CHAPTER 5- FINDINGS, DISCUSSION AND RECOMMENDATIONS

According to the objectives of the research have been met and the data collected from the survey was analyzed and inferences drawn in the previous chapters.

5.1 Findings

5.1.1 Profile of Respondents

Table C1 shows the distribution of the faculty, students, males and females region wise. In all 52% male faculty and 47% female faculty filled the questionnaire. The percentage of female students was around 43% and male students were around 56%.

Faculty

From Table C1 and C2, 39% of males from North perceive that Facilitating conditions Direct is better than 61% of females from North. 63% male faculty and 37% females faculty participated in the survey from East. 61% male faculty and 39% female faculty from West participated in the survey. 53% males and 47% females in south participated in the survey. The percentage of faculty participating in the survey are: 27% faculty from north, 15% faculty is from east, 29% faculty are from west and 29% from south.

Students

53% male students and 47% females students are from north India, 56% males students and 44% females students are from East India, 62% males students and 38% females students are from west, 54% males students and 46% females students are from south. In all 33% students are from north, 19% students are from east, 27% from west, 21% from south.

5.1.2 Descriptive Statistics

Univariate summary statistics like the mean, standard deviation for the five constructs of behavioral intention- Performance expectancy, Effort expectancy, Subjective Norm, Image, Facilitating Conditions Direct and Facilitating Support for overall sample data (Table no 29). The mean values for all the intention variables are greater than 4 on a seven point scale.
constructs were 5 on a seven point scale. This implies a more than average on all the constructs which measure the intention. Performance Expectancy exhibited the highest mean followed by Effort expectancy, Subjective norm and Facilitating Conditions Direct. Image and Facilitating Conditions Support scored low amongst the other dimensions.

Table C2 tabulates the univariate summary or descriptive statistics of the faculty from north. The mean values for measuring the intention for both males and females for all the constructs are more than 4 on a 7 point scale. This implied a more than average level in measuring the intention. For males the score for Performance expectancy had the highest means followed by facilitating conditions direct and Effort Expectancy. The mean for facilitating conditions is the lowest but above average of 4 on a 7 point scale. For the female faculty from north Performance expectancy has the highest mean followed by Effort Expectancy, Subjective norm and Facilitating conditions direct. The lowest mean was of Facilitating conditions support but above average of 4 on a 7 point scale. Similarly from table C2, the score for Performance expectancy for students has the highest mean. The mean for facilitating conditions support is the lowest, slightly above average on a 7 point likert scale. This implied a more than average level in measuring the intention.

Table C3 shows the mean score for performance expectancy scores for male faculty from east is the highest followed by Effort expectancy, Subjective norm, Facilitating Conditions Direct, Image and facilitating condition support. Nevertheless, all the mean scores are above average 4 (with FCS measuring slightly low) on a 7 point scale. This is implied a more than average level in measuring the intention. Similarly for female faculty from east the mean scores for Performance Expectancy are the highest followed by Effort Expectancy, Facilitating conditions direct, Subjective norm, Facilitating condition support and least for Image. Nevertheless, the mean scores are above average of 3.5 on a 7 point scale. Similarly from table C3, the mean score for Performance expectancy for students from east is the highest whereas the score is lowest for facilitating conditions support. All the mean scores for students from east, both males and females, are above average of 4 on a 7 point scale.
From table C4, the mean value faculty from west, both, males and females, Performance expectancy is the highest, Effort Expectancy, Subjective norm, Facilitating conditions direct, Image and least for Facilitating conditions support. However, all the mean scores are above average on a 7 point scale. This implied more than average level in measuring the intention and more than average for all the constructs measuring intention. Similarly from table C4, the mean value for students from west, both, males and females, Performance expectancy is the highest, Effort Expectancy, Subjective norm.

However for students, male for west region the mean for facilitating conditions support is the least. However, all the mean scores are above average of 4 on a 7 point scale (except facilitating condition support for, males students from west). This implied more than average level in measuring the intention and more than average for all the constructs measuring intention.

From table C5, unlike others, the mean values for performance expectancy and effort expectancy are almost equal for faculty from south. However, there was a decline in most of the mean values as compared to the faculty from the North, East and West. First and foremost the means of faculty, both, male and female are lesser than the entire faculty from North, East and West and secondly, in spite of the means being above average, are lesser than the average of mean for the other entire faculty from different regions. Similarly from table C5, Performance expectancy has the highest score for female students from south followed by Effort Expectancy, Subjective norm, Image, Facilitating conditions direct and least for Facilitating conditions support. However, all the mean scores are above average on a 7 point scale. This implied more than average level in measuring the intention and more than average for all the constructs measuring intention.

From table C6, the mean values for all the intention variables for Faculty, all of them are greater than 4 on a seven point scale. This implied a more than average level in the intention and in the five constructs. Performance Expectancy has the highest mean followed by Effort Expectancy, Subjective norm and Facilitating Conditions Direct. Similarly for Students, the mean for all the constructs measuring intention are above 4 on a seven point scale. The score was highest for Performance Expectancy and lowest for Facilitating Conditions Direct.
Form table C6, the mean values for all the intention variables for males, all of them are greater than 4 on a seven point scale. This implied a more than average level in the intention and in the five constructs. Similarly, for the overall samples for female the mean values for all the intention variables are greater than 4 on a seven point scale. This implied a more than average level in the intention and in the five constructs. The mean scores for Performance expectancy was the highest followed by Effort expectancy, subjective norm and facilitating conditions direct. The least score was for facilitating conditions support.

**5.1.3 Significance Testing of the Constructs Measuring Intention**

The results from t-test, the mean scores for Performance Expectancy, Effort Expectancy, Subjective Norm, Image, Facilitating Condition Support, Facilitating Condition Direct for Faculty and Students (H$_{01a}$), Males and Females (H$_{01b}$), Male Faculty and Female Faculty (H$_{01c}$), Male Students and Female Students (H$_{01d}$), Younger and Older Faculty (H$_{01e}$) are calculated.

Faculty perceived ease of use of the technology to be important than students. However, students were more under the effect of Subjective norm and Image than the faculty. Facilitating Conditions Direct was adequate according to the faculty as compared to the students. Female faculty used the technology more than male faculty because of its usefulness as well and its ease of use. Also, female students used technology more than male students because of its usefulness followed by its ease of use. The younger faculty and older faculty had the same perceptions about technology for all the constructs used.

**5.1.4 Factors affecting the behavioral intention of faculty, students & faculty and students**

**Faculty H$_{02a}$**

The behavioral intention towards use of technology for faculty was majorly determined by Effort expectancy and Performance Expectancy. This implies that faculty used technology more because of its Ease of Use and Perceived Usefulness and Facilitating Conditions Direct. It means that if the facilitating condition direct is absent, then it can become as a barrier in the use of technology.

**Students H$_{02b}$**

The behavioral intention towards use of technology for students was majorly determined by Effort expectancy followed by Subjective Norm, Image and Performance Expectancy. This
implies that students used technology more because of its Ease of Use, due to social influence and Perceived Usefulness.

**Faculty and Students H₀²e**

The behavioral intention towards use of technology for faculty and students was majorly determined by Effort expectancy followed by Facilitating Conditions Direct, Performance Expectancy and Social influence. This implies that faculty and students use technology more because of its Ease of Use, due to social influence and Perceived Usefulness. Facilitating conditions direct if not adequate will hinder the use of technology.

5.1.5 Measurement of constructs for behavioral intention Region-wise. (H₀³a to H₀³f, H₀⁴a to H₀⁴f, H₀⁵a to H₀⁵f, H₀⁶a to H₀⁶f)

**North**

The male faculty in north India perceived that the colleges have provided adequate facilities, infrastructure and time to learn and use technology than their female counterparts. The faculty which consider themselves to have high and moderate experience in using technology use technology because of its perceived usefulness and the ease of use than the faculty with low experience. Faculty with high experience consider that the college has provided adequate facilities, infrastructure and time to learn to use technology was more than the faculty with low experience and medium experience.

**East**

The assistant professors from east India consider that their use of technology is influenced by colleagues and the people who are important to them use technology in teaching the lecturer on the other hand only slightly agree to this. Perceived ease of use to use technology was considered more important by faculty having bachelor’s degree than by a faculty having master’s degree from east.

**South**

The female faculty from the south do not think that image really matters when it comes to usage of technology whereas the male faculty do think that image is a factor due to which technology is adopted in classroom teaching.

**Faculty and Students, Region wise – (H₀⁷a to H₀⁷d)**

The students in north agree to the fact that image plays an important role as compared to the faculty in north. The faculty from north confirms that facilitating conditions direct help in them
to teach whereas according to students from north facilitating conditions are provided only to a certain extent. The faculty from east adopt technology due to its ease of use as compared to the students. The students from east use technology as they think it will enhance their image as compared to the faculty from east who adopt technology. Facilitating conditions support are perceived to be not enough for students from west India, whereas the faculty from the west perceive that facilitating conditions support are enough. Perceived usefulness is the reason why faculty from north adopt technology more than the students. There is a substantial social pressure on the students to adopt technology as compared to the faculty from south. The faculty from south perceive that they get adequate facilitating conditions direct, whereas the students from south perceive facilitating conditions direct to be just enough.

**Faculty of North, East, South and West & Students of North, East, South and West - H\textsubscript{08a} and H\textsubscript{08b}**

The students of east and west consider facilitating conditions direct in classroom learning to be good as compared to the students of north which consider the facilitating conditions to be adequate.

**Students male and Students female from North, East, West and South - H\textsubscript{09a} to H\textsubscript{09d}**

Female students from North used technology more because of its perceived usefulness and secondly because of its ease of use as compared to its male students from North. Similarly it was observed in south Female students used technology more because of its perceived usefulness and secondly because of its ease of use as compared to the male students from south.

**Moderating hypotheses (MH\textsubscript{01} - MH\textsubscript{04})**

Faculty’s Subjective norm is moderated by age, such that for older faculty the subjective norm will become less. Similarly subjective norm is moderated by experience, such that for faculty with higher experience the subjective norm becomes less.

**5.2 Discussion**

Subjective norm and image, i.e social influence was a very prominent factor for students. It plays a very important role for students to use technology. Faculty perceived facilitating conditions direct as adequate enough whereas students perceived it to be moderate. The females
in general used technology as they perceived it to be useful and because of its ease of use. Age was not important as far as the intention to use technology is considered. Interestingly, Facilitating conditions direct was one of the predictors for behavioral intention to adopt technology by the faculty. Facilitating conditions support, however, was not a considered important by the faculty. Similarly the motivating factor for students was its ease of use and social influence followed by its perceived usefulness. This implies that students adopt technology more because of social influence rather than its perceived usefulness. Subjective norm did not play an important role at all for the faculty to adopt technology in teaching. The relationship of subjective norm with behavioral intention with age shows that with the increase in age, subjective norm comes down. Similarly, the relationship of subjective norm on behavioral intention with experience shows that as the experience increases subjective norm comes down.

According to the findings, behavioral intention depends on facilitating conditions direct but not facilitating conditions support. According to Venkatesh et al. (2003), results indicate that facilitating conditions do have a direct influence on usage. This is also consistent with the Theory of Planned behavior and Decomposed theory of planned behavior where facilitating conditions are also modelled as a direct antecedent of usage (not fully mediated by intention).

Oye, Iahad and Rahim, 2012, in their study of academic staff for Nigerian University reported the use of technology and found that all the four constructs had a positive impact on the behavioral intention of the academic staff to accept and use ICT. The results for their study are study is consistent with our findings where the faculty considers the perceived usefulness will improve job performance and the ease of use of technology will help them to adopt technology. Also, consistent with their results is the relation of facilitating conditions with behavioural intention to use technology. However, in our study the measurement of social influence differs with the findings of Oye, Iahad and Rahim, 2012. According to our study Behavioral intention is not determined by Social influence. Pynoo, B et al.,2010 found in his longitudinal study that initially the performance expectancy was less due to the new systems introduced, facilitating conditions became important intermediately whereas social influence became the most important predictor later. However, the behavioral intention to use technology by faculty is not determined by Social influence as per our findings. Consistent with the findings of Moran, Hawkes, and Gayar, 2010, for mobile computing devices by students, the perceived usefulness, ease of use, social influence, facilitating conditions are the main predictors of behavioral intention.
Marchewka, Liu, Kostiwa, 2012, in their study of UTAUT constructs for Blackboard – course management tool for students concluded that age and gender have not been recognized to play an important moderating role in IT/IS acceptance research. This is consistent with the findings that age and gender play a do not play a moderating role for all constructs except Subjective norm.

Consistent with the findings of Jong and Wang, 2009, for the study of web based learning system by students, perceived usefulness of the system and social influence affect the students acceptance of technology. However, Facilitating condition was a predictor of intention to use technology by students, which is not the same as the case with our findings.

5.3 Recommendations

As there were no barriers in the adoption of technology it’s a positive sign for the academics industry. Faculty perceives adequate facilitating conditions in their colleges which is a positive development towards introduction of technology for teaching. However, students were neutral about the fact that support conditions were adequate. Therefore support facilities should be strengthened for students to use technology more.

According to our findings students use technology more because of its ease of use and social influence. The last motivating factor for them is perceived usefulness of the technology. This is quite a usual phenomenon observed in this age group. Even though the use of technology for learning is quite prominent they should be motivated to use technology for the right purpose which corresponds to the perceived usefulness.

5.4 Limitations

This study has measured the intention of faculty and students towards usage of technology in teaching and learning respectively. With the introduction of technology at a fast pace and their subsequent introduction in the academia these measurements may not remain the same.
5.5 Future Scope of Research

The research covered full time private colleges which were affiliated to some university and approved by AICTE. The infrastructure of colleges differs, for example colleges offering PGDM are different from Government College. Similarly, part time courses have a different set up from full time. Distance learning courses use technology significantly. Hence there will be a wide variation in the variables of intention. Future research can be done in other set ups to know about the adoption of technology.

A more detailed analysis can be done to study the impact of gender, age and experience together. For the technology being newly introduced in teaching and learning, longitudinal research can be conducted.

Other variables can be studied to measure the intention behind using technology in teaching and learning.

5.6 Conclusions

Technology has a great impact on our daily lives. Its application are numerous, it may be in medicine, airlines, banking, service or just for an average homemaker. Teaching and Learning has been greatly impacted with the advancement of technology. The quality of learning materials have improved, the time of both the faculty and student is saved and the effort is reduced substantially.

It was quite overwhelming to know from the research conducted that both faculty and students did not face any barriers to adoption in technology. The findings also suggest that facilitating conditions are adequate in the colleges and the faculty are quite satisfied and contended with the infrastructure set up. The facilitating support conditions for students are slightly low for students tough.

If such standards are maintained the introduction of new technology will be easier in teaching and learning. Facilitating conditions can be a differentiating factor in enabling the introduction of new technology.