

## **THE DIFFERENCE BETWEEN GENDERS ON THE INSTITUTIONAL TRANSACTIONAL PRESENCE AND LEARNING ACHIEVEMENT AMONG DISTANCE EDUCATION LEARNERS**

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**Abstract:** This study looks at the effect of the institutional transactional presence on the learning achievement of the two genders. A total of 615 learners at the School of Distance Education, University Sains Malaysia at the ratio of 40.8% males and 59.2% females, were involved as the respondents in the study. An analysis on gender differences using the one-way ANOVA analysis showed that there was a significant difference on the overall effect of the institutional transactional presence between the genders with higher means recorded by male students. When the learning achievement was considered, the results showed that there was also a significant difference between the genders with higher means again achieved by male students. The implications of the study will be discussed, particularly the role played by the institution in providing the appropriate and relevant support system to cater to the needs of the distance education learners regardless of their gender.

**Keywords:** transactional presence, gender, learning achievement

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### **INTRODUCTION**

The transactional presence refers to the degree to which a distance learner senses the availability of, and connectedness with, people in his/her educational setting (Shin, 2002). Shin (2003) proposes that there are three dimensions of transactional presence, namely, the lecturer transactional presence, the peer transactional presence and the institutional transactional presence.

The institutional transactional presence, in turn, may be defined as the degree of connectedness or sense of belonging of the students to the institution. In other words, it is a measure of the availability of the institution to the distance education learners. Such availability refers to the belief or feeling that there is a co-relationship existing between two or more parties or expanding involvement of the parties concerned (Shin, 2003).

There are many ways in which the institutional transactional presence can be created and developed among the distance education learners. Among others, there is the physical presence of the faculty in the live video conferencing sessions of the course delivery. The higher the degree of availability of the lecturers to the students in

the course delivery, the greater will be the connectedness the students perceive with the institution. Similarly, interaction and assistance provided by the institution via internet-based collaborative tools and academic aspects (access to the library, laboratory, print-based learning materials, course guide books, multimedia resources) as well as non-academic assistance in the support system (access to guidance, counselling, motivation, social gathering, etc.) could also enhance the institutional transactional presence among students. The importance of the institutional transactional presence has been highlighted in many studies. For instance, several studies have revealed that there is a close relationship between the institutional transactional presence and student learning (Rashid et al., 1993; Sewart, 1993; Peter, 1983).

In distance education, the educational transaction occurs between the lecturer and students. Moore (1990) used the term "dialogue" as a parameter to overcome the transactional distance between the lecturer and students. Munro (1998) emphasised that the establishment of the transactional presence among distance education learners is imperative as the "dialogue" provides the links between the lecturer and the students and the extent of this link determines and affects student learning achievement. Apart from minimising the transactional distance via collaboration, the physical support system as well as the social support system also affect student learning (Rashid et al., 1993). The academic support system, such as the provision of learning resources in the form of learning materials and internet and multimedia-based materials, must also be adequately provided. With an efficient academic support system in place, the aspect of isolation and the disconnectedness of the distance education learners can be overcome and positive learning outcomes achieved.

The importance of the institutional transactional presence and its effect towards the students' learning achievement cannot be overemphasised. However, another aspect of equal importance is the gender difference. This difference on issues related to the use of technology has received immense interest among researchers (Margolis & Fisher, 2002). Many studies have reported that female students exhibit negative views on the use of technology especially in terms of their attitude, the extent of use and self-perceived computer experience (Houtz & Gupta, 2001; Broos, 2005); they also exhibit lower confidence than males when using technology in learning (Shashaani and Khalili, 2001). However, there are also studies which show no gender differences. For instance, Chen (1985) found that female and male students responded with similar levels of interest when using the technology in learning and both genders possess the same amount of experience. Studies by Shashaani (1997) and Su & Atan (2007) also revealed that both male and female students exhibit similarity especially in terms of attitude towards ICT.

However, few studies have been undertaken to look into the issue of gender differences in terms of the institutional transactional presence and learning achievement among distance education learners. Taking into consideration the importance of the transactional presence and learning achievement among the genders, this study seeks to explore the difference between the genders in these two parameters. In particular, the aims of the study are:

- i. What is the extent of the existence of the institutional transactional presence among distance education learners?
- ii. Are there gender differences in terms of the institutional transactional presence among distance education learners?
- iii. What is the extent of the learning achievement as perceived by the distance education learners?
- iv. Are there gender differences in learning achievement among distance education learners?

## METHODOLOGY

The results presented here are a small part of a larger study that looks at the relationship of the transactional presence and the learning achievement of students at the School of Distance Education, University Sains Malaysia in Penang, Malaysia. The conceptual approach of the study is based on the transactional presence concept of Shin (2002) and the students' learning model of Gibson (1991). Shin (2002) proposes three dimensions of transactional presence, namely, the lecturer transactional presence, the peer transactional presence and the institutional presence.

On the other hand, the learning model of Gibson (1991) proposes three dimensions of learning, namely, the satisfaction in learning, learning achievement and learning persistence.

This study only focuses on the institutional transactional presence and learning achievement and the different effects exhibited by the two genders. The main questionnaire consisted of two sections, Section A and Section B. Section A covered the demographic variables while Section B had a list of 57 items. Eight items related to the institutional transactional presence measured on the Likert scale 1-5, where 1 was the least agreeable and 5 was the most agreeable.

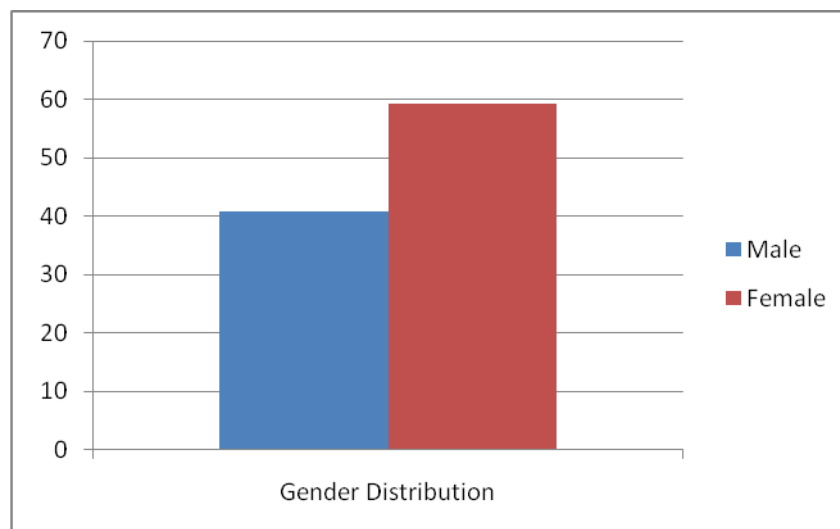
The sample of the study consisted of distance education students enrolled at the School of Distance Education for the 2006/07 academic session. A total of 992 questionnaires were distributed during the annual three-week residential course where all students gathered at the main campus to undertake the face-to-face tutorials, laboratory sessions and tests. Out of the total number of questionnaires distributed, 615 questionnaires were returned representing the rate of return of 62%.

Before the analysis was undertaken, the data were investigated for normality and this was carried out using the normal Q-Q plot analysis. The plot showed a linear relationship indicating that the data distribution was normal. The independent samples, t-tests and ANOVA analysis at 5% confidence level were subsequently carried out to investigate whether there were significant differences between genders on the factors of the institutional transactional presence and learning achievement.

## RESULTS AND DISCUSSION

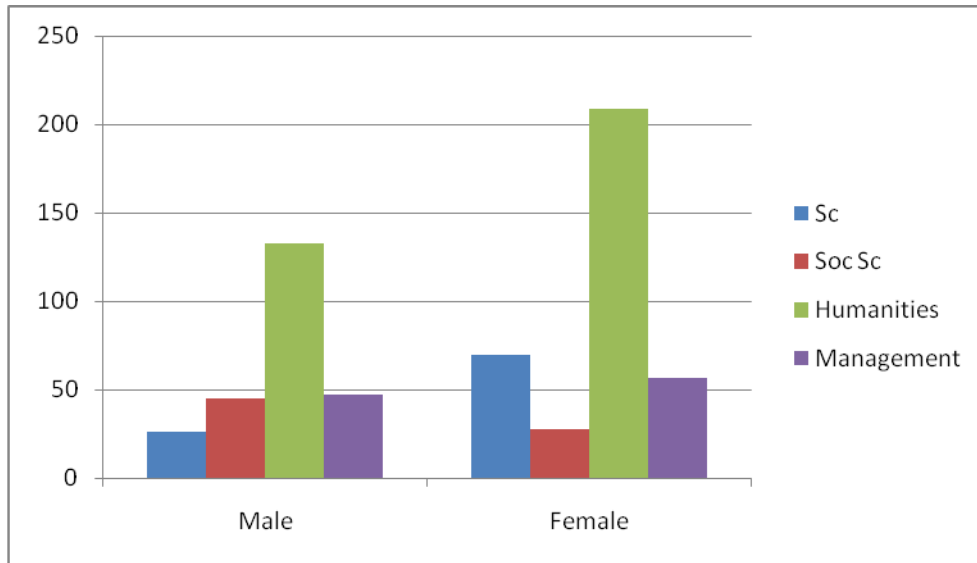
### Demographic results

Figure 1 shows the distribution of the genders of the sample. There was a higher proportion of female learners with 364 students (59.2%) compared to male learners of 251 students (40.8%) in the sample taken.



**Figure 1:** Gender distribution

When the academic programmes they enrolled in were considered, the data showed that in the humanities programme, the enrolment was the highest, at 52.9% for male students and 57.4% for female students. See Figure 2.



**Figure 2:** The gender distribution in the programmes enrolled

### **The Institutional Transactional Presence**

The overall mean for the institutional transactional presence (as shown in Table 1) was  $\bar{x}=4.05$  which was very high and when each item was considered, the results showed that Items No. 2, No.3 and No. 5 (which related to the sense of belonging to the institution) recorded the highest means. These results indicate a very high level of psychological belief that the learners hold toward the presence, availability and connectedness of the institution.

**Table 1:** The mean and standard deviation of items related to institutional transactional presence (items adapted from Shin,2003)

No.	Item	Mean	Std.
1.	I find it easy to contact the academic staff of the School of Distance Education, USM.	3.62	0.76
2.	I feel proud when I see the USM logo.	4.33	0.66
3.	I have a strong sense of being a student of the School of Distance Education, USM.	4.38	0.69
4.	I believe that the academic staff is willing to help whenever I encounter difficulties in my studies.	3.94	0.73
5.	I am very proud to be a member of USM.	4.26	0.69
6.	I believe that the support staff is very helpful when I encounter difficulties in course registration, payment of fees, etc.	3.99	0.70
7.	I find it easy to obtain information about the courses offered by the School of Distance Education, USM.	3.98	0.72
8.	I feel attached to USM.	3.91	0.73
	Total Mean	4.05	0.71

### The Learning Achievement

The overall mean for the learning achievement was  $\bar{x}=4.19$  which was also very high; as can be seen in the Table 2, Items No. 5 and No. 10 (which relate the personal growth and learning ability) recorded the highest means. These results indicate a very high positive perception towards learning achievement and affirm that the institution has provided a conducive academic programme and support system that enable the students to excel.

**Table 2:** The mean and standard deviations for items related to learning achievement (adapted from Shin, 2003)

No.	Item	Mean	Std.
1.	I gained practical ideas to be applied to my work.	4.00	0.65
2.	The courses provided me with professional knowledge for work.	4.10	0.67
3.	The courses provided me with an opportunity to develop time management skills for learning.	4.17	0.63
4.	The courses enhanced my thinking skills.	4.34	0.58
5.	The courses helped me in my intellectual growth.	4.37	0.58
6.	My views of work were enriched with insight gained from the courses.	4.15	0.67
7.	The courses allowed me to look at things at different ways.	4.17	0.63
8.	The courses provided me with knowledge on how to work more effectively.	4.15	0.66
9.	From the courses, I gained new perspectives of my work.	4.12	0.67
10.	The courses enabled me to enhance my learning ability.	4.25	0.65
11.	I learnt extensively from my courses.	4.24	0.66
	Total Mean	4.19	0.65

#### A comparative analysis between genders

The comparative analysis in Table 3 showed that there was a significant difference on the overall effect of the institutional transactional presence between the genders with higher means recorded for male students ( $\bar{x}=4.15$ ) compared to female students ( $\bar{x}=3.99$ ). The male students perceived that they were more connected with the institution than the female learners. The probable reasons are that male students engage in collaborative activities with the faculties such as collaboration in live video conferencing, participate in the forum board in the LMS or make personal contact more than the female learners. Chen (1997) revealed that the presence of the faculty in the live video conferencing influences the participation rate of students. This in turn enhances the level of connectedness between the students and the institution.

**Table 3:** The comparative analysis for the institutional transactional presence and learning achievement between genders

	Male			Female		
	N	mean	std	N	mean	std
Institutional transactional presence	247	4.15	0.52	355	3.99	0.52
Learning achievement	248	4.25	0.47	361	4.15	0.52

\* significant at 5% confidence level

When the learning achievement was considered, the results showed that there was also a significant difference between the genders with higher means achieved by male students ( $x=4.25$ ) compared to female students ( $x=4.15$ ). There are many possible reasons attributed to these results. The most plausible reason would be that male students are able to solve problems related to the course contents more than female students. They obtain more help and assistance from peers as well as from the faculty in solving the problems they encounter. There is also a possibility that male learners are more proficient in using the ICT tools in learning compared to female learners. They enjoy using technology in learning and this leads to a higher learning achievement.

Other reasons that can be attributed to the results obtained would be that the male students are more technically minded than the female students. As such, the male students could solve technical problems such as those related to the use of the Learning Management System (LMS) via the support they receive from peers as well as from the institution more readily than the female students. In this way, male students benefit more in terms of learning than the female learners. Kirkup (1988) reported that more male students access the computer at home or workplace than female students. The experience in computer classes at the school level also contributed more obstacles to an equal participation of female students in ICT related learning activities at the university level. The negative image that the ICT related devices or tools are "male toys" also provides a barrier to female learners' participation and as a result, the female learners possess less experience and confidence in using the ICT related tools in teaching and learning (Von Primmer & Rossie, 1988).

### CONCLUSION

This article reported on the comparative study between genders in terms of the institutional transactional presence and learning achievement. At a 5% confidence level, the results show that male students perceive that they are more connected with the institution, learn more and have more access to the faculty than the female learners. This in turn empowers the male learners with a higher level of belief of connectedness to the institution and a higher learning achievement than the female learners. Appropriate action has to be taken to narrow the gap by providing more access to the faculty to the female learners. This includes making personal contacts by the faculty as well as allocating more time for the female learners when meeting them face-to-face during tutorials/lectures at the time of the annual intensive course.

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