

## An Analysis of Competency of Management Teachers in Using Different Teaching Methods in Affiliated Colleges in Bengaluru

Ms. A. Sahana<sup>1</sup>, Dr. Vijila<sup>2</sup>

<sup>1</sup>(Asst. Prof. Dept of MBA, The Oxford College of Engineering, Bengaluru, India)

<sup>2</sup>(Director, KCT Business School, Coimbatore, India)

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**Abstract:** Teaching methods can be categorised into two broad categories namely teacher – centered approach and a responsive, collaborative learner – centered approach. The purpose of this study was to understand the competence of management teachers in using different teaching methods in affiliated colleges in urban Bengaluru. The objectives of this study was to (i) To analyse the competence level of B-School faculty members in using the different teaching methods; (ii) To compare the teaching methods of male and female faculty members of B-School; (iii) To evaluate the teaching methods of B-School faculty with different age groups; (iv) To assess the teaching methods of B-School faculty having different designation; and (v) To identify the latent factors that comprises the different teaching methods. A structured self administered survey questionnaire was developed for data collection. The sampling frame for the study included permanent faculty members working in University affiliated B-Schools in urban Bangalore. As per the analysis lecture, assignments, seminar and case study methods were the frequently used teaching methods by the faculty methods; group discussion, individual/group project, and role play were frequently but not adequately used teaching methods while simulations, field studies and workshop were the least frequently used teaching methods.

**Keywords:** competency, learner-centric approach, teacher-centric approach, teaching methods.

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### I. Introduction

Management education as a professional program of study should help students to take on managerial responsibilities professionally. The purpose of management education cannot be catered to by classroom teaching only. Teachers need to develop appropriate teaching methodology and teaching material to impart meaningful knowledge to students. Therefore teaching should include assignments, projects, dealing with live problems and feedback to students on their performance in these areas. Teachers have their university degree that indicates the background of the discipline in which they have specialised. They have to shift their focus from primarily subject discipline to application; from knowledge per se to its application (Dayal, 2002).

On the basis of the different aims of higher education identified by Bourner (1996a) (1) Disseminate up-to-date knowledge include: lectures, up-to-date textbooks, handouts, 'guest' lectures, exercises, library resources, use of internet, open learning. (2) Teaching methods that help in developing the capability to use ideas and information are: case studies, practical, projects, demonstrations, group work, simulations, debate and discussions. (3) Developing the student's ability to test ideas and evidence can be achieved by seminars and tutorials, presentations, literature reviewing, exam papers, critical assessment. (4) Research projects, workshops, group working, brainstorming, mind-mapping, problem solving helps in developing the student's ability to generate ideas and evidence, (5) To facilitate the personal development of students role plays, experiential learning, structured experiences in groups, feedback and learning logs can be used, and (6) Projects, mentors, reflective logs and diaries, dissertations help in developing the capacity of students to manage own learning.

### II. Literature Review

According to Grasha (1996) teaching method includes the personal qualities and behaviour on how the teacher conducts their classes. Conti (1982) defined teaching approach consists of unique qualities possessed by a teacher that are reliable in different situations irrespective of the content they teach. Teaching style includes an assortment of behaviours that a teacher regularly uses over time, different situations and content (Elliott, 1996).

Teaching approach can be categorised into two groups namely – (1) teacher – centered approach and (2) a responsive, collaborative learner – centered approach.

According to Huba and Freed (2000), in teacher - centered approach, knowledge transmission is from teacher to students and students are passive receivers. Emphasis is more on acquisition of knowledge. The teacher's main role is as an information giver and evaluator. Learning of the students is assessed by test scores. The goal of teaching is mainly to cover the prescribed curriculum. The delivery of information is mainly through lecture, assignments and examinations.

Learner – centered approach is centered on creating a learning environment that enhances and promotes learning among students (McCombs & Whisler, 1997). The role of a teacher is that of a coach and students' knowledge enhancement is through information gathering, synthesising and integrating to promoting skill development, critical thinking and problem solving. In this process students and teachers learn together. The teacher plays a dual role of a coach and a facilitator with emphasis on using and communicating knowledge for tackling emerging issues and problems in real life situations (Huba and Freed 2000).

In learner centered teaching approach, the style of instruction is more responsive, collaborative and democratic in nature for the teacher and the learner as they can decide on when, what and how the learning can occur (Dupin – Bryant, 2004).

According to Bourner (1997) selecting a teaching method in higher method is useful when: 1) teachers are designing courses; 2) individual lecturers' are planning how they want to deliver a particular unit of a course and 3) lecturers are deciding what to do in a particular teaching session.

The dynamism of the business world requires faculty members in the field of Business Management to develop new teaching methodologies. Higher education faculty strives to become more effective teachers so that students can learn better, and many explore methods to improve their teaching practice. Depending on the nature of subject, number of students, and the facilities available, there are different methods teachers are using in the classroom. Below are given various methods and certain tips and techniques for improving these methods. (Sajjad, S.1997)

A lecture is a talk or verbal presentation given by a lecturer, trainer or speaker to an audience. With all the advancement of training systems and computer technology, lecture method is still a backbone widely used in teaching and training at higher level of education. This method is economical, can be used for a large number of students, material can be covered in a structured manner and the teacher has a great control of time and material.

A study conducted by Benson, L., Schroeder, P., Lantz, C., and Bird, M (n.d.) provides evidence that students may place greater emphasis on lecture material than on textbooks. Lecturing is not simply a matter of standing in front of a class and reciting what you know. The classroom lecture is a special form of communication in which voice, gesture, movement, facial expression, and eye contact can either complement or detract from the content. (Davis.1993). McCarthy, P.(1992) in article "Common Teaching Methods" stated strengths of lecture method that it presents factual material in direct, logical manner, contains experience which inspires, stimulates thinking to open discussion, and useful for large groups.

Sullivan & McIntosh (1996) said that with planning and effective presentation techniques, the lecture can be a highly effective and interactive method for transferring knowledge to students. Lecture gives the pupils training in listening and taking rapid notes. (Kochkar. 2000, p.345).

Discussion is a free verbal exchange of ideas between group members or teacher and students. For effective discussion the students should have prior knowledge and information about the topic to be discussed. McCarthy, P. (1992) stated strengths of class discussion as; pools ideas and experiences from group, and allows everyone to participate in an active process. Kochkar (2000, p.347) stated that; a problem, an issue, a situation in which there is a difference of opinion, is suitable for discussion method of teaching.

Role play occurs when participants take on differentiated roles in a simulation. These may be highly prescribed, including biographical details, and even personality, attitudes and beliefs; or loosely indicated by an outline of the function or task. These techniques have already demonstrated their applicability to a wide range of learners, subjects and levels. (Singh, and Sudarshan, 2005).

Primarily developed in business and law contexts, case method teaching can be productively used in liberal arts, engineering, and education. This method is basically used to develop critical thinking and problem-solving skills, as well as to present students with real-life situations. The students are presented with a record set of circumstances based on actual event or an imaginary situation and they are asked: 1) to diagnose particular problem(s) only; 2) to diagnose problem(s) & provide solution(s); and 3) to give reasons & implications of action after providing both problem & solution.

It is a time consuming method and sometimes the case does not actually provide real experience. It could be in-conclusive, and insufficient information can lead to inappropriate results. At the end, the students want to know the right answer by the teacher. The role of the teacher in conducting the case study should be to: (i) read the case and determine the key problems faced by the decision maker; (ii) determine the data required to analyze the problems and for a synthesis into solutions ; (iii) to develop, analyze, and compare alternative solutions, and (iv) recommend a course of action.

Brainstorming is a loosely structured form of discussion for generating ideas without participants embroiled in unproductive analysis. It is a very useful technique for problem solving, decision making, creative thinking and team building. It develops listening skills.

Written assignments help in organization of knowledge, assimilation of facts and better preparation of examinations. It emphasizes on individual pupil work and the method that helps both teaching and learning processes (Kochkar, 2000).

### III. Research Questions

The following research questions were framed on the basis of the literature review:

- What are the teaching methods commonly used by B-School faculty members?
- What is the influence of demographic factors on the teaching methods of B-School faculty members?
- What are the latent factors that help in categorising the different teaching methods?

### IV. Objectives Of The Study

- To analyse the competence level of B-School faculty members in using the different teaching methods
- To compare the teaching methods of male and female faculty members of B-School.
- To evaluate the teaching methods of B-School faculty with different age groups.
- To assess the teaching methods of B-School faculty having different designation.
- To identify the latent factors that comprises the different teaching methods.
- To distinguish the instructor centric and learner centric approaches of teachers.

### V. Hypotheses Of The Study

1. There is no significant difference between the teaching methods used by male and female B-School members
2. There is no significant association between age and the teaching methods used by B-school faculty members.
3. There is no significant relationship between designation and the teaching methods used by B-school faculty members.

### VI. Methodology

A structured self administered survey questionnaire was developed for data collection. The items in the questionnaire were rated on a five point Likert scale. In the process of preparing the tool, each attribute was converted into a scale. Each item was to be rated on a five point Likert scale 1, 2, 3, 4, 5 corresponding to never, rarely, occasionally, frequently and always.

#### 6.1 Participants

The sampling frame for the study included permanent faculty members working in University affiliated B-Schools in urban Bangalore. The respondents for the study consist of assistant professors, associate professors, and professors working in University affiliated B-Schools in urban Bangalore. In this study simple random sampling without replacement using Tippet's random number table was used for sample selection. The content validity of the tool was ensured by experts, head of the department and faculty members of B-Schools.

The reliability statistics provides the actual value for Cronbach's alpha for 10 items devised in the questionnaire. The Cronbach's alpha of 0.742 indicated an overall reliability of internal consistency of the research instrument (Table 1).

**Table 1: Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.742	.724	10

#### 6.2 Demographic profile of the respondents

The demographic profile (Table 2) of the respondents indicate that 60.8% were male and 39.2% were female respondents; 44.3% were in the 25 – 35 yrs age group, 42.6% of the respondents were of the 36 – 45 yrs age group, 11.6 % were of the 46 – 55 yrs age group and 1.5% belonged to 56 – 65 yrs age group. 60% of the respondents were assistant professors, 20.6% were associate professors and 19.4% were professors.

**Table 2: Demographic profile of the respondents**

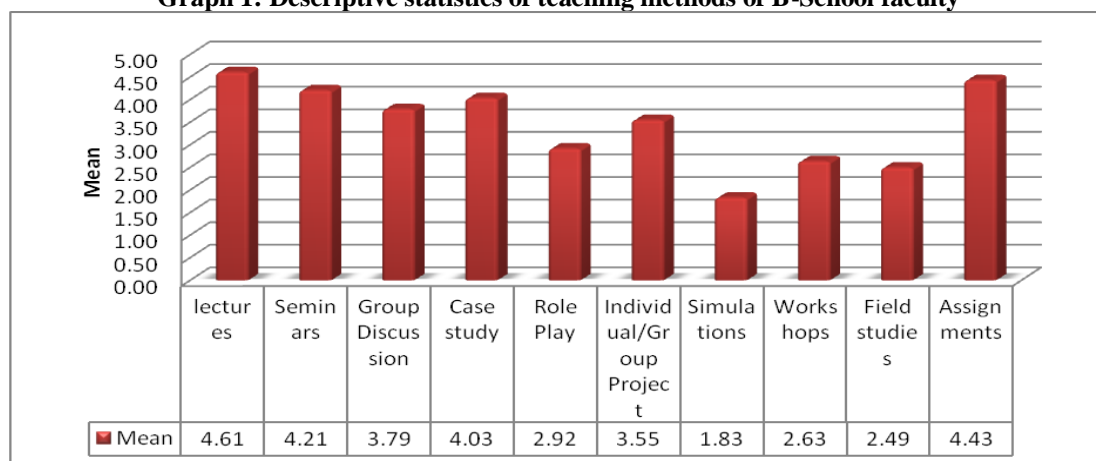
Sl. No	Population characteristics	No. of respondents (%)	Total (%)
1	Female	162 (39.2)	413 (100)
	Male	251 (60.8)	
2	25 - 35 yrs	183 (44.3)	413 (100)
	36 – 45 yrs	176(42.6)	
	46 – 55 yrs	48 (11.6)	
	56 – 65 yrs	6 (1.5)	
3	Asst. Prof	248 (60)	413 (100)
	Assoc. Prof	85 (20.6)	
	Professor	80 (19.4)	

## VII. Results

The data collected was tested for normality with Shapiro – Wilk Test. It was observed that for both Kolmogorov-Smirnov and Shapiro – Wilk Test, the p- values > 0.05, thus it implies that the data are from normally distributed population. The data was analysed using the following statistical tools: standard deviation, weighted mean, ranking, Chi-square test, one way ANOVA, factor analysis and Discriminant analysis.

### 7.1 Descriptive statistics of teaching Methods used by B-School faculty

Graph 1: Descriptive statistics of teaching methods of B-School faculty



The descriptive analysis (Graph 1) indicate that among the teaching methods lecture ranked 1<sup>st</sup> with the highest mean of 4.61, followed by assignments at 2<sup>nd</sup> rank with mean of 4.43. Seminar method is ranked 3<sup>rd</sup> with mean of 4.21, case study method is ranked 4<sup>th</sup> with mean of 4.03 and group discussion is ranked 5<sup>th</sup> with mean of 3.79. Individual/group projects method is ranked 6<sup>th</sup> with mean of 3.55, role play is ranked 7<sup>th</sup> with mean of 2.92, workshops is ranked 8<sup>th</sup> with mean of 2.63. Field studies is ranked 9<sup>th</sup> with mean of 2.49 and simulation is ranked last with mean of 1.83.

#### 1. To analyse the competence level of B-School faculty members in using the different teaching methods

The data was interpreted on the basis of percentage score obtained by the respondents. Score range and level of cognitive competency was developed and followed as illustrated in table 3 and table 4 displays the analysis of cognitive competency.

Table 3: Percentage score and level of competency scale

Percentage of score	Remark	Level of competency
Less than 19	Poor	Low level of competency
20 – 39	Satisfactory	
40 -59	Average	Average level of competency
60 -79	Good	
80 & above	Excellent	High level of competency

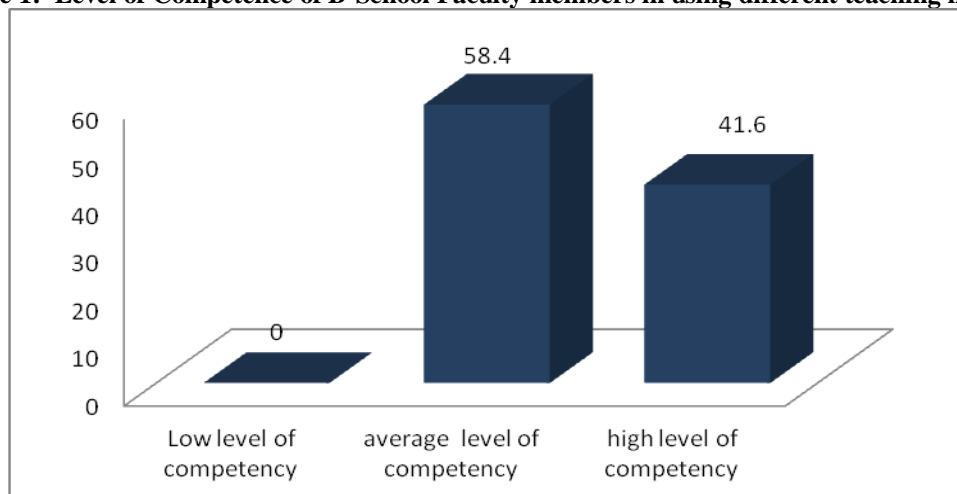
By observing the data (Table 4) it was analysed that 61% of the male and 53% of the female faculty members possessed average level of competence in using different teaching methods. In the age groups 56 – 65; 46 – 55; 36 – 45 and 25 – 35 years, respondents possessed 100% 74%, 57% and 52% average level of competence respectively in using different teaching methods. With respect to designation 69% of associate professors, 63% of professors and 52% of the assistant professors have average level of competence in using different teaching methods.

Table 4: Analysis of competence level of B-School faculty members in using different teaching methods

Variable	Category	N	Competency in using teaching methods %		
			Low competency level	Average competency level	High competency level
Gender	Female	162	-	56.2	43.8
	Male	251	-	59.8	40.2
Age	25 – 35 yrs	183	-	51.9	48.1
	36 – 45 yrs	176	-	59.1	40.9
	46 – 55 yrs	48	-	75	25
	56 – 65 yrs	6	-	100	-
Designation	Asst. Prof	248	-	53.2	46.8

	Assoc. Prof	85	-	69.4	30.6
	Professor	80	-	62.5	37.5

Figure 1: Level of Competence of B-School Faculty members in using different teaching methods



**2. To compare the teaching methods of male and female faculty members of B-School.**

**Hypothesis 1: H<sub>0</sub>** - There is no significant difference in the teaching methods of male and female B-School members.

Chi-Square statistics (Table 5) indicates that  $\chi^2$  statistic for 1 degree of freedom is 0.522. It also indicates that the significant value (0.470) is more than the threshold value of 0.05. This indicated that H<sub>0</sub> can be accepted (i.e.) there is no significant difference in the teaching methods used by male and female B-School faculty members.

**Table 5: Chi-Square statistics output**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.522 <sup>a</sup>	1	.470		
Continuity Correction <sup>b</sup>	.384	1	.535		
Likelihood Ratio	.521	1	.470		
Fisher's Exact Test				.476	.267
Linear-by-Linear Association	.520	1	.471		
N of Valid Cases	413				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 67.47.					
b. Computed only for a 2x2 table					

**3. To evaluate the teaching methods of B-School faculty with different age groups.**

**Hypothesis 2: H<sub>0</sub>** - There is no significant association between age and the teaching methods used by B-school faculty members.

ANOVA output (Table 6) lists the sum of squares of the difference means of different age groups and their mean square error. The between group variation (3.140) is due to the interaction in samples between groups and the within group variation is due to the difference within individual samples. The F statistic is 4.402 and the significant value of 0.005 is less than the threshold value of 0.05 indicating that the null hypothesis can be rejected and concluded that there is a significant difference in the teaching methods used by B-school faculty members with respect to their age.

**Table 6: ANOVA Output**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.140	3	1.047	4.402	.005
Within Groups	97.229	409	.238		
Total	100.368	412			

**4. To assess the teaching methods of B-School faculty having different designation.**

**Hypothesis 3: H<sub>0</sub>** - There is no significant relationship between designation and the teaching methods used by B-school faculty members.

From the ANOVA table (Table 7) it can be observed that the F-value is 3.805 and the corresponding p-value (0.023) is less than the threshold value of 0.05. Therefore H<sub>0</sub> can be rejected (There is no significant

relationship between designation and the teaching methods used by B-school faculty members) and concluded that there is significant difference in the teaching methods of B-School faculty members with respect to their age.

**Table 7: ANOVA Output**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.829	2	.915	3.805	.023
Within Groups	98.539	410	.240		
Total	100.368	412			

**5. To identify the latent factors that comprises the different teaching methods.**

Factor analysis was used to identify the factors that comprise the teachers' use of different teaching methods.

**Table 8: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.626
Approx. Chi-Square	1113.008
Bartlett's Test of Sphericity	df
	45
	Sig.
	.000

KMO test (Table 8) was conducted to establish the reliability and validity was 0.626 and the Bartlett's test of Sphericity significant value of 0.000 indicated that the data can be subjected to factor analysis. The principal component matrix was used to analyse the result of factor analysis. Eigen value greater than 1, and varimax rotation method was used for data extraction. About 68.031% of the variables can be explained with these four factors (Table 9).

**Table 9: Total variance explained**

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.142	31.425	31.425	2.039	20.394	20.394
2	1.435	14.350	45.774	1.768	17.678	38.072
3	1.224	12.244	58.018	1.764	17.639	55.711
4	1.001	10.013	68.031	1.232	12.320	68.031

**Table 10: Rotated Component Matrix<sup>a</sup>**

	Component			
	1	2	3	4
Field studies	.843			
Workshops	.649			
Individual/Group Project	.595			
Simulations	.570			
Seminars		.856		
Case study		.852		
Role Play			.828	
Group Discussion			.778	
lectures				.789
Assignments				.734
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 5 iterations.				

The factor analysis identified four factors (Table 10): Factor 1: Experiential and independent learning: comprises of field studies (0.843), workshops (0.649), individual /group project (0.595) and simulations (0.570). Factor 2: Indirect instruction: consisted of Seminars (0.856) and case studies (0.852). Factor 3: Interactive instructions: includes role play (0.828) and group discussions (0.778). Factor 4: Direct instruction includes lecture (0.789) and assignments (0.734).

**VIII. Discussion**

As per the descriptive analysis lecture, assignments, seminar and case study methods were the frequently used teaching methods by the faculty methods with the mean ranging from 4.61 to 4.21; group discussion, individual/group project, and role play (mean ranging from 4.03 to 2.9) were frequently but not adequately used teaching methods while simulations, field studies and workshop (mean from 1.82 to 2.63) were the least frequently used teaching methods. The analysis also indicated that 58.4% of the respondents possessed average level of competency and 41.6% of the respondents have high level of competency in using different teaching methods.

The result of Chi-square analysis indicated that there is no significant difference in the teaching methods used by male and female B-School faculty members (Sig. 0.470 > 0.05). The Analysis of Variance concluded that there is a significant difference in the teaching methods used by B-school faculty members with respect to their age (Sig. 0.005 < 0.05). The Post Hoc test with Tukey HSD between the age groups 25 – 35 & 46 – 55 years (Sig. 0.019 < 0.05) concluded that there is statistically significant difference between the age group. The research findings also indicated that the results of variance analysis indicated a significant relationship between designation and the teaching methods used by B-school faculty members (Sig. 0.023 < 0.05) and Post Hoc test indicated that there is a significant difference in the teaching methods of Asst. professor & Assoc. professor (Sig. 0.024 < 0.05).

The variables were subjected to factor analysis to extract the underlying factors. As a statistical technique to extract common factor variance from a set of observations it tells us which variables have a high degree of inter-correlation. The four factors extracted by factor analysis indicated that direct instruction includes instructing and imparting knowledge and skills in the form of lecture, presentations and assignments. In some situations instead of teaching directly, the teacher sets up strategies and allows the students to make meaning for themselves as in seminars and case study. This approach is called indirect instruction. In the third approach known as interactive instruction the teacher plays the role of an organiser and facilitator and the students interact with each other with the help of information and material as in role plays and group discussions. Field studies, workshops, individual/group project and simulations are methods where students are actively involved and learn from experience and from content outside the control of teacher.

### IX. Interpretation

As a data reduction method factor analysis reduce the data into four manageable factors thereby identifying the underlying structure of the data. This result was further subjected to Discriminant Analysis in order to create a linear combination of variables that discriminate between variables on the basis of attributes in the best possible manner. The group statistics (Table 11) indicates the distribution of observations into different groups viz. ‘Instructor Centric Approach’ and ‘Learner Centric Approach’ in using different teaching approaches. Tests of equality of Group Means (Table 12) provides strong statistical evidence of significant difference between means of ‘Instructor Centric Approach’ and ‘Learner Centric Approach’.

**Table 11: Group Statistics**

Teaching methods		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
Instructor Centric Approach	Direct Instruction	8.7676	.84407	241	241.000
	Interactive Instructions	5.9253	1.25939	241	241.000
	Indirect Instruction	7.6763	.98479	241	241.000
	Experiential & Independent Learning	8.5228	2.00013	241	241.000
Learner Centric Approach	Direct Instruction	9.4186	.56122	172	172.000
	Interactive Instructions	7.7907	1.40689	172	172.000
	Indirect Instruction	9.0233	.94870	172	172.000
	Experiential & Independent Learning	13.2791	3.05563	172	172.000
Total	Direct Instruction	9.0387	.80559	413	413.000
	Interactive Instructions	6.7022	1.61032	413	413.000
	Indirect Instruction	8.2373	1.17493	413	413.000
	Experiential & Independent Learning	10.5036	3.42295	413	413.000

**Table 12: Tests of Equality of Group Means**

Teaching methods	Wilks' Lambda	F	df1	df2	Sig.
Direct Instruction	.841	77.745	1	411	.000
Interactive Instructions	.673	199.606	1	411	.000
Indirect Instruction	.680	193.545	1	411	.000
Experiential & Independent Learning	.530	364.990	1	411	.000

The eigenvalue for the estimated Discriminant function is 2.225 (Table 13) with 100% of the variance explained. The Canonical Correlation depicts a correlation between the Discriminant score and their corresponding group membership, was found to be 0.831. The square of the Canonical Correlation is  $(0.831)^2 = 0.6905$ , which means that 69.05 percent of the variance in the Discriminant model between a instructor centric and learner centric teaching approaches is due to the changes in the four predictor variables namely experiential and independent learning, indirect instruction, interactive instructions and direct instruction.

**Table 13: Eigenvalues**

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	2.225 <sup>a</sup>	100.0	100.0	.831

a. First 1 canonical discriminant functions were used in the analysis.

To test the significance of Discriminant function model Wilks' Lambda was computed (Table 14). The Wilks' Lambda takes a value between 0 and 1, therefore lower the value of Wilks' Lambda higher is the significant of the Discriminant function. There is a strong evidence of significant differentiation between the groups since the significant value is less than 0.05, it is concluded that there is a significant Discriminant power in the variables in the model. The Wilks' Lambda of 0.310 indicates the proportion of the total variability not explained.

**Table 14: Wilks' Lambda**

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.310	478.897	4	.000

The standardised canonical Discriminant function coefficient is used to calculate the Discriminant score. Based on the coefficient (Table 15) the relative important predictor variables can be ranked as follows: rank 1 – Experiential & Independent learning; rank 2 – indirect instruction; rank 3 – interactive interaction and rank 4 – direct instruction.

**Table 15: Standardized Canonical Discriminant Function Coefficients**

Teaching methods	Function
	1
Direct Instruction	.331
Interactive Interaction	.534
Indirect Instruction	.548
Experiential Independent Learning	.637

The mathematical form of the Discriminant analysis model is

$$Z = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4$$

Where

Z is the dependent variable

a is constant

b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub> & b<sub>4</sub> are coefficient of independent variables

x<sub>1</sub>, x<sub>2</sub>, x<sub>3</sub> & x<sub>4</sub> are the predictor or independent variable

The unstandardised canonical coefficient indicates the unstandardised scores of the independent variable. Therefore it was used to construct the Discriminant function, wherein

$$Z = -14.077 + 0.447 (\text{direct instruction}) + 0.404 (\text{interactive instruction}) + 0.564 (\text{indirect instruction}) + 0.255 (\text{experiential \& independent learning}).$$

**Table 16: Classification Results<sup>a</sup>**

Teaching methods		Predicted Group Membership		Total	
		Instructor Centric Approach	Learner Centric Approach		
Original	Count	Instructor Centric Approach	239	2	241
		Learner Centric Approach	10	162	172
	%	Instructor Centric Approach	99.2	.8	100.0
		Learner Centric Approach	5.8	94.2	100.0

a. 97.1% of original grouped cases correctly classified.

The analysis of the classification results (Table 16) indicates the overall results of the Discriminant model, where

Overall hit ratio is 97.1%; Correctly classified Instructor Centric Approach 99.2% and Correctly classified Learner Centric Approach 94.2%

## X. Conclusion

Teaching in higher education has to foster active learning and acquisition of skills and attitudes along with new knowledge to mould students according to the dynamic changes in the contemporary labour market. In view of this it becomes necessary to classify between instructor centric and learner centric approach and discriminate transmissive and transformative approach of the teachers in developing the competencies of the students.



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