNESSIN BLENDED LEARNING

Connectedness is the sense of belonging and acceptance which refers to a person's belief that a relationship exists between him or her and at least one other individual. When individuals feel connected they feel less isolation (Rovai, 2002; Bolliger & Inan, 2012). Bolliger & Inan (2012) mentioned factors that can pertaining students' connectedness:

1. Community and social presence.

   a. Learning community is a groups of people engaged in intellectual interaction for the purpose of learning, in which comprises from four elements: (1) membership; (2)

influence; (3) integration and fulfillment of needs; and (4) shared emotional connection. The important characteristic of a community and stipulates that learners in strong learning communities feel connected is trust.The integration of online communities in the online environment can reduce student dropout rates and "can help meet the quality challenge. Palloff & Pratt (2007) stated that online communities, however, must be fostered in order to be sustainable and successful.Drouin (quoted by Bolliger & Inan, 2012) explained that students' feeling of community contributes to student satisfaction, not all students expect, need, or value a sense of community in online courses.

b. Presence refers to the degree to which a distance student perceives the availability of, and connectedness with, people in his/her educational setting (Shin, 2003:71). Social presence is considered an important factor in student satisfaction and success (Swan & Shih, quoted by Bolliger & Inan, 2012), in which inflenced by several factors: social context, privacy, online communication, and interaction.

2. Comfort.

Comfort is defined as experiencing contentment and security, and comfort with either integrated technologies or the learning environment is mentioned by researchers as an important aspect for distance students.

3. Facilitation of learning.

Shea et al (2006) found a positive relationship between students' perceived learning and community and teaching presence. Therefore, instructors need to ensure that students have the opportunity to communicate, interact, and collaborate with course participants.

Rovai (2003) who investigated relationships between communication styles, community, and learning styles in online courses found that friendly and open communication styles correlated with connectedness. They are willing to share their thoughts and emotions openly. Friendly communicators are tactful; they tend to encourage individuals and acknowledge others' contributions. Engaged learners are active participants in the learning process. Involved learners actively participate in their construction of knowledge and acquisition of skills..

F. PROMOTING MOTIVATION OF STUDENTS BOARDING COLLEGE THROUGH DIGITAL INTERACTION AND APPLICATIVE CONNECTEDNESS

Motive is a construct that explains why someone did what they did. Motive is a common need or desire to encourage individuals to initiate a series of actions that have a purpose. Whereas, motivation is a theoretical construct that describes an initiation, direction, intensity and persistence and the quality of behavior, especially the behavior of direct destinations (Brophy, 2010: 3). Motivation is also a disposition to achieve goals that can provide satisfaction when is achieved (Akbar-Hawadi, 2001: 43).

In the context of the classroom, student motivation concept explains the level where students are paying attention and efforts in various ways to achieve something, whether it is desirable or not by the teacher. In this case, the student's motivation was based on experience of students, especially those related to their willingness to be bound in the learning activities and their reasons for doing this learning activity. Therefore, the motivation to learn is the intention to acquire knowledge or skill as it has been designed and developed in learning activities (Brophy, 2010: 3).

Further, achievement motivation according Mc.Clelland is the motive for directing a person's behavior with emphasis on how the feat was achieved. This motif that encourages individuals to achieve success in competing with a certain standard of excellence(Akbar-Hawadi, 2001: 43-44; Shaffer, 2009: 209). Akbar-Hawadi (2001: 85) also explains that achievement motivation is the driving force in students to achieve the highest possible level of achievement, as determined by the students themselves.

Shaffer (2009:210) states that there are two forms of achievement motivation, namely intrinsic and extrinsic orientation orientation. Intrinsic orientation is the desire to excel in order to satisfy the needs/control of personal competence. While extrinsic orientation is the desire to excel in order to obtain external incentives such as value, reward, or recognition of others.

Someone who has high achievement motivation will display different behavior with people who have low achievement motivation. McClelland explains that there are four aspects that set the level of high achievement motivation if compared to others(Akbar-Hawadi, 2001: 57), namely:

1. Responsibility. Individuals who have high motivation will feel himself responsible for a given task. He will complete each task does and will not leave the task before it is completed.

2. Consideration to the risks. Individuals with high achievement motivation will select the task with the degree of difficulty is moderate, challenging his ability, yet still enable it to successfully complete the well.

3. Pay attention to feedback. Individuals with high achievement motivation like providing feedback on their work.

4. Creative-Innovative. Individuals with high achievement motivation tends to be creative, to find new ways to accomplish the task as efficiently and effectively as possible.
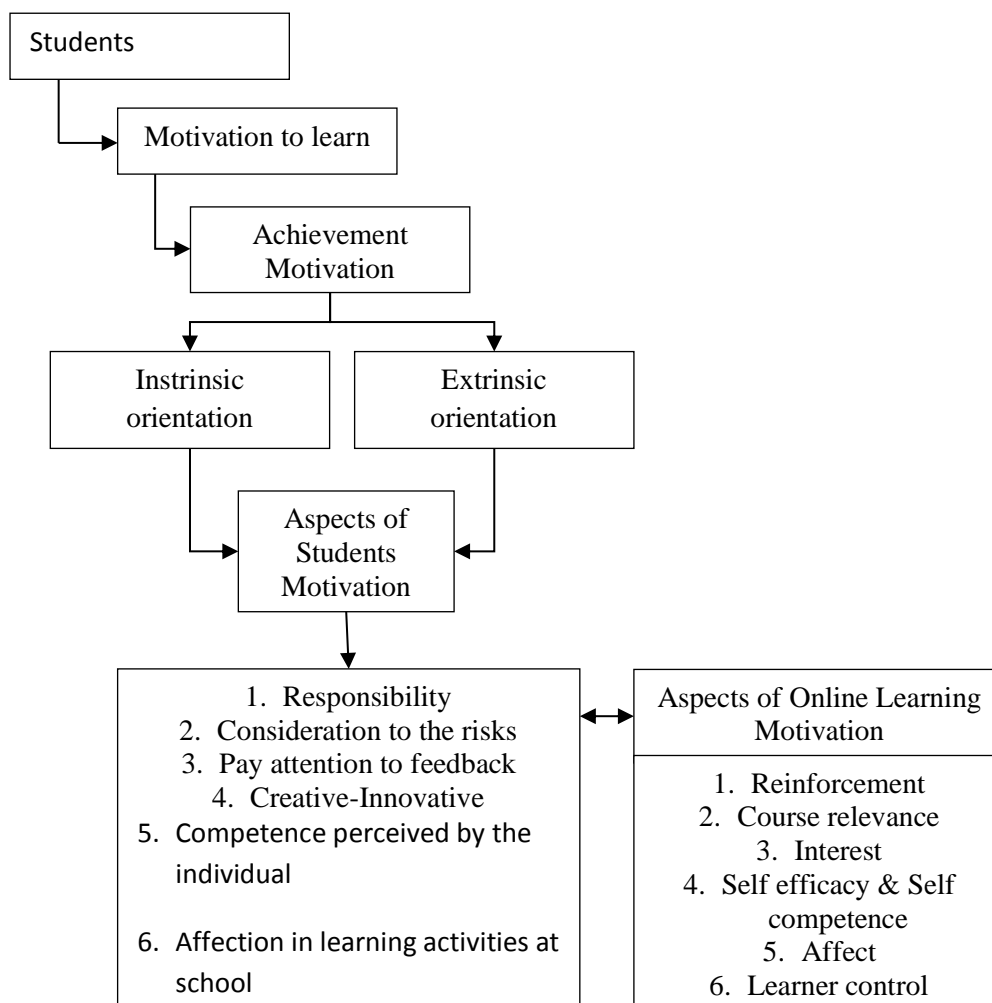

Figure 2. Students Motivation Model for Achievement Motivation and Online Learning Motivation

According to Harter (in Akbar-Hawadi, 2001: 88), there are three things that affect achievement motivation in relation to teaching and learning activities in schools, namely:

1. Competence perceived by the individual. This is influenced by their perception of how other people vote against the actual achievement levels. The higher one's achievement, the greater the sense of competence they have and the greater their love a challenge, full of curiosity, and engage in mastering a skill.

2. Affection in learning activities at school. There were three of affection is related to the subjects, teachers, and schools. If the students feel capable in a particular subject then it will please the lesson. In general, students are encouraged to work more diligently on the subjects that are taught by teachers who favored. In school affection, students have a feeling obtained from a high proficiency in the majority of school work, receiving great recognition of teaching and learning, and have good relationships with teachers and peers.

3. Perception of control. Students who have a perception of internal control has high hopes for a successful and motivated to work hard. They realize that success and failure is very dependent on their own efforts.

Figure 1 explains that despite the achievement motivation aspects, there are six variables in online learning motivation (Lim & Kim, 2003; Lim & Morris, 2009): (1) reinforcement, (2) course relevance, (3) interest, (4) self-efficacy, (5) affect, and (6)learner control.

1. Reinforcementis important to learningmotivation.

2. Relevance refers to the value of course content related to learner's jobsand studies. The perceived level of valueresiding in learning content decides the level of motivation.

3. Level of interest isanother type of motivation factor promoting learner involvement during learning. When a learning task ischallenging and involves fantasy during the learning process, learners will be motivated.

4. Self-competence which refers to one's feelings of self-worth and self-efficacy. Selfcompetencecan be generally described as the degree to which one believes that he or she is able to achieve a giventask.

5. Affect, involves a learner's feeling and emotion during the learningexperience.

6. Learner control is an important study subject in the field of instructional systems and technology.

Recently, higher education is being transformed by three forces addressing three fundamental aspects of education: access to high quality education; models for how the mind works, and what its capabilities and limitations are; and the use of technology for the implementation of pedagogical strategies that will lead to optimal learning experiences. Some of the major changes is online access to higher education around the world; the fundamental ideas that cognitive sciences and computation are advancing for a new educational system; and a set of specific examples where this access and these methodologies are being implemented in the real world (Olabe, 2016).
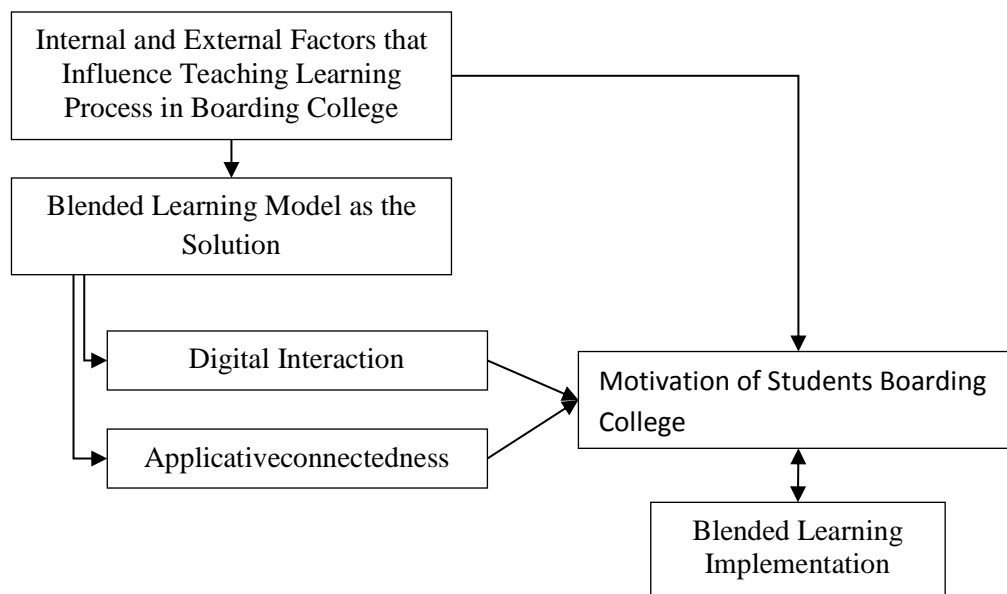
Figure 3. Promoting Motivation of Students Boarding College Through Digital Interaction and Applicative Connectedness

The challenges in higher education that related to technology will influence the student motivation to learn (Schmidt, 2007; Lim & Morris, 2009), including the implementation of blended learning (Syarif, 2012; Ocaf &Akçayır, 2013; Al-Ani, 2013; Jeffrey et al, 2014; Butzler, 2014; Martinsen et al, 2015), because the motivation of student must be increased to support the online learning that are blended to traditional learning.

Liang (2012) studied about the use of interactive whiteboards (IWBs) for pedagogic uses that comprised from four IWB supported teaching and learning interaction factors: IWB Supported Teaching (IST), IWB Supported Learning (ISL), Teacher Supported Learning (TSL), and Student Interactive Learning (SIL). Those factors influence the student and lecturer interaction styles. Finally, blended learning that can increase the interaction between lecturer and students (Jusoff&Khodabandelou, 2009) then can improve the student motivation and achievement (Syarif, 2012; Al-Ani, 2013). Further, Al-Ani (2013) also conveyed that blended learning may help and support the students to hear, see, reflect, and interact in a more communicative and collaborative learning environment.

The emporical study that was conducted by Ocak &Akçayır (2013) explained that the feasibility of improving overall learner motivation and academic achievement through external conditions such as motivational tactics, in which the effectiveness of the ARCS model may enhance learner motivation and academic achievement in a blended learning environment.ARCS model (attention, relevance, confidence, satisfaction) was developed by Keller as the motivation tactics for improve students motivation.

G. CONCLUSION AND SUGGESTION

The advance of information and communication technology influence the style of learning practice at education institution since the elementary school, high school, and higher education. The existence of computer-mediated and aids in the teaching learning practice has been the certain and unique challenges for institution in practicing and implementing e-learning, because they have been used to implement traditional learning.

The characteristics of e-learning that different from traditional learning, the flexibility, the speed, and other characteristics of it make the lecturer must attempt to learn about how to implement it effectively, because however, e-learning also have the weakness, instead of it's benefits. Therefore, to accommodate the weakness of each types of learning, then it can be developed blended learning model that can minimize the weakness and increase the benefits of each.

Based on empirical study, blended learning may increase the interaction of leacturer and students, and among students in flexibility, and finally will create the connectedness among them safely. This can improve the interaction between senior and junior students in boarding college, because the interaction and communication among them can be completed

transparently and massive. Therefore, the blended learning can promote the students motivation either in conducting online learning or traditional learning.

This paper recommended to the institution that they need to find the learning styles that appropriate to the boarding college environment, because, in boarding college, the role of senior and lecturer will give more experience for the junior students. Finally, the digital interaction and connectedness in blended learning implementation should be considered well, in order that the implementation of blended learning model can be efficient and effective.

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