

# Digital Literacy of Faculty & Its Relationship with Teaching Learning: A Study on Student's Perspective

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## **Abstract**

The paper explores the influence of faculty's digital skills on the learning experience of students. Student's background and their specialization's influence the way they perceive digital literacy of the faculties. Digital literacy of a faculty makes them more accessible and transparent when it comes to student interactions. The real-time feedback and ability to respond instantly adds more value to the interactions. The existing millennial generation of students is more comfortable with digitalization of teaching and learning and therefore it is critical to update the academic approach towards higher education. Digitalization has made learning and education globally accessible anytime anywhere.

## **Keywords:**

Digital literacy, Learning, Information Technology Literacy, Teaching Learning.

## **Introduction**

Digital literacy in academics is constantly evolving the way academicians approach transferring of knowledge is influencing the teaching learning experience of students.

Students from different background and social strata in India perceive digital technology in different ways. Access to technology and exposure to technology driven society influence their understanding and application of digital literacy in their individual life.

In the academic domain students perceive role or influence of digital literacy on their learning and use of DLS based on its utility value. In previous researches it is revealed that students from science background are technologically savvy but they fail to use technology for the purpose of learning and academic enhancement. The researcher wishes to explore this phenomenon and establish that specialization of the students has a role to play when it comes to DLS.

The DLS of the faculty member's influences students with different specialization in different ways depending on their specialization. These specializations could be finance, marketing, human resources, operations, information technology etc.

The digital literacy skill of the faculty is measured on the 6 specific criteria of digital literacy:

1. Accessing information
2. Creating & generating information
3. Integration of information
4. Evaluation of information
5. Managing information
6. Communication of information

Often faculty use the DLS to enhance the teaching learning experience of the students, which varies from one specialization to other.

### Defining Digital Literacy:

<sup>1</sup>The American Library Association's digital-literacy task force offers this definition: "Digital literacy is the ability to use information and communication technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills."

### Literature Review:

**Aviram, A., & Eshet-Alkalai, Y. (2006)** in their paper discuss and point towards the clash of two cultures book based and digital, and points out the effect of digital literacy environment on us in future. According to the paper there are 2 strategies about DL. First is the conservative strategy which says that DL is a set of skills which anybody can learn. Sceptical approach has got two hypothesis besides digital and technical skills one needs cognitive skills to learn DL.

These cognitive skills depend on your personality, intelligence and style of learning along with ability to multitask and multi-think.

The second hypothesis says book based culture was rational and individualistic while digital culture is audio visual and saturating hence destroys individualism. Keeping the above in mind the future of DL in education has to be decided & debated for its influence on society's culture and future.

**Dede, C. (2005)** in this paper discusses shift in student learning style prompting active construction of knowledge through mediated immersion. From desktop to multi user virtual environment people are interacting with each other, through computer based agents, and digital artefact in a simulated context. The world wide web has changed learning by seeking and synthesizing information instead of assimilating validated sources and knowledge. This promoted learning for all students, even those who are unengaged and low in performance. Wearable devices have made education universally present without any physical presence required on the campus. The students now have a virtual identity which can use open sources, can manipulate content with tools & media with no gender, race or disability bias.

**Karsh, S. M. A. (2018)** the paper discusses the level of technology usage, perception, incentives, barriers of IT use in the B-schools' faculties. It was found that most of the teachers were trying to accommodate technology in classrooms, the barriers were availability of technology, time and administrative support which made them anxious since they could not keep up with the technological advancements. The author suggests developing long range technical plans and strategies for teaching, promotion of teacher's using technology, faculty development programs like training of technical aspects & support and integration of technology training. Working of teachers & technology staff together should be a standard norm.

**Neuman, S. B., Smagorinsky, P., Enciso, P. E., Baldwin, R. S., & Hartman, D. K. (2000)** highlights the new picture of public library after media literacy. From big buildings and bigger number of books to infinite space and infinite resources along with free access from anywhere the public library will be a place to learn & play for all age groups especially with various webpages & computer terminals it will cater both to children & adults. The role of the librarian will now be of the online helper & technician.

Statement of the problem: This paper attempts to examine the role of digital literacy skills of faculties and how they influence the learning of students from different specialization.

### Objective of the paper:

1. *To examine the role of digital literacy of faculties on student's learning of various specializations.*

### Research Hypothesis:

The following null hypotheses were formulated for the purpose of this study:

*H1: There is significant relation between digital literacy skills of faculties and student learning from different specialization.*

*Ha1: There is no significant relation between digital literacy skills of faculties and student learning from different specialization.*

### Research Methodology:

This research paper is based on the primary data. For the purpose of collecting the primary data, an instrument was designed. The instrument designed was administered to collect data from the students of a B-school. The independent variables used in designing the instrument are "specialization" of students. The survey was administered among the 125 students from a B-school and SPSS (Statistical package of social sciences) was used for analysing the data.

List of test administered:

<i>Name of Test</i>	<i>Purpose</i>
Cronbach Alpha	To test the reliability of the instrument designed
Descriptive analysis	To study the frequency of the data collected
Chi-Square	To study the significance value between two variables

### Data Analysis

#### *Test of reliability*

Reliability Statistics	
Cronbach's Alpha	N of Items
0.912	44

Interpretation

The above table confirms that the instrument designed for the student is 91% reliable.

#### *Descriptive analysis*

Q. Please specify your specialization					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Finance	35	28.0	28.0	28.0
	Marketing	30	24.0	24.0	52.0
	Human Resources	20	16.0	16.0	68.0
	Operations	10	8.0	8.0	76.0
	Information Technology	10	8.0	8.0	84.0
	Others	20	16.0	16.0	100.0
	Total	125	100.0	100.0	

Interpretation:

Out of 125 respondent maximum respondents are from

finance specialization and 20% of the respondents are from specialization that were not listed.

*Chi Square*

		Q5_S "Please state the level of course you are a student of:		
		PG	UG	Total
Q6_S "Please specify your specialization	Finance	35	0	35
	Marketing	28	2	30
	Human Resources	20	0	20
	Operations	10	0	10
	Information Technology	1	9	10
	Others	7	13	20
Total		101	24	125
Chi-Square Tests				
	Value	df	Asymptotic Significance (2-sided)	
Pearson Chi-Square	77.837 <sup>a</sup>	5	0.000	

## Interpretation:

The above table establishes a significant relationship between the level of the course and the specialization.

Students from different specializations and the level of degree i.e. Graduate level and post graduate level have different understanding.

		Q8_4 "The use of Digital platform in lecture leads to: <i>The appropriate usage of various digital techniques to enhance the learning experience</i>			
		Neutral	Agree	Strongly Agree	Total
Q6_S "Please specify your specialization	Finance	1	15	19	35
	Marketing	6	14	10	30
	Human Resources	2	10	8	20
	Operations	0	8	2	10
	Information Technology	4	2	4	10
	Others	2	15	3	20
Total		15	64	46	125
Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)		
Pearson Chi-Square	24.680 <sup>a</sup>	10	0.006		

Interpretation:

The above table establishes a significant relationship

between the specialization of the students and the influence the digital tools & techniques have on the learning of the students.

		Q8_5 "The use of Digital platform in lecture leads to: <i>The availability of the teacher support is increased due to various online support systems like: email, online support forums and other digital platforms</i>				
		Disagree	Neutral	Agree	Strongly Agree	Total
Q6_S "Please specify your specialization	Finance	0	2	13	20	35
	Marketing	0	3	12	15	30
	Human Resources	1	4	6	9	20
	Operations	0	1	4	5	10
	Information Technology	0	3	6	1	10
	Others	0	1	16	3	20
Total		1	14	57	53	125
Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)			
Pearson Chi-Square	27.391 <sup>a</sup>	15	0.026			

Interpretation:

The above table establishes a significant relationship

between the specialization of the students and the accessibility of the faculty because of the online presence of the faculty.

		Q9_4 "As a student I feel: <i>Interaction amongst student &amp; faculty has improved &amp; become more qualitative due to the use of digital techniques &amp; tools. We as students feel more positive when given feedback, or asked questions.</i>				
		Disagree	Neutral	Agree	Strongly Agree	Total
Q6_S "Please specify your specialization	Finance	0	0	17	18	35
	Marketing	3	7	10	10	30
	Human Resources	1	7	5	7	20
	Operations	0	0	7	3	10
	Information Technology	0	3	3	4	10
	Others	0	3	11	6	20
Total		4	20	53	48	125

Chi-Square Tests						
	Value	df	Asymptotic Significance (2- sided)			
Pearson Chi-Square	28.494 <sup>a</sup>	15	0.019			

Interpretation:

The above table establishes a significant relationship

between the specialization of the students and the role of digitalization and it affecting the approach towards interaction has made it more transparent and use friendly.

		Q9_6 "As a student I feel: <i>Digital platforms enable use of more interactive, relevant real-time visual materials which lead to clear &amp; tangible understanding of the subject matter.</i>				
		Disagree	Neutral	Agree	Strongly Agree	Total
Q6_S "Please specify your specialization"	Finance	0	0	18	17	35
	Marketing	1	4	11	14	30
	Human Resources	1	4	11	4	20
	Operations	0	1	5	4	10
	Information Technology	0	5	3	2	10
	Others	0	3	10	7	20
Total		2	17	58	48	125
Chi-Square Tests						
	Value	df	Asymptotic Significance (2- sided)			
Pearson Chi-Square	24.413 <sup>a</sup>	15	0.058			

Interpretation:

The above table establishes a relationship between the

specialization of the students and use of digital tools & techniques leads to more interactive and in depth understanding due to multi media usage and influence.

		Q10_3 "As a student how do you feel about Digital technology integration like the following activities during teaching & learning process enhances the learning experience: <i>The ability to post my assignment on specified websites makes me more quality conscious rather quantity oriented.</i>				
		Disagree	Neutral	Agree	Strongly Agree	Total
Q6_S "Please specify your specialization	Finance	2	3	15	15	35
	Marketing	0	3	12	15	30
	Human Resources	0	7	7	6	20
	Operations	0	0	7	3	10
	Information Technology	0	4	5	1	10
	Others	0	4	12	4	20
Total		2	21	58	44	125
Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)			
Pearson Chi-Square	25.071 <sup>a</sup>	15	0.049			

## Interpretation:

The above table establishes a significant relationship between the specialization of the students and the online

access which has lead to clear and improved understanding of topics due to different perspectives on the same topic which in turn leads to more content conscious approach.

		Q10_5 "As a student how do you feel about Digital technology integration like the following activities during teaching & learning process enhances the learning experience: <i>Information understanding &amp; organization is enhanced when online information techniques are incorporated in every day teaching/learning activities.</i>			
		Neutral	Agree	Strongly Agree	Total
Q6_S "Please specify your specialization	Finance	3	15	17	35
	Marketing	5	14	11	30
	Human Resources	4	8	8	20
	Operations	0	6	4	10
	Information Technology	5	3	2	10
	Others	2	14	4	20
Total		19	60	46	125

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)		
Pearson Chi-Square	18.365 <sup>a</sup>	10	0.049		

Interpretation:

The above table establishes a significant relationship

between the specialization of the students and the latest and real-time information is incorporated in the teaching leads to enhanced and updated learning for students.

		Q11_6 "As a student do you consider using digital technologies during teaching has a positive impact on the following: <i>Digital techniques enables you to work better with other students on tasks</i>				
		Disagree	Neutral	Agree	Strongly Agree	Total
Q6_S "Please specify your specialization	Finance	0	1	17	17	35
	Marketing	0	5	14	11	30
	Human Resources	1	4	10	5	20
	Operations	0	0	5	5	10
	Information Technology	0	6	3	1	10
	Others	0	1	13	6	20
Total		1	17	62	45	125
Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)			
Pearson Chi-Square	33.934 <sup>a</sup>	15	0.003			

Interpretation:

The above table establishes a significant relationship

between the specialization of the students and knowledge management and knowledge sharing through digital platforms and techniques.



		Q11_7 "As a student do you consider using digital technologies during teaching has a positive impact on the following: <i>Digital techniques improve the atmosphere in class (e.g. students are more engaged, there is less disruption)</i>				
		Disagree	Neutral	Agree	Strongly Agree	Total
Q6_S "Please specify your specialization	Finance	0	3	15	17	35
	Marketing	3	7	9	11	30
	Human Resources	2	4	12	2	20
	Operations	0	0	5	5	10
	Information Technology	0	4	2	4	10
	Others	0	3	11	6	20
Total		5	21	54	45	125
Chi-Square Tests						
	Value	df	Asymptotic Significance (2-sided)			
Pearson Chi-Square	25.317 <sup>a</sup>	15	0.046			

Interpretation:

The above table establishes a significant relationship

between the specialization of the students and the learning environment and class room interaction when digitalization is part of the teaching-learning methodology.

		Q14_3 "As a student how often do you engage in the following activities with respect to your lectures/classes: <i>Create a presentation with animations.</i>					
		Not at all	A little	Some what	Often	All the time	Total
Q6_S "Please specify your specialization	Finance	1	3	3	16	12	35
	Marketing	0	1	7	8	14	30
	Human Resources	1	3	4	7	5	20
	Operations	0	0	1	8	1	10
	Information Technology	1	1	5	1	2	10
	Others	0	5	5	5	5	20
Total		3	13	25	45	39	125
Chi-Square Tests							
	Value	df	Asymptotic Significance (2-sided)				
Pearson Chi-Square	33.563 <sup>a</sup>	20	0.029				

### Interpretation:

The above table establishes a significant relationship between the specialization of the students and the information presentation techniques are improved due to incorporation of technology in my presentation techniques.

### Findings

It is important to understand that students from different backgrounds are going to perceive the DL of the faculties in their own individualist way. The level of course (Graduate & PG) influences the learning experience of students and their understanding.

The traditional approach towards teaching is not very affective with the millennial or with the generation of technology. Students in current scenario of education prefer incorporation of digital technology and digital platforms in teaching pedagogy.

Specialization is a vital and the ability to understand how technology can serve each specialization to bring out its improved and more user-friendly version is critical. Students from different specializations are influenced differently by the level of digital literacy of teachers. For example, in certain specializations like marketing & HR digital and media literacy has more impact while in subjects like finance & operations simulations programs have more influence on learning and understanding of the subject matter.

Digital presence & fluency of faculties enhances the communication, interaction, problem-solving, accessibility and feedback for students.

### Conclusion & Recommendations

Academics are the foundation of any society. The ever present contribution of academics creates the future of the nation. Technology has influenced the way society perceives education; today education is not about imparting knowledge but is about enabling the future generation and preparing them for tomorrow.

From the above finding it is evident that students today need

the understanding of technology and it is critical for faculties to bring in the digital approach in the teaching methodology. Teaching pedagogy as well as syllabus design should incorporate more technology and digitalization to empower the student and well as faculties. It is safe to conclude that a digitally literate faculty will enhance teaching – learning experience of students due to good communication, interaction and accessibility whereas a traditional faculty can be excellent in class but their accessibility and communication will be limited.

Therefore, promotion of digital literacy among faculties is recommended by incorporation of technology in syllabus, teaching and in everyday routine tasks. Faculty development programs and technology training reboots should be a regular among the academicians. Knowledge sharing and collaboration is the new approach towards educating the future today.

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### End Notes:

1. <https://www.edweek.org/ew/articles/2016/11/09/what-is-digital-literacy.html>