

## The Relationship between Teaching Presence and Self-Directed Learning Readiness in e-Learning Environment

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This study was conducted to find out the relationship between teaching presence and self-directed learning readiness in e-learning environment. 219 cyber university students finished the web-formatted questionnaires. The Self-Directed Learning Readiness Scale-Adult Based Education instrument and Teaching Presence Scale instrument were used. The results of the present study can be concluded as follow. First of all, teaching presence and self-directed learning readiness have a very high relationship in e-learning environment. Secondly, all five components of teaching presence have significant correlations with self-directed learning readiness. Thirdly, depending on the results of multiple regression analysis, only components of instructional contents and facilitating communication predict the self-directed learning readiness.

*Keywords : teaching presence, self-directed learning readiness, adult learner*

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## Introduction

The effectiveness of e-learning environment, such as there are fewer limitations of time and place than the traditional face-to-face learning environments, has been proven in many previous studies (Jung & Rha, 2000), however, high learner drop-out rates have been a main problem in distance education (Kim, 2007a). While there are many reasons for causing this phenomenon, the basic reason is that the e-learning environment is totally different from the traditional learning environment; so it is completely new and challenge to the learners (Deture, 2003). The learners in e-learning environment should own some distinctive learning abilities to be successful.

The abilities of learning by learners themselves and the learners' awareness of learning responsibilities are very important to e-learning (Keegan, 1986; Moore, 1986; Wedemyer, 1981). And the e-learning environment is also a suitable environment for them to take charge of their own learning since they can control their own learning process (Chang, 2005). So the e-learning environment requires the students to have more self-directed learning abilities than the students in face-to-face environment; and now self-directed learning has been seen as a critical characteristic of the successful learners in e-learning environment.

However, self-directed learning does not mean that the learners are alone in the learning process. Although there are many different concepts about self-directed learning, according to the different concepts of self-directed learning, the outer environments around the learners and the inner characteristics of the learners are the two main factors of self-directed learning (Lee, 2004). Other previous researches have shown that autonomous learning needs support to be successful (Little, 1995). Thus, in order to facilitate the learners to play an active role in learning activities, the instructors have to construct an environment which can enhance students to conduct self-directed learning activities themselves. Besides of this, many other studies have found that the interaction between the instructors and learners is a very important factor to the successful self-directed learning (Lee, 2004). So self-directed learning can

not be accomplished by learners alone; a successful self-directed learning needs the cooperation between instructors and learners.

The requirement for the instructors' efforts in self-directed learning does not only exist in the traditional face-to-face learning environment; but also exists in e-learning environment. Although in the e-learning environment all the learners study for themselves, all the discussions and other actions which are facilitated by the programmed contents depend on the plans of the instructors (Koh, 2007). Other research has pointed out that autonomous learning compels the teachers to redefine their roles and skills and to take into account the new kind of distance between teachers and students (Maud, 2007). Hence, the research about how the instructors in e-learning environment can help the students to improve their self-directed learning abilities is needed.

According to the research by Garrison, Anderson and Archer (2000), there are three elements which are crucial prerequisites for a successful higher educational experience; and those are social presence, cognitive presence and teaching presence. Among these three elements, teaching presence is seen as a binding element in creating a community of inquiry for educational purposes (Garrison, et al., 2000). Moreover, teaching presence is also defined as the core role of the online instructors (Shea & Swan, 2005). However, there is no research has been done to find out if some kinds of relationship exist between teaching presence and self-directed learning readiness. Hence, the research about the relationship between teaching presence and self-directed learning in e-learning environment and how they affect each other is needed.

### **Research Problem and Purpose of the Study**

If the instructors can help learners do better self-directed learning in e-learning environment, than there will be a strong need for how instructors can improve the

self-directed learning readiness of the learners in e-learning environments. Therefore, the purpose of the present study is to investigate the relationship between “teaching presence”- the core role of online instructors, and “self-directed learning readiness”- the main characteristic for successful online learners in e-learning environment at first, and then the study also tries to find out how they affect each other. The research problems of the present study are:

- (1) What is the relationship between teaching presence and self-directed learning readiness in e-learning environment?
- (2) What are the relationships between the five components of teaching presence and self-directed learning readiness in e-learning environment?
  - a. What is the relationship between systematic implementation of instruction and self-directed learning readiness in e-learning environment?
  - b. What is the relationship between facilitating communication and self-directed learning readiness in e-learning environment?
  - c. What is the relationship between instructional contents and self-directed learning readiness in e-learning environment?
  - d. What is the relationship between facilitating and monitoring learning and self-directed learning readiness in e-learning environment?
  - e. What is the relationship between the presence of teacher and self-directed learning readiness in e-learning environment?

## **Background**

### **Self-Directed Learning**

Self-directed learning is an appealing concept, many authors have tried to define self-directed learning, and there are also many different definitions about it (Garrison,

2003). However, on a large scale, all the definitions of self-directed learning stressed two basic elements --- the person takes charge of his or her own learning (Carre, 2000; Hiemstra, 1991; Tough, 1979), and the environment, learning resources around learners (Candy, 1991; Guglielmino, 1977; Knowles, 1975). These show us we can not think the self-directed learners are totally independent in learning process.

The concept of self-directed learning first appeared in 1960s. Although there may be slight differences in different definitions of self-directed learning, several tenets that are central to the concept can be found. First of all, all the definitions view learners as responsible owners and managers of their own learning process. Secondly, self-directed learning is a systematic learning process, which includes planning learning goals, finding out suitable learning materials, carrying out the learning plans, and evaluating the learning results. Thirdly, self-directed learning is collaborative, which means that the learners should collaborate and interact with teachers and peers in the learning environments (Candy, 1991). From the last tenet we can know the instructors are needed and can help learners do better in self-directed learning process. In the present study, Candy's (1991) definition of self-directed learning, which stresses the interaction between learners and environment in self-directed learning, is taken as the theoretical framework of the present study.

### **Learners and Instructors in Self-Directed Learning**

According on Knowles (1984), most of the adult learners are self-directed learners. However, there is no special age when students stop being dependent and begin being involved as self-directed learners. And there is also no special grade level when a teacher's role should move from being an authority to a motivator or a facilitator. In fact, it depends on the students. As a student gets older, the degree of dependence tends to be lower (Lee, 2004). Therefore, educators need to have intentions about what learners want to learn and to state their willing as the teaching goals, and also help learners find and organize resources and strategies for achieving their goals, and also measure the attainments (Moore, 1986).

Many studies had been done to find out the main characteristics of adult learners. Even in 1966, Boyd had described the adult learners as they know their own standards and expectations; and no longer needs to be told what to do by others (Boyd, 1966). This description first stated out the adult's characteristic of independence, which is the very basic element of adult learners. Moore (1986) also wrote about the adult learners. He said that the adult learners are able to establish a learning goal and to achieve their goals, they also know where, how and from which people or resources to gather the information to solve the problems or acquire the particular skills (Moore, 1986). This means that adult learners not only have the willingness to learn, but also know how to learn and how to find out resources and helps from other instruments or people. Therefore, three characteristics of adult learners become clearly, that are independence, knowing learning skills, and should be supported. As the instructors, providing the self-directed adult learners good instruments, supports and helps in accordance with the learners' characteristics is very important.

Hence, how to give the learners chances and resources to exercise the self-directed learning has been the main work of the instructors. To state the adult instructors' role clearly, Knowles had begun to write about "andragogy" in 1970. According to Knowles's andragogy theory, instructors in self-directed learning are no longer the centre in the learning process; however, they become the guides, facilitators, and resources providers to learners (Knowles, 1970). They should know every student's characteristics and learning goals, and use the strategies, such as interaction, deliberate programs, to make the students feel the presence of instructors.

Instructors in self-directed learning are no longer the centre in the learning process; however, comparing with teaching knowledge to students directly, they become the guides, facilitators, and resources providers to learners. They should know every student's characteristics and learning goals, and use the strategies, such as interaction, deliberate programs, to make the students feel the presence of instructors. However, from the description of both adult self-directed learning learners and instructors, we

can clearly know that instructors are needed in self-directed learning.

### **Self-Directed Learning in e-Learning Environment**

Moore (1986) indicated that self-directed learning does not have to be face-to-face. And distance teaching is also described as a more efficient and effective force for achieving either enhancing learner's autonomy (Moore, 1986). Internet can support self-directed in mainly three aspects. The first one is that Internet makes the learning more convenient as the limitations of time and places are reduced. The second support is that Internet can provide the learners much information which is needed in learning process. And the last one is that Internet makes the communication and interaction between instructors and learners in distance education possible.

However, initial access to the Internet can be difficult; people can feel isolation because of undocumented status, lack of language skills, or poverty of communication with other people (Roger, 2006). To make the Internet learning more effective, interactions between instructor and student, student and student, student and contents are very important (Koh, 2007). Many scholars have discussed that online instructors play a very important role in the self-directed learning in e-learning environment (Garrison, 2003; Moore, 1986). Recently more and more scholars begin to talk about teaching presence which is thought as the core role of online teacher (Shea, Li & Pickett, 2006). In order to understand teaching presence better, more detailed information about teaching presence will be introduced.

## **Teaching Presence**

### **Definitions of Teaching Presence**

Although teaching presence does not only exist in distance education, with the development of high technology and more people have begun to learn in e-learning environments, some researcher have regarded the teaching presence as the core role of the online instructors (Shea & Swan, 2005). The concept of teaching presence was

first introduced by Garrison in 2000. As shown in Fig. 1, three elements essential to an educational transaction - cognitive presence, social presence, and teaching presence are included in this model. In the Garrison's community of inquiry theory, teaching presence was defined as "the design, facilitation, and direction of cognitive and social processes for the realization of personally meaningful and educationally worthwhile learning outcomes" (Garrison, Anderson & Archer, 2000).



Figure 1. Elements of Educational Experience (Garrison et al., 2000)

Later on this, Anderson, Rourke, Garrison & Archer (2001) did a study on assessing teaching presence in online environment. In this study, teaching presence was defined as "the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (Anderson et al., 2001: 5). Teaching presence was also defined by Thornam (2003) as "an intersubjective experience during which a teacher and a student willingly move together toward valued learning." (Thornam, 2003: 7). This definition was both for the face-to-face environment and online learning environment.

Since the previous studies defined the teaching presence differently; and nowadays



there are not only text-based material, but also video, multimedia contents and many kinds of solutions (Koh, 2007), Koh (2007) redefined the teaching presence in e-learning environment as “the learner’s perception of teaching care to design learning experiences and facilitate learning for individual online learner’s meaningful learning” (Koh, 2007: 83); and this definition is used in the present study.

### **Main Components of Teaching Presence**

According to different definitions of teaching presence, the main components of each teaching presence concept are different, too. In Garrison’s model of critical thinking and practical inquiry, teaching presence had three components (Garrison et al., 2000), which are instructional management, building understanding, and direct instruction (Garrison et al., 2000). Anderson et al. (2001) redeveloped three elements for online course; and they are design and organization, facilitating discourse and direct instruction. Thornam investigated that teachers can use “to know” and “be there” to reduce the distance between students and instructors (Thornam, 2003). To define the components of teaching presence in e-learning environment, Koh (2007) researched the teaching presence and its elements in e-learning environment. Components of teaching presence were found as systematic implementation of instruction, facilitating communication, instructional contents, facilitating and monitoring learning, and the presence of teacher (Koh, 2007).

Koh’s (2007) components, as concluded in Table 1, all elements are totally distinguished from community of inquiry or caring approaches; in fact these five components are more comprehensive than others. According to Koh, this definition of teaching presence supplements the community of inquiry, which is short of the presence of teacher; moreover, this is the first description about the teaching presence’s components in e-learning environments (Koh, 2007). Hence, the present study assessed the relationships of the components developed by Koh (2007) with self-directed learning readiness in e-learning environment.

Table 1. Components of Teaching Presence in e-Learning Environment (Koh, 2007)

Element	Components
Teaching Presence	Systematic implementation of instruction
	Facilitating communication
	Instructional contents
	Facilitating and monitoring learning
	The presence of teacher

### Teaching Presence in e-Learning Environment

Moore (1972) first attempted to define distance education and to develop a theory about it, which was called the theory of transactional distance latter. The transaction in distance education occurs between teachers and learners in the environment which has the special characteristic of teachers and learners are separated. This separation leads to special patterns of learner and teacher behaviors. This separation of learners and teachers also profoundly affects teaching and learning. For this reason, Moore defined the distance education as "... is not simply a geographic separation of learners and teachers, but, more importantly, is a pedagogical concept. It is a concept describing the universe of teacher-learner relationships that exist when learners and instructors are separated by space and/ or by time." (Moore, 1997: 1). That means even learners and instructors are separated; there is also a relationship between them. To support the relationship and across the separation, special teaching methods are needed in distance education.

To across the separation, the characteristic of this separation should be known first. By Moore (1997), this separation is the transactional distance, which includes both psychological and communications space. In fact, because of the existence of separation in distance education, there is a potential misunderstanding between the instructor and learner. To across this distance the key components are the structured instructional program, the interaction between learners and teachers, and the nature and degree of self-directedness of the learner. The first two things can be seen as teaching procedures; and the third one describes the behaviors of learners. These

three elements are named as dialogue, structure, and learner autonomy (Moore, 1997), which are the core elements of the theory of transactional distance.

According to Moore, this separation is not only the separation of space; there is also a “psychological distance” between instructors and learners in distance education, which can be seen as the basic of teaching presence theory. From 1990s, more and more people began to do detailed research about the “psychological distance” between instructors and learners (Garrison, 1991; Anderson & et al., 2001; Thornam, 2003).

The first person who brought the concept of teaching presence to distance learning is Garrison. In the field of distance education, Garrison (1997) has argued that computer conferencing represents a new age of distance education, due to its ability to create a collaborative community of learners. However, teaching in online courses is an extremely complex and challenging function (Anderson et al., 2001), and computer conferencing can fulfill this great potential in distance only if it includes three essential elements of a community of inquiry - cognitive presence, social presence, and teaching presence (Garrison et al., 2000).

Besides of that many educational technology enthusiasts agree that online learning environments will be hollow if teachers are not present, or the caring role of teachers is not felt by learners. This will make students feeling depersonalized, objectified and alone (Thornam, 2003). Teachers who are present with students in online learning environments may help students overcome some of their reluctance toward online education and extend the benefits of accessible online education. To make the students can feel the presence of instructors in e-learning environment, Thornam (2003) argued two components – being there and knowing students. Hence, the feel of presence of instructors in e-learning environment is very important to the students.

## **Methodology**

This study was designed to examine the relationship between self-directed learning

readiness and teaching presence in e-learning environment. One sample group which was drawn from D cyber university was investigated. In this study, there are two variables -- the self-directed learning readiness and the teaching presence. To measure the participants' perception for each variable, the Self-Directed Learning Readiness Scale-Adult Based Education (SDLRS-ADE) instrument and Teaching Presence Scale instrument were used and were delivered to the participants by the web-formatted questionnaires.

### Population and Participant Selection

The research problem of this study is what the relationship is between teaching presence and self-directed learning readiness in e-learning environment; so a one percent e-learning environment should be selected to guarantee the validity of the study. Cyber university uses the Internet, satellite, and other information technologies to make a cyber space, in which the learners can choose the program they really need without the limitation of time and space, and they also should do a self-directed learning in cyber universities (Kim, 2007b). For this reason, cyber universities' students were selected as the sample for this study.

D cyber universities' students in Korea were selected as the sample for this study. A web-formatted questionnaire which includes the Self-Directed Learning Readiness Scale and teaching presence instrument was made. All the students can see this questionnaire when they login the page to ensure the reliability of the study; and the period was from April 11 to April 28, 2008. At last, 219 students responded the questionnaire.

The respondent demographic information can be concluded as follow. Approximately 35.6% of the respondents are between the ages 20 and 30, 32.9% of the respondents are between the ages 30 and 40, 21.5% of the respondents are between the ages 40 and 50, and 10% of the respondents are over age 50. And nearly 44.3% of the respondents are in Grade 1, 13.2% of the respondents are in Grade 2,

30.1% of the respondents are in Grade 3, and 12.3% of the respondents are in Grade 4. Among all the respondents, there are 64.8% are male, and 35.2% are female. 74.9% of the respondents are experienced e-learning learners. At last, approximately 31.5% of the respondents are doing online learning about 2~3 hours, 29.2% of the respondents are doing online learning more than 5 hours every week. 25.6% of the respondents are doing online learning 1~2 hours every week, 11% 4~5 hours. Just 2.7% respondents are doing online learning less than 1 hour every week.

## Instruments

To assess students' perceptions of teaching presence, the five-point Likert-type scale instrument of Teaching Presence Scales, which is developed by Koh in 2007, was used. This scale includes five parts and they are systematic implementation of instruction, facilitating communication, instructional contents, facilitation and monitoring learning, and the presence of teacher (Koh, 2007). The instrument was used in the present study for three reasons. First of all, this instrument was developed in e-learning environment; so it is very suitable for the present study since this study was preceded in e-learning environment too. Secondly, the data used to develop this scale is from a Cyber Home Learning System in Korea, for this reason, the scale reflects the Korean learners' features well. Thirdly, the population of the present study is Korean learners, and the scale is also in Korean, so the inaccuracy which can be caused by translation does not exist. The Cronbach's  $\alpha$  of the scale in the present study is highly .97.

One of the most broadly used instruments in the field of self-directed learning is the Self-Directed Learning Readiness Scale (SDLRS), which was developed by Guglielmino in 1978 (Lee, 2004). This instrument has been used to measure over 50,000 people's self-directed learning readiness around the world, and most of the researches using SDLRS have shown high reliability of .72-.92 for the SDLRS (Guglielmino, 1997). The Self-Directed Learning Readiness Scale-Adult Basic

Education (SDLRS-ABE) questionnaire, which is developed by Guglielmino in 1989 and is translated into Korean by In-Heok Lee in 2004, was used in the present study. The SDLRS-ABE consists of 34 items and it is a five point Likert-type scale. The Cronbach's  $\alpha$  of this instrument in the present study is .96.

Table 2. reliabilities Coefficients of Self-Directed Learning Readiness Scale and Teaching Presence

	Cronbach' Alpha
Self-directed Learning Readiness Scale	.96
Teaching Presence Scale	.97

### Statistical Procedures

All data collected was analyzed by using the English version Statistical Package for Social Sciences for Windows (SPSS 12.0). Descriptive statistics for all of the study variables were performed. A preliminary analysis was completed to explore the reliability estimates (**Cronbach'  $\alpha$**  alpha) for the two instruments used in the study. Correlation coefficients were calculated to determine the relationships between self-directed learning readiness and the five subordinate elements of teaching presence. At last, multiple regression analysis was run to find out how the two variables and their components affect each other.

## Results

### Descriptive Analysis

The total scores of both measures were obtained by summing up the items. The means and standard deviations of both self-directed learning readiness and teaching presence measures are listed in Table 3. Through this analysis, no missing values were

found both in the self-directed learning readiness and teaching presence measures. The mean value for self-directed learning readiness is 129.98 in the present study, which is very similar with Lee's (2004) study, which used the same self-directed learning readiness instrument. The mean of self-directed learning readiness in Lee's study was 123.69 (Lee, 2004).

Table 3. Mean and Standard Deviation of SDLR Scale and Teaching Presence Scale

	Minimum	Maximum	Mean	SD	N
Self-directed Learning Readiness	88.00	170.00	129.98	16.65	219
Teaching Presence	35.00	155.00	118.19	17.22	219

### Correlation between self-directed learning readiness and teaching presence

Pearson correlation analysis was applied to examine the relationship between self-directed learning readiness and teaching presence. Results showed that there is a significant and positive correlation between the total teaching presence and self-directed learning readiness in e-learning environment; the correlation coefficient was .61, as seen in Table 4.

Table 4. Relationship between Teaching Presence and Self-Directed Learning Readiness

	Teaching Presence	Self-Directed Learning Readiness
Teaching Presence	1	.609**
Self-Directed Learning Readiness	.609**	1

\*\*p<.01

After the correlation between teaching presence and self-directed learning readiness was found, the five components of teaching presence were also analyzed respectively to see if there are some correlations between the teaching presence components and self-directed learning readiness. Through the analysis, it was found

that all of these five components have significant correlations with self-directed learning readiness in e-learning environment. And among these five components of teaching presence, self-directed learning readiness has a highest correlation with instructional contents (.617). Moreover, self-directed learning readiness also has very high relationships with facilitating communication and the presence of teacher, with correlation .550 and .531 respectively. At last, self-directed learning readiness also has relationship with systematic implementation of instruction, and facilitating and monitoring learning, with correlation .491 and .503 respectively. The results found were showed in Table 5.

Table 5. Correlations between the five Teaching Presence components and SDLR

	Systematic Implementation of Instruction	Facilitating Communication	Instructional Contents	Facilitating and Monitoring Learning	The Presence of Teacher	Self-Directed Learning Readiness
Systematic Implementation of Instruction	1	.553**	.661**	.749	.745	.491**
Facilitating Communication	.553**	1	.557**	.590**	.547**	.550**
Instructional Contents	.661**	.557**	1	.720**	.704**	.617**
Facilitating and Monitoring Learning	.749**	.590**	.720**	1	.813**	.503**
The Presence of Teacher	.745**	.547**	.704**	.813**	1	.531**
Self-Directed Learning Readiness	.491**	.550**	.617**	.503**	.531**	1

\*\* p<.01

### Relationship between components of teaching presence and self-directed learning readiness

After the correlation between teaching presence and self-directed learning



readiness was regulated, to see the relationship between them deeply, a multiple regression analysis was applied to see which component of teaching presence can predict the self-directed learning readiness. In the regression analysis, the dependent variable was self-directed learning readiness. The independent variables were the five components of teaching presence in e-learning environment.

To test and verify if the data received meet the assumptions of doing regression analysis, the collinearity diagnostics, independence of residuals, and homogeneity of variance were examined before the regression analysis was did. The result for collinearity diagnostics is confirmed since both VIF and Condition Index are satisfied. VIF is 1.449, which is very smaller than 10; and the Condition Index are 12.687 and 14.328 for instructional contents component and facilitating communication component individually, since both of them are smaller than 30, the Condition Index is satisfied, too. Depending on these values, the results could be said as there would not be the collinearity between the variables.

In order to check the assumption of independence of residuals, Durbin-Watson test was performed. The independence of the residuals was also confirmed since the Durbin-Watson was 2.100 which is higher than 1.78 at the level of  $\alpha=0.05$ , ( $k=5$ ,  $n=219>100$ ). Therefore the data were found to satisfy the assumption of independence of the residuals for regression analysis.

At last the homogeneity of variance was examined. To testify the homogeneity of variance, the scatterplots for self-directed learning readiness, the partial regression plot for SDLR and instructional contents and the partial regression plot for SDLR and facilitating communication were examined. No one of them shows irregular graphs. That means the data received meet all three prerequisite conditions to do regression analysis.

Hence, the multiple regression analysis was run to examine the relationships between the five components of teaching presence and self-directed learning readiness by the way of stepwise. As presented in Table 6, the results of the regression model were found that the components of instructional contents and

facilitating communication were statistically significant to self-directed learning readiness ( $\alpha=.05$ ). It means the components of instructional contents and facilitating communication significantly contributed to the self-directed learning readiness.

Table 6. Relationship between Components of Teaching Presence and SDLR

	R	R Square	Sig.	$\beta$	Beta	t
Instructional Contents	.617	.381	.000	2.236	.304	7.366*
Facilitating Communication	.665	.442	.000	2.339	.478	4.890*

\*  $P < .05$

## Conclusions and Implications

This study was conducted to find out the relationship between teaching presence and self-directed learning readiness in e-learning environment. 219 cyber university students finished the web-formatted questionnaires. The Self-Directed Learning Readiness Scale-Adult Based Education instrument and Teaching Presence Scale instrument were used. Two limitations were recognized to exist in the present study. The first one is that as the subjects under this study is limited to one cyber university in Seoul in South Korea, findings and conclusion should not be generalized to other sectors of higher education. The second one is that both instruments and the questionnaires used in this study are self-reported instrument.

### Conclusions about the Key Findings

Depending on the results, a number of conclusions can be made based on the study's results. First of all, there is a clear connection between perceived teaching presence and self-directed learning readiness in e-learning environment. According to the correlation analysis, the relationship between teaching presence and self-directed

learning readiness in e-learning environment is .609, which means there is a strong relationship between two factors in e-learning environment.

Secondly, among the five components of teaching presence, which are defined by Koh (2007), self-directed learning readiness has very significant relationships with all of five teaching presence components. Among these five components, self-directed learning readiness has a highest correlation with instructional contents (.617). Self-directed learning readiness also has very high relationships with facilitating communication and the presence of teacher, with correlation .550 and .531 respectively. At last, self-directed learning readiness also has relationship with systematic implementation of instruction, and facilitating and monitoring learning, with correlation .491 and .503 respectively.

Thirdly, depending on the multiple regression analysis, although all five components of teaching presence have significant relationships with self-directed learning readiness, only the components of instructional contents and facilitating communication predict to the self-directed learning readiness in e-learning environment.

According to Koh (2007), the successful instructional contents can make the e-learning contents help the students reach the destinations successfully. And in Koh (2007)'s study, she also stressed to make good instructional contents, during the instructional contents making process, the makers should not only consider the contents of the course, but also the methods will be used to transfer the contents. That means to improve the learners' self-directed learning readiness in e-learning environment, the instructors should consider the both the contents of the teaching material and the ways used to deliver these contents.

The component of facilitating communication was defined as a kind of help done by instructors. Depending on this kind of help, interaction between students and instructors, students and students, also students and contents in cyber spaces can be facilitated (Koh, 2007). That means the instructors' help used to facilitate the interaction in e-learning environment can improve the self-directed learning readiness

of learners in e-learning environment; so the online teacher should take this component into consideration when they try to improve learners' self-directed learning readiness.

The results of the present study show us that although self-directed learning means learners should control their own studies and have the responsibilities in the whole learning process, instructors are related to learners' self-directed learning readiness in the way of facilitating communication in the learning process and caring about the students. Therefore, these results proofed the previous views that self-directed learning needs to be supported; and is determined by both the characteristics of learners and the environments around them (Knowles, 1975; Guglielmino, 1977; Candy, 1991).

### Implications and Recommendations

The results of the present study show that self-directed learning has to be supported to be successful and the instructors can give this support from two aspects – instructional contents and facilitate communication. These results testify the other researchers' opinion of self-directed learning is consisted of both the inner characteristics of learners and the outer environment (Little, 1995; Lee, 2004). The implications of this research can be said as instructors should not think the self-directed learners should do all the things themselves in learning process. Instructors are also important to them, and they can help the learners improve their self-directed learning readiness. Depending on the results of the present study, the instructors in e-learning environment should pay more attention on instructional contents, and they also have to use strategies to facilitate the communication between them and their students in e-learning environment.

Additional research is need in these two areas: (1) strategies which can be used to improve the design and making instructional contents, and facilitating communication components should be developed; (2) the studies should be done with different participants, such as other cyber universities, companies and also

colleges. Through studies with different participants, the relationship between self-directed learning readiness and teaching presence in e-learning environment can be regulated clearer than now.

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