

To Study the Impact of Facilitating Students Learning Competency Vs Demographic Profile of Faculties in Educational Institution

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Abstract

Competency-based learning is learner focused and works naturally with independent study and with the instructor in the role of facilitator. Learners often find different individual skills more difficult than others. Competency based education system ultimately responsible for the quality of the program and engaging with students in a way that helps those students achieve mastery. In which students take on the role of teachers and teachers take on the role of students. In this paper the study aims at investigating the facilitating student learning competency by the faculty in relation to their age, marital, status, designation, department and experience.

The sample consists of 500 teachers from arts and science and engineering background in Coimbatore city. Teaching competency rating scale constructed and validated by Kaiser-Meyer-Olkin. The data were analyzed using descriptive and differential analysis. The study reveals that the teachers have a high level of teaching competency. It also concluded that there is a significant difference is found between demographic profile and facilitating student learning competency in their teaching method.

Key Words: Competency, learning, Education, Teaching, demographic

INTRODUCTION

Education is a process of human enlightenment and empowerment for the achievement of a better and higher quality of life. A sound and effective system of education result in the enfoldment of learner's potentialities, enlargement of their competencies and values. Recognizing such an enormous potential of education, all progressive societies have committed themselves to the universalization of education with an explicit aim of providing "Quality education for all." A differentiated tertiary education system, assessing the development of competencies among students presents a methodological challenge. From this perspective, modeling

and measuring academic competencies as well as their preconditions and effects set high thresholds. Another challenge is the question of a suitable criterion (e.g., future job requirements) that will help to evaluate the acquisition of competence. The requirements of possible job areas and also the academics are changing constantly. Sigrid Blömeke-(2013). Its facilitating learning, or the acquisition of knowledge, skills, value, beliefs, habits, educational methods include storytelling, discussion, teaching, training, and directed research. Education frequently takes place under the guidance of educators, but learners may also educate themselves. Education can take place in formal or informal settings and

any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational.

1.2. REVIEW OF LITERATURE

(Franzoni, 2009) The study define about learning materials shouldn't just reflect of the teacher's style, but should be designed for all kinds of students and all kind of learning styles. They describe the design of a personalized teaching method that is based on an n adaptive taxonomy. Students are able to learn and to efficiently improve their learning process with such method. The researcher finds a different pedagogic model for the best result, i.e. learning styles model by Felder Silverman,

Teaching strategies, Adaptive Teaching Taxonomy and guidelines for use. In the application method he applied three factors, i.e. Application of the fielder Silverman learning styles survey , Study plan according to the ideal class students and select teaching strategy and electronic media. It describe the development of an integrated taxonomy combining learning styles, different teaching strategies and the corresponding appropriate electronic media. It provides a structured method to help in facilitating the learning process and personalizing the pedagogical resources. A two phase evaluation of the method to test its efficiency is actually under investigation. The first phase will deal with the availability of the shield education software and the second phase will be in a suited system under implementation at the ITAM (The Instituto Tecnológico Autónomo de México's)

(Cheng, 2009)He researcher created a model, namely Game Making Pedagogy (GMP) is proposed to facilitate students learning of interactive multimedia. The

model focus on student a centred learning process and it is underpinned by the constructivist paradigm. It's find the students were satisfied with making their own multimedia games. The high level of satisfaction and strong sense of ownership motivate individual students to participate in an active learning process.

(Ng'ambi, 2012) His studies to develop an approach for using podcasts to enhance students learning. It illustrated podcasts potential to transform students social and entertainment spaces into learning spaces. It has shown that such transformative change requires tight coupling of podcasts into pedagogy. The study has demonstrated that students accessed and used podcast more when integrated with pedagogy. The effective educational use of podcast requires that educators integrate podcasts in the task design.

(J.Anith, 2014)Her Study identifies teacher's Contribution in imparting education and modelling our future generation. Its finds out whether competency mapping is being practices in education sector. It explores a development of the new tool for the performance assessment and the quality enhancement of educational institution. It's also describes a TAASK (Trait, Ability, Attitude, Skill, Knowledge) based competency model for the assessment of faculty members in academia.

1.3. OBJECTIVE OF THE STUDY

- To know the factors influencing of facilitating students learning competency by the faculty.
- To identify the significant difference between the demographic profile of faculty and facilitating students learning competency.

1.4. HYPOTHESIS OF THE STUDY

- There is no significant difference between different age groups of faculty in their facilitating students learning competency teaching competency.
- There is no significant difference between different educational qualification groups of faculties in their facilitating students learning competency.
- There is no significant difference between marital status of faculty and their facilitating students learning competency.
- There is no significant difference between different department group of faculty and their facilitating students learning competency.
- There is no significant difference between different designations of faculty and their facilitating students learning competency.
- There is no significant difference between different experience group of faculty and their facilitating students learning competency.

1.5. RESEARCH METHODOLOGY

The present study has been conducted on the faculty working in colleges located in Coimbatore District of Tamil Nadu state. A

random sample of 500 faculty has been selected for the present study. The investigator employed normative survey method for this study. The scale consists of 20 statements related to three major components namely supporting students, knowledge, student discipline and learning process. Samples are undertaken 5 point Likert scale analysis. These statements are tested with reliability and validity through two tests namely KMO and Bartlett's Test of Sphercity. Factors analysis was done to categories the statement into verified classification. The data was analysed using descriptive analyses with the help of SPSS package.

Sources: Primary data collected from faculty

Two tests, namely Kaiser-Meyer-Olkin measures of sampling adequacy (KMO) & Bartlett's Test of Sphercity have been applied, to test whether the relationship among the variables has been significant or not as shown in table (a) The result of the test shows that with the significant value of .000 there is significant relationship among the variable chosen. KMO test yields a result of 0.828, which states that factor analysis can be carried out appropriately for these 20 statements which are taken for the study.

**TABLE 1.5.1
 KMO and Bartlett's Test of Sphercity**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.828
Bartlett's Test of Sphercity Chi-Square	Approx. 6035.25
Df	190
Sig	0

ROTATION

Since the idea of factor analysis is to identify the factors that meaningfully summarize the sets of closely related variables, the rotation phase of the factor

analysis attempts to transfer initial matrix into one that is easier to interpret. Varimax rotation method is used to extract meaningful factors. This is given in Table 1.5.2:

**TABLE 1.5.2
 ROTATED COMPONENT MATRIX**

Undertake Planning To Support Student Learning	0.648
Identifies Learning Outcomes That Are Matched To Students' Developmental Needs	0.84
Prepares Purposeful and Sequential Learning Experiences	0.606
Links Learning Outcomes, Learning Experiences And Forms Of Assessment	0.605
Addresses Student Safety Issues And Concerns.	0.644
Apply A Professional Knowledge Base To The Design Of Learning Experiences	0.738
Promote Student Learning	0.587
Employs Effective Questioning Strategies	0.748
Emphasizes Language As A Vehicle For Learning	0.605
Offers Clear Explanations Of Concepts, Relationships, Procedures And Processes	0.606
Helps In Student Collaboration, Problem Solving, Inquiry And Creativity	0.452
Encourages Students To Take Increasing Responsibility	0.61
Cater For Individual Student Learning Styles And Needs	0.59
Manage Teaching And Learning Processes	0.631
Structures Learning Experiences To Ensure Students Have A Sense Of Purpose	0.554
Establishes And Maintains A Classroom Environment Which Has Clear, Consistent Expectations For Standards Of Behaviour	0.817
Organises, Allocates And Manages Time, Materials And Physical Space To Support Learning	0.726
Uses A Range Of Instructional Resources And ICT Within And Across Student Learning Experiences	0.691
Engages The Wider Community As A Resource For Learning	0.756
Utilises The Whole College (Physical And Human) As An Environment To Enhance Student Learning	0.805

Sources: Primary data collected from faculty

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 8 iterations.

We notice that statements “links learning outcomes, learning experiences and forms of assessment, “addresses student safety issues and concerns.”, “employs effective

questioning strategies”, “emphasizes language as a vehicle for learning”, “Helps in student collaboration, problem solving, inquiry and creativity”, “encourages

students to take increasing responsibility” and “organizes, allocates and manages time, materials and physical space to support learning” have loadings of 0.605, 0.644, .748, 0.605, 0.452, 0.610 and 0.726 on factor 1, this suggests that factor 1 is a combination of these variables. At this point, a suitable phrase which captures the essence of the original variables to form the underlying concept, factor 1 could be named as “Compete 1”. In case of the factor 2 columns, the statements “Manage Teaching And Learning Processes”, “Structures Learning Experiences To Ensure Students Have A Sense Of Purpose”, “Uses A Range Of Instructional Resources And ICT Within And Across Student Learning Experiences”, “Engages The Wider Community As A Resource For Learning”, “Utilises The Whole College (Physical And Human) As An Environment To Enhance Student Learning” have high loadings of 0.631, 0.554, 0.691, 0.756 and 0.805 respectively. This indicates that factor 2 is the combination of these three variables and named as Compete 2.

In case of the factor 3 columns, the statements “Prepares Purposeful And Sequential Learning Experiences”, Apply A Professional Knowledge Base To The

Design Of Learning Experiences”, “Offers Clear Explanations Of Concepts, Relationships, Procedures And Processes”, “Cater For Individual Student Learning Styles And Needs”, have high loadings of 0.606, 0.738, 0.606 and 0.59 respectively. This indicates that factor 3 is the combination of these three variables and named as Compete 3.

In the factor 4 columns, the statements “Undertake Planning To Support Student Learning”, “Identifies Learning Outcomes That Are Matched To Students’ Developmental Needs”, “Promote Student Learning”, have high loadings of 0.648, 0.84 and 0.587 respectively. This indicates that factor 4 is the combination of these three variables and named as Compete 4.

In the factor 5 columns, the statements “Establishes and Maintains a Classroom Environment Which Has Clear, Consistent Expectations For Standards Of Behaviour” have high loadings of 0.805 respectively. This indicates that factor 5 is the combination of these three variables and named as Compete 5. Further all the variables which have high loadings are combined with the concerned factor based on their scores as shown in table (f)

TABLE 1.5.3
VARIABLES IDENTIFIED FOR FACTOR SCORES

S.No	Variable	Factor Name
1	Links Learning Outcomes, Learning Experiences And Forms Of Assessment	Supporting students
2	Addresses Student Safety Issues And Concerns.	
3	Employs Effective Questioning Strategies	
4	Emphasizes Language As A Vehicle For Learning	
5	Helps In Student Collaboration, Problem Solving, Inquiry And Creativity	
6	Encourages Students To Take Increasing Responsibility	

7	Organizes, Allocates And Manages Time, Materials And Physical Space To Support Learning	
8	Manage Teaching And Learning Processes	Learning Process
9	Structures Learning Experiences To Ensure Students Have A Sense Of Purpose	
10	Uses A Range Of Instructional Resources And ICT Within And Across Student Learning Experiences	
11	Engages The Wider Community As A Resource For Learning	
12	Utilizes The Whole College (Physical And Human) As An Environment To Enhance Student Learning	
13	Prepares Purposeful and Sequential Learning Experiences	Knowledge
14	Apply A Professional Knowledge Base To The Design Of Learning Experiences	
15	Offers Clear Explanations Of Concepts, Relationships, Procedures And Processes	
16	Cater For Individual Student Learning Styles And Needs	
17	Undertake Planning To Support Student Learning	Student discipline
18	Identifies Learning Outcomes That Are Matched To Students' Developmental Needs	
19	Promote Student Learning	
20	Establishes And Maintains A Classroom Environment Which Has Clear, Consistent Expectations For Standards Of Behaviour	

Sources: Primary data collected from faculty

Thus the 20 variables which were selected for the study, using principal component analysis have been reduced to 5 factor model and each factor have been given a name which is associated with the corresponding variables based on the values obtained from the rotated component matrix table.

1.6. ANALYSIS AND DISCUSSION

ANOVA has been applied to test the significant difference in the respondents' opinion towards facilitating student

learning competency and their demographic variables taken for the study at the 5% level of significance (Age, Educational qualification, Marital status, Department, Designation, Total years of teaching experience, Type of school for most part of school education, UG Education and PG Education)

Table 6.1 (a) indicate the respondents' level of agreeability towards facilitating student learning competency based on demography profile, its mean value and ANOVA results.

TABLE 1.6.1
DEMOGRAPHIC PROFILE RESPONDENTS

	N	Mean	Std. Deviation
Age Group	Less than 30 years	204	84.299
	30 - 40 years	210	86.4048
	41 - 50 years	65	91.5385
	51 years & above	21	80
	Total	500	85.944
Marital Status			
	Married	320	87.4031
	Unmarried	176	83.4261
	Widow/Divorced/Separated	4	80
	Total	500	85.944
Department			
	Computer studies	74	93.1892
	Arts	64	82.7812
	Engineering	74	83.3784
	Management	194	86.0052
	Science	94	84.2872
	Total	500	85.944
Designation			
	Professor/ HOD	115	77.2087
	Associate Professor	69	92.1304
	Assistant Professor	236	88.2585
	Guest Lecturer	80	86.3375
	Total	500	85.944
Experience			
	Less than 5 years	137	84.8102
	5 - 10 years	169	85.6864
	10 - 15 years	119	89.1681
	15 - 20 years	75	83.48
	Total	500	85.944

Sources: Primary data collected from faculty

The highest mean score of 91.53 is found among the respondents who are in the age category of 41 to 50 years. Highest

standard deviation of 9.542 is found among the respondents who are in the age category of 30 to 40 years and lowest standard

deviation of 0.0 is found among the respondents who are in the age category of 51 years and above.

The highest mean score of 86.2 is found among the respondents who are in the category of PG. Highest standard deviation of 10.06 is found among the respondents who are in the category of M.Phil and lowest standard deviation of 8.8 is found among the respondents who are in the category of PG qualification.

The highest mean score of 87.4 is found among the respondents who are in the category of marital status. Highest standard deviation of 9.6 is found among the respondents who are in the category of unmarried and lowest standard deviation of 0.00 is found among the respondents who are in the category of window/Divorced/Separated.

The highest mean score of 93.1 is found among the respondents who are in the category of department. Highest standard deviation of 9.5 is found among the respondents who are in the category of Management department and lowest standard deviation of 5.7 is found among

the respondents who are in the category of computer science department.

The highest mean score of 92.1 is found among the respondents who are in the category of Associate professor. Highest standard deviation of 10.79 is found among the respondents who are in the category of Professor/HOD and lowest standard deviation of 8.5 is found among the respondents who are in the category of Associate professor.

The highest mean score of 85.6 is found among the respondents who are in the category 5-10 years' experience. Highest standard deviation of 10.3 is found among the respondents who are in the category of 5-10 years of experience and lowest standard deviation of 8 is found among the respondents who are in the category of 10-15 years of experience.

Ho: "There is no significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the age groups of the respondents".

TABLE 1.6.2

ANOVA- AGE AND LEVEL OF AGREEABILITY OF THE RESPONDENTS TOWARDS FACILITATING STUDENT LEARNING COMPETENCY

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3372.923	3	1124.308	13.757	.000
Within Groups	40535.509	496	81.725		
Total	43908.432	499			

Sources: Primary data collected from faculty

The ANOVA result table 6.1 shows that at 5% level of significance, the significant value is 0.000. As the significant value is less than 0.05, the null hypothesis is rejected and the result shows that there exists significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the age groups

of the respondents. It is implied that the level of agreeability differs from one age group to another.

Ho: “There is no significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the marital status of the respondents”

TABLE-1.6.3
ANOVA-MARITAL STATUS AND LEVEL OF AGREEABILITY OF THE RESPONDENTS TOWARDS FACILITATING STUDNETS LEARNING COMPETENCY

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1938.395	2	969.198	11.477	.000
Within Groups	41970.037	497	84.447		
Total	43908.432	499			

Sources: Primary data collected from faculty

The ANOVA result table 6.3 shows that at 5% level of significance, the significant value is 0.000. As the significant value is less than 0.05, the null hypothesis is rejected and the result shows that there exists significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the marital

status of the respondents. It is implied that the level of agreeability there is differs from one marital respondent to another.

Ho: “There is no significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the department respondents”

TABLE 1.6.4
ANOVA-DEPARTMENT AND LEVEL OF AGREEABILITY OF THE RESPONDENTS TOWARDS FACILITATING STUDNETS LEARNING COMPETENCY

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	5270.498	4	1317.625	16.880	.000
Within Groups	38637.934	495	78.056		
Total	43908.432	499			

Sources: Primary data collected from faculty

The ANOVA result table 6.4 shows that at the 5% level of significance, the significant value is 0.000. As the significant value is less than 0.05, the null hypothesis is rejected and the result shows that there exists a significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the

qualification of the respondents. It is implied that the level of agreeability there is differs from one department to another.

Ho: "There is no significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the designation of the respondents"

TABLE-1.6.5
ANOVA-DESIGNATION AND LEVEL OF AGREEABILITY OF THE RESPONDENTS TOWARDS FACILITATING STUDNETS LEARNING COMPETENCY

			Sum of Squares	df	
Between Groups	12692.494	3	Mean Square	F	Sig.
Within Groups	31215.938	496	4230.831	67.225	.000
Total	43908.432	499	62.935		

Sources: Primary data collected from faculty

The ANOVA result table 4.10.5 (b) shows that at the 5% level of significance, the significant value is 0.000. As the significant value is less than 0.05, the null hypothesis is rejected and the result shows that there exists a significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the

qualification of the respondents. It is implied that the level of agreeability there is differs from one designation to another.

Ho: "There is no significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the experience group of the respondents"

TABLE-1.6.6
ANOVA-EXPERIENCE AND LEVEL OF AGREEABILITY OF THE RESPONDENTS TOWARDS FACILITATING STUDNETS LEARNING COMPETENCY

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1879.629	3	626.543	7.394	.000
Within Groups	42028.803	496	84.735		
Total	43908.432	499			

Sources: Primary data collected from faculty

The ANOVA result table 4.10.3 (b) shows that at the 5% level of significance, the significant value is 0.000. As the significant value is less than 0.05, the null hypothesis is rejected and the result shows that there exists a significant difference in the mean values of the level of agreeability of the respondents towards facilitating student learning competency among the experience of the respondents. It is implied that the level of agreeability there is differs from one experience to another.

FINDINGS

- The age group of respondent differs from one age group to another age. So it shows faculty' facilitation will changes according to their age.
- The marital status differs from one person to another, so it shows faculty' marital status will affect the facilitation of learning.

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- The designation of faculty's facilitation of learning to the students has differed from one designation to another designation.

- The department of faculty has differed the facilitation of student learning to another department.

- The experience of faculty' facilitation of students learning differs from one experienced person to another.

CONCLUSION:

The work postulated in this paper "The impact of facilitating students learning competency vs demographic Profile of faculty in educational institution" describes that the demographic factors like age, Department, Designation, Marital status and experience have influenced the facilities for students learning competency by faculty members. It is worth mentioning combining faculty' to their demographic profile.