**Students’ perceptions toward online learning and face-to-face learning courses**

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**Abstract:** The implications of online learning versus face-to-face learning have been discussed for several years in higher education. This study examined the issues of student perception toward online learning and face-to-face learning in the context of social presence, social interaction, and satisfaction in Indonesia Open University, Taiwan branch (n=107). The comparison of the online group and the face-to-face group conducted to explore student-learning perceptions regardless of the course delivery method and the online environment. The result of this study indicate that face-to-face learning perception was higher than online learning in term of social presence, social interaction, and satisfaction. However, there is no statistically significant difference in learning preference found among level of student. Meanwhile, some students were very comfortable in online learning since it led them to the chance to being innovative by using computer technology.

1. **Introduction**

Online education has definitely moved into higher education with new programs being added continuously. The blended synchronous learning (a “blend” of online and traditional approaches) mode is also gaining and developing currency in higher education, while its effects on students’ and instructors’ experiences are yet to be fully explored. With the rapid expansion of the transnational education market, more and more universities join the ranks of transnational education providers or expand their transnational education offering, such as distance learning or blended learning, including in Indonesia, such as in Indonesia Open University.

Traditionally, online learning perceived as lack interactivity compared to face-to-face learning. It is mainly due to the lack of social presence, lack of social interaction, and lacks of students’ satisfaction. However, online learning has been promoted as being more cost effective and convenient than traditional educational environments as well as providing opportunities for more learners to continue their educations.

Previous research have investigated some research regarding to the students perception and satisfaction toward online learning and face-to-face learning. Fortune, Spielman, and Pangelinan [1] investigated 156 students who took and enrolled in either an online learning section or face-to-face learning of the Recreation and Tourism course at multicultural university in Northern California, United States. They found that no statistically significant difference in learning preference was found between those enrolled in the two different learning modes.
Kemp and Grieve [2] found that a result showed that undergraduate Psychology students (n = 67) at Australian university preferred to complete activities face-to-face rather than online. However, their study argued that online and face-to-face activities can lead to similar levels of academic performance, but that students would rather do written activities online but engage in discussion in person. Another study found by Tratnik [3] indicated that there are significant differences in student satisfaction levels between online and face-to-face learning of English as a foreign language. Students taking the face-to-face course were generally more satisfied with the course on several dimensions than their online counterparts.

Although online learning continues to grow rapidly, it still remains at an early stage of development. Consequently, developers and deliverers of online learning need more understanding of how students perceive and react to elements of blended learning, since student perception and attitude is critical to motivation and learning, along with how to apply these approaches most effectively to enhance learning [4]. Therefore, the significance of this research lies on exploring the Indonesia Open University students’ perception toward online and face-to-face courses. More specifically, the purpose of this research were to explore the students’ perception toward online and face-to-face courses in term of social presence, social interaction, and satisfaction. Besides, this study also examine the difference of online learning and face-to-face learning perception among different level of students.

2. Literature Review
2.1. Social Presence
One of the most important factors in online learning is social presence. Social presence can be defined as the degree of salience between two communicators using a communication medium due to the differing perceptions of medium of its online learning [5, 6]. Social presence also can be interpreted as the degree to which a person is perceived as “real” in mediated communication, which contribute to the social climate in the classroom experience [7]. In regard to that, Garrison, Anderson, and Archer [8] also argued that social presence refers to Community of Inquiry (CoI) framework, namely the students’ ability to project themselves socially and emotionally as “real people” in an online learning community which is support cognitive and affective objectives of learning in a community of learners.

As Salmon [5] argued, the importance of social presence is to cultivate and build the successful of communication and group which has something to do with cognitive presence. As Gunawardena [7] argued, social presence is necessary to increase the communication both in traditional and technology-based classrooms. Instructor must be able to create and maintain the educational arrangements, while students enjoy that arrangement. If the social presence is low, it means the interaction in learning is also low.

2.2. Social Interaction
Moore [9] demonstrated that interaction is one of the most important components of teaching and learning experiences. Interaction is the most important thing when it comes to face-to-face learning [10] or even in online learning [11]. Inevitably, interaction that uses the social aspect must be apply in learning in order to improve student learning by enhancing student knowledge.

According to Tu [10], social interaction is fundamental to the explanation of the relationship between social presence and the social learning theory. When social interaction becomes part of the classroom dynamics, therefore classrooms become active places [12]. Also, social interaction of learning which is very essential for the successful learning provides and support productive and meaningful learning. Besides, social interaction also promotes learning engagement which has been identified as positively affecting achievement of learning outcomes [13].

2.3. Satisfaction
Similar to social presence and social interaction, satisfaction in courses is an important thing in learning. When comparing satisfaction with online and face-to-face courses, many researcher argued that learners tend to be more satisfied with face-to-face interactions [14]. In regard to that, Gunawardena and Zittle [15] also argued interactions between learner and instructor also contribute to satisfaction. According to
Lo [16], satisfaction deals with three parts, namely satisfaction with instructor’s directions and support, satisfaction with own commitment to learning, and satisfaction with course policies as well.

There are several studies have been conducted to measure the level of student satisfaction in traditional and online environments. However, this study solely focused on social presence, social interaction, and satisfaction dimension, because these three dimension were suitable and amenable to conduct with participants’ background.

### Table. 1 The dimensions of online and face-to-face learning by different studies

| Spears (2012) | Fortune, M., Spielman, M., and Pangelinan, D. (2011) | Gray, J., and DiLoreto, M. (2016) | In this Study |
|---------------|------------------------------------------------------|----------------------------------|---------------|
| a. Social Presence | a. Learning Environment | a. Course Structure/Organization | a. Social Presence |
| b. Social Interaction | b. Face to Face | b. Learner Interaction | b. Social Interaction |
| c. Collaborative Learning | c. Technology | c. Student Engagement | c. Satisfaction |
| d. Satisfaction | d. Learning | d. Instructor Presence | e. Student Satisfaction |
| e. Preferences | e. Collaboration | | |

### 3. Method

#### 3.1. Context and Participants

Participants in this study (n=107) were undergraduate students pursuing a bachelor degree in Indonesian Open University, Taiwan branch, which consisted of three major namely Management, English Literature and Communication. They were enrolled in blended education learning for some courses on the field of humanities and social sciences. The data were collected from four group of students level as shown in Table 2.

### Table 2. Summary of Sample demographics (n=107)

| Background       | Subtotal | %   |
|------------------|----------|-----|
| Gender           |          |     |
| Male             | 7        | 6.54|
| Female           | 100      | 93.46|
| Level            |          |     |
| Freshman (1)*    | 28       | 26.17|
| Sophomore (2)*   | 35       | 32.71|
| Junior (3)*      | 27       | 25.23|
| Senior (4) *     | 17       | 15.89|
| Total            | 107      | 100 |

*Years of studying

#### 3.2. Instrument

The survey in this study included into three instruments, which has twenty-five items and three dimensions. The dimension were applied into the scale. Social Presence Scale developed by Spears [17], Social Interaction Scale was developed by Picciano [18] and Students Satisfaction Scale [17, 19]. The reliability of the full survey (composed of three subscales) was .973 for online learning, and .977 for face-to-face learning.

The Social Presence Scale was developed by Spears [17] was used to measure social presence, social interaction, collaborative learning, and satisfaction in online and face-to-face courses. The Social
Interaction Scale was developed by Picciano [18] to examine performance in an online course in relationship to student interaction and sense of presence in the course. Similar to Social Presence scale, the students Satisfaction Scale also developed by Spears [17] and by Gray and DiLoreto [19], which was designed to measure student engagement, student Satisfaction, and perceived learning in online learning environments. In regard to those scale, this study only adopted and modified the scale and items which are amenable.

3.3. Data Analysis
The validity and reliability in this study using the SPSS software. All factors and items considered to be correlated. Meanwhile, earlier was mentioned that the questionnaire given to the participants were adopted and modified which also had been translated into Indonesian language. In order to translate the questionnaire from English to Indonesian language, one expert was involved in editing or rewording each statement. The construct validities and reliabilities of the of the Social Presence Scale, Social Interaction Scale and Students Satisfaction Scale both in online learning and in face-to-face learning can be described in table 3 by the Pearson product-moment correlation coefficient. Next, the comparison of mean and standard deviation also shown in table 4, and finally, the examination of online learning and face-to-face learning perception among different level of students also examined through ANOVA test, in order to portray the different perception of online learning and face-to-face learning among the different level of student.

4. Results and Discussion
4.1. Students Perception toward Online Learning in term of Social Presence, Social Interaction and Satisfaction
This study employed three instruments to measure students’ perception toward online learning and face-to-face learning. All of the scale used a five-point Likert scale. Although these scales have been used in previous studies of online learning, some minor modifications to the wording of specific scale items as discussed previously were made. Thus reliability for each variable used in this study was analyzed by calculating Cronbach’s alpha. The Cronbach’s alpha for the online learning was .973 and for face-to-face learning was .977. Carmines and Zeller [20] indicated that a Cronbach’s alpha of at least .800 should be achieved for widely used.

In this study, the level of analysis also involved obtaining descriptive statistics. As shown in table 3, the face-to-face learning show significantly higher than the online learning. Students rated face-to-face learning higher in all of dimension. For social presence in face-to-face learning (M=33.29, SD=.5.48), than online learning (M=31.51, SD=.69). With regard to social interaction, there was a statistically different between face-to-face learning (M=24.20, SD=4.34) and online learning (M=22.77, SD=.4.28). The result also indicated that there were a significance different in the students’ perception of face-to-face learning and online learning in term of satisfaction. The satisfaction rated (M=44.07, SD=7.48). Those results supported hypothesis in this study: face-to-face learning led to more positive perceptions, higher levels, and stronger sense compared to online learning. The main reason why face-to-face learning is higher than online learning is due to the lacks of social presence and social interaction itself toward online learning.

| Dimension         | Variable               | Mean  | Standard Deviation |
|-------------------|------------------------|-------|--------------------|
| Social Presence   | Online learning        | 31.51 | 5.55               |
|                   | Face-to-face learning  | 33.29 | 5.48               |
| Social Interaction| Online learning        | 22.77 | 4.28               |
|                   | Face-to-face learning  | 24.20 | 4.34               |
| Satisfaction      | Online learning        | 41.63 | 7.62               |
|                   | Face-to-face learning  | 44.07 | 7.48               |
To examine the difference of online learning and face-to-face learning perception, ANOVA test also used in this study. Table 4 describes the students’ perception of online learning and face-to-face learning among different level in the university. Based on ANOVA test, there is no significantly different among university students at different levels of online learning and face-to-face learning, the university students level are freshman, sophomore, junior, and senior.

|                  | Sum of Squares | df | Mean Square | F      | Sig.  |
|------------------|----------------|----|-------------|--------|-------|
| **Online Learning** |                |    |             |        |       |
| Between Groups   | 2.76           | 3  | .92         | 2.13   | .10   |
| Within Groups    | 44.32          | 103| .43         | 1.31   |       |
| Total            | 47.09          | 106|             |        |       |
| **Face-to-face learning** |            |    |             |        |       |
| Between Groups   | 1.71           | 3  | .57         | 1.31   | .27   |
| Within Groups    | 44.84          | 103| .43         |        |       |
| Total            | 46.55          | 106|             |        |       |

The result showed that p value > .05, meanwhile .10> .05, and .27> .05.

4.2. Discussion
The purpose of this study was to explore the students’ perception toward online and face-to-face courses in term of social presence, social interaction, and satisfaction. In addition, this study also aimed to examine the difference of online learning and face-to-face learning perception among different level of students. Many previous research identified the satisfaction of face-to-face learning is higher than online learning, this research also argued that face-to-face learning are more amenable compared to online learning in term of social presence, social interaction, and satisfaction. However, the findings of this study argued that there is no significantly perception of online learning and face-to-face learning among different level in the university (freshman, sophomore, junior, and senior).

Our findings demonstrated that level in the university does not have influence to the online learning and face-to-face learning. With respect to learning perspectives, there was no statistically significant difference between the participants enrolled in the online and face-to-face learning. Even though face-to-face learning perceived more satisfy, many chose online learning over face-to-face classes for the convenience and ease of time and for the opportunity to work when they wanted instead of when they had to [21]. In addition, online education has efficient cost, and it allows learners to work at their own pace to complete their full degree. Therefore, instructor must have a concrete understanding of the theory and the practice in order to be effective, whether in online learning or in face-to-face learning in order to experience class participation [22].

5. Conclusions
Universities now have the ability to provide blended learning or distance learning opportunities through online classes. Therefore, a survey instrument was distributed to students to explore students perception toward online and face-to-face courses in term of social presence, social interaction, and satisfaction. Moreover, this study also aimed to examine the difference of online learning and face-to-face learning perception among different level of students. Even though online learning perceived as less social interaction, lacking social presence, and synchronicity in communication, online learning actually has some advantages to the students.

5.1. Limitation of the Study
The participants in this study were just from one university on the field of humanities. Adding more sample from different university should be conducted on the field of natural science as well. Most of the participants were female (n=107, male=7, female=100). Therefore this study doesn’t compare based on
gender, which is very common in education field. Moreover, this study also was based upon students’ perception rather than field of observation in face-to-face learning or analyzing the online learning video.

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