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Innovative instructional strategies: A business and management perspective

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This empirical study investigated the use of innovative instructional strategies by the business schools in the present era of globalization where information and knowledge have become the main sources of competitive advantage for the business world. The challenge of the management schools is to develop more permanent skills and knowledge through implementing innovative instructional strategies to prepare managers for action. To change classical perception of education, and minimize the methods dating back to middle age, new techniques must be developed. The purpose of this study was to find out to what extent the business schools use innovative instructional strategies. The scale used was examined in accordance with validity and reliability features. Data about construct validity was gathered through factor analysis, and depending on component factorial analysis, three sub-dimensions (problem based learning, case study method and common teaching method) were reached. The sample consisted of 256 teachers of the business schools. The total coefficient of reliability was calculated as 0.732. The results revealed that gender, education, experience of the faculty and socio-economic status of the business schools had a significant effect on the choice of the instructional strategy. These results can be used to develop new curricula for the business schools and the feedback about the frequency of these strategies can be used in developing effective training programs for the faculty and the business world.

Key words: Problem-based learning, case-study method, common strategies, business schools.

INTRODUCTION

This empirical study investigated the use of innovative instructional strategies (problem based learning, case study and common teaching methods) by the faculty of the business schools in order to meet the growing demand of the business world of producing knowledgeable and skilled managers. As management education exists within broader societal context, and graduates go on work for a broad range of private and public sector organizations, so business schools must respond to changing societal demands in order to remain relevant and competitive.

The sources of these changes include growth and integration of a global economy, greater openness of political system and development in information technology. These change forces have brought funda-mental changes in the way organizations are managed. Transacting business across national boundaries

has become a fact of life, organizations are adopting more diverse organizational structures, empha- sis on entrepreneurship and technology has become an enabling force. Emphasis on linking corporate goals with human resource and knowledge has come to be viewed as a key currency of organizations. Moreover, the stress is on how many capacities for innovation an organization have to be competitive in the market.

So to respond to these changes, the management curriculum must incorporate problem –solving skills and attitudes, global perspectives, leadership competencies, ethical judgment and decision-making, adaptability, self-reflection and personal development skills. With these we can prepare graduates who will have sufficient knowledge, thinking, attitude, values, skills and the ability to act upon them. These are all included in the 21st century management of organizations, as these goals are

rapidly converging into a set of global expectations for graduate's management education. The present paper therefore, focuses at some common and innovative instructional strategies and tries to find out the extent to which management teachers use them in business schools. Subsequently, some explanations will be made on these instructional strategies.

LITERATURE REVIEW

Here, this study discusses the instructional strategies that were adopted. These strategies are as follows.

Problem-based learning

As Charles (1954), a professor in Harvard Business School sixty years ago stated that "education in the professions should prepare students for action" as to address this issue, many steps had been taken in the education field, from research conducted in 1980s problem base learning (PBL) was introduced in some countries of Australia, north America and Asia and found PBL a useful approach to prepare managers for action. Due to globalization, organizations became more diverse and adopting new values and new approaches to conduct their day to day operations, this changing context of organization created new goals for higher education programs to address these issues, and if educational institution wants to be in a competitive stage and relevance, they must respond to these changes. As to respond to these changes, approaches like PBL must be introduced (Newman, 2001).

The problem based learning is always designed by keeping few things in mind. Whenever you are teaching problem based learning you have created such environment in your business school which is very much close to the corporate culture. Student is given different kind of goals identical to the goals given to the employees in the organization. Student must be guided by their instructor about the kind of thing and ways required to achieve your goal. Students must be informed by the instructor on how to use different things and processes to reach to your goal. By doing all these aforementioned things, it is easy for instructor to measure the potential of students (Colliver, 2000a).

It is a radical departure from the traditional way of preparing managers. PBL is more creative and realistic method. Students become capable to facilitate, collaborate, make decisions and implement solution. It equips the students with personal and team learning skills (Norman and Schmidt, 2000). Therefore, problem based learning is used as the innovative instructional strategy for the present study. Another widely used strategy in business schools is the case study method.

Case study method

A case is sets forth in a factual manner, the events and organizational circumstances are surrounding a particular managerial situation. It puts reader at the scene of action and familiarizes them with all the relevant circumstances. The essence of a student's role in case analysis is to diagnose and size up the situation described in the case and then to recommend appropriate action steps. The fact are that mere act of listening to the lectures and sound advice about managing does little for anyone's management skills and that the accumulated managerial wisdom cannot effectively be passed on by lecture and assigned readings alone.

If anything had been learned about the practice of management, it is that a storehouse of ready-made textbook answers does not exist. Each managerial situation has unique aspects, requiring its own diagnosis, judgment and tailor-made actions. Cases provide would-be managers with a valuable way to practice wrestling with the actual problems of actual managers in actual companies.

To use this instructional strategy, an instructor has to skim the case quickly to get an overview of the situation it presents. Then read the case thoroughly to digest the facts and circumstances. After carefully reviewing the information presented in the exhibits, the instructor should do the analysis of the case with reasons and evidence; check out the conflicting opinions and make some judgments about the validity of all the data and information provided; develop an appropriate action plan and set of recommendations.

The students should be involved in this entire process through interactive discussions and presentations. The case study strategy is also innovative as it prepares managers for action and hence, it has been considered as the second innovative strategy for the present research. The use of this strategy by the business schools instructors would be explored in this research. Subsequently, this study explains some common instructional strategies used in the business schools.

Common strategies

These are the commonly practiced strategies in most of the business schools. This may include presentations, discovery and inquiry teaching methods. In presentation method, the teacher use lecture method to share the content and students acts as a passive listener or receiver, so it usually results in one-way communication (Ausebel, 1967).

According to Jerome (1966), teaching should not be considered as product-focused process rather it should be discovering the information internalized by the students. In this strategy the teacher presents samples and examples, students presents more relevant or

irrelevant samples, then the student discovers certain points, defines and explains relations. The teacher is a leader and guide in this method. Yet another method is called inquiry method in which student can conduct research on a topic, can change and upgrade the existing research (Suchman, 1962).

These strategies have also been explored in the present study to find out how they are used in the business schools to make students innovative and give creative solutions to the business industry. Subsequently, this study deals with the research methodology that was adopted.

RESEARCH METHODOLOGY

Information about the model, population, and sample of this research is presented in this part. As this research methodology was descriptive, in which an actual situation is described, a survey was used to collect data. It aims to describe a present or past situation as it is or it was (Newman, 2006). Descriptive research extends in accordance with the content of the study; therefore, it was decided to be used for this study.

Population and sample

This study was carried out in the second half of 2010 to 2011 academic years, and the population was faculty of the business schools. The sample size was 256 teachers.

Data collection method

As the goal of this study was to find out what kind of strategies teachers apply, observation, interview, or a data collection instrument could be employed. The former two, observation and interview were not preferred as the number of teachers was high, and it required a lot of time, moreover, the results would be subjective. Therefore, a questionnaire was used as it decreased the aforementioned risks; moreover, the results handled were more objective; the results can be supported with statistical data; it was easy to employ, and practical and economical too (Newman, 2006).

Since there was not any appropriate instrument in line with the content of this study, it was required to develop first an instrument and then data was gathered. The information about survey instrument is provided under the title of developing survey instrument.

Developing survey instrument

To establish a comprehensive database about the strategies, literature survey was carried out, and related resources were searched. After the literature survey, scale's items were decided depending on that each item should focus on the strategies' principles, benefits and limitations. The items were analyzed and evaluated by the specialists and it was formed according to five-level Likert Scale with 42 items. Attendees were asked not to write name or number on it, but only in the first part, 1- Gender, 2- Term of service, 3- Educational status were asked to get information about the demographic variables for the present study. Figuring out the highest point of an attendee in the scale, a trial was made to guess which strategy the respondent prefers. The items were organized as "4- strongly agree", "3- agree", "0- Neither agree nor

disagree", "2- disagree", "1- strongly disagrees". Taking the literature survey into account, "Neither agree nor disagree" was graded as "0" as it doesn't have an effect on the research (Saunders et al., 2003).

The pilot test was run on 115 teachers. After carrying out the scale, it was observed that some items were checked "Agree" by most teachers, and some were checked "Strongly disagree". When most of the teachers checked the same grade for an item in the scale, it was taken out because that item is not anymore distinguishable for the purpose of the scale (Saunders et al., 2003).

After sampling, item analysis was done with each of them according to their distinguishing features. This feature was calculated for each item, and when the value was negative and lower than 0.20, that item was eliminated from the scale. Depending on these criteria and specialists' opinions, 9 item were eliminated, and scale had 33 items. As the coefficient of reliability, Cronbach's Alpha 0.691 was reached, and after the final and main application of the scale, the coefficient of reliability was found as Cronbach's Alpha was increased to 0.732, meaning that reliability of the scale got higher. To measure the reliability of cognitive features, Cronbach's Alpha is used, and it is suggested to be over 0.70 (Newman, 2006). Therefore, coefficient of reliability of the scale was accepted as adequate.

After eliminating the items that are not distinguishing and adequate, the scale had 33 items, 11 (2, 3, 4, 6, 11, 12, 19, 20, 30, 31, 32) of which measure problem based learning method; 11 (1, 7, 9, 10, 14, 15, 16, 23, 25, 27, 33) of which were about case study method; and 11 (5, 8, 11, 17, 18, 21, 22, 24, 26, 28, 29) of which were about other common methods. This scale was carried out amongst randomly chosen 256 teachers of the business schools. After the implementation of the scale, the grades assigned by the teachers were added up, and using SPSS14.0 statistical program, reliability of all answers was analyzed. As the scale was five-level Likert Scale measuring affective features, Cronbach's Alpha was calculated as coefficient of reliability. Consulting the specialists' opinions, the value was concluded to be useful.

KMO is related with the correlation between sampling adequacy and scale items. The value is expected to be above 0.60 (Newman, 2006). The value in the Table 1 is 0.689 which is acceptable. If KMO is higher, Barlett test gets statistically more significant. If both tests values are high, this indicates that the scale has a strong correlation between and its practicality and its test items.

While doing factor analysis, 33 items were grouped into 11 factors, and 11-factor test can explain only 67.294% of the total variance. However, as the scale was designed as 3-factor, problem-based learning, case-study, and common strategies, the values indicated subsequently were achieved after the analysis done according to these 3 factors. According to the values, this 3-factor scale explained 33.328% of the total variance (Tables 2, 3 and 4).

RESULTS

Analysis of data

In this part, the frequency and percentage values obtained from the instructional strategies scale, findings and comments of Chi-square test for independence were covered. According to the results obtained, teachers prefer firstly case-study teaching method, then common teaching method, and finally problem-based learning method.

As seen in this Table 5, 31 teachers, 15 of which were male, and 16 of which were female, prefer problem-based method; 69 male and 70 female teachers prefer

Table 1. Development of instructional strategies scale KMO and Bartlett test.

Kaiser-Meyer-Olkin measure of sampling adequacy		0.689
Bartlett's test		1311,642
Ki-kare	Df	528
	Sig.	0.000

Table 2. Factor analysis results of development of instructional strategies scale.

Component	Initial Eigen values			Extraction sums of squared loadings		
	Total	% of Variance	Cumulative (%)	Total	% of Variance	Cumulative (%)
1	6.034	18.284	18.284	6.034	18.284	18.284
2	2.793	8.465	26.749	2.793	8.465	26.749
3	2.042	6.188	32.937	2.042	6.188	32.937
4	1.976	5.987	38.924	1.976	5.987	38.924
5	1.618	4.902	43.827	1.618	4.902	43.827
6	1.562	4.734	48.561	1.562	4.734	48.561
7	1.426	4.321	52.882	1.426	4.321	52.882
8	1.344	4.072	56.953	1.344	4.072	56.953
9	1.189	3.603	60.557	1.189	3.603	60.557
10	1.176	3.562	64.119	1.176	3.562	64.119
11	1.048	3.176	67.294	1.048	3.176	67.294
12	0.940	2.847	70.142			

Table 3. Factor analysis results of development of instructional strategies scale (3-Factor).

Component	Initial Eigenvalues			Extraction sums of squared loadings		
	Total	% of Variance	Cumulative (%)	Total	% of Variance	Cumulative (%)
1	6.109	18.513	18.513	6.109	18.513	18.513
2	2.821	8.549	27.061	2.821	8.549	27.061
3	2.068	6.266	33.328	2.068	6.266	33.328
4	1.978	5.994	39.322			

case-study teaching method; 86 teachers, 28 of which were male, and 58 of which were female, prefer common teaching method.

According to these figures, it can be stated that male teachers mostly prefer problem-based methods, while female teachers mostly intend to use case-study teaching Method. However, it was also obtained from the survey that male teachers intend to use common teaching method more than the other group. In order to explain these results more clearly, Chi-square test was employed, and the results were provided in Table 6.

It was observed that expressiveness value was p = 0.000, which meets the requirement for $p < 0.05$, and means that there is a meaningful correlation between finding instructional strategies and gender. Taking this

value's closeness to 0.05 into consideration, it can be stated that instructional strategies mostly preferred are partly under the influence of gender variables.

When the participant teachers' socio-economical status and instructional strategies were examined, those working in schools having low socio-economical status often prefer problem-based learning as their instructional strategy. On the other hand, those working in schools having high socio-economical status mostly prefer case-study teaching method first and common teaching method second, and they prefer presentation in the third place as their instructional strategy.

The point that must be mentioned here is that there is difference in finding instructional strategies between teachers working with parents who have low income and

Table 4. Frequency and percentage (%) values of survey sampling according to variables.

Variable		Frequency	Percentage (%)
Socio-economical situation	Medium	86	33.59
	High	109	42.57
	Total	256	100
	1–5	68	26.56
	6–10	54	21.09
	11–15	50	19.53
Experience	16–20	48	18.75
	21-25	16	6.25
	26+	20	7.81
	Total	256	100.0
	Male	112	43.75
Gender	Female	144	56.25
	Total	256	100.0
	MBA	160	62.5
	MS	64	25
Educational status	MA	11	4.29
	PhD	2	0.78
	Other	19	7.42
	Total	256	100.0

Table 5. Correlation between instructional strategies and gender.

Variable			Gender		Total
			Male	Female	
S T R A T E G Y	Problem-based method	Count	15	16	
		Expected count	13.6	17.4	31
		% within strategy	48.4%	51.6%	31.0
		% within gender	13.4%	11.1%	100.0%
	Case-study teaching method	Count	69	70	12.1%
		Expected count	60.8	78,2	139
		% within strategy	49.6%	50.4%	139.0
		% within gender	61.6%	48,6%	100.0%
	Common teaching method	Count	28	58	54.3%
		Expected count	37.6	48,4	86
		% within strategy	32.6%	67.4%	86.0
		% within gender	25.0%	40.3%	100.0%
Total		Count	112	144	33,6%
		Expected count	112.0	144.0	256
		% within strategy	43.8%	56.3%	256.0
		% within gender	100.0%	100.0%	100.0%

Table 6. Instructional strategies and gender variable Chi-square test.

Variable	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-square	6.608(a)	2	0.037
Possibility rate	6.717	2	0.035
Linear-by-linear association	4.709	1	0.030
Total of valid cases	256		

Table 7. Correlation between instructional strategies and socio-economical status.

Variable			Socio-economical status			Total
			High	Medium	Low	
S T R A T E G Y	Problem-based method	Count	10	5	16	31
		Expected count	13.2	10.4	7.4	31.0
		% within strategy	32.3%	16.1%	51.6%	100.0%
		% within socio-economical statue	9.2%	5.8%	26.2%	12.1%
	Case-study method	Count	43	68	28	139
		Expected count	59.2	46.7	33.1	139.0
		% within strategy	30.9%	48.9%	20.1%	100.0%
		% within socio-economical statue	39.4%	79.1%	45.9%	54.3%
	Common Teaching Method	Count	56	13	17	86
		Expected count	36.6	28.9	20.5	86.0
		% within strategy	65.1%	15.1%	19.8%	100.0%
		% within socio-economical statue	51.4%	15.1%	27.9%	33.6%
Total		Count	109	86	61	256
		Expected count	109.0	86.0	61.0	256.0
		% within strategy	42.6%	33.6%	23.8%	100.0%
		% within socio-economical status	100.0%	100.0%	100.0%	33.6%

Table 8. Instructional strategies and socio-economical status Chi-square test.

Variable	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-square	48.166(a)	4	0.000
Possibility rate	46.550	4	0.000
Linear-by-linear association	18.118	1	0.000
Total	256		

teachers working with parents who have high income. It was observed that problem-based strategy is mostly preferred in places where people have low socio-economical status. It can be stated that similarly, there is a correlation between instructional strategies and socio-economical status as seen in the Table 7. However, data was reanalyzed using chi-square test for independence.

It was observed that expressiveness value was $p = 0.000$, which meets the requirement for $p < 0.05$, and means that there is a meaningful correlation between finding instructional strategies and socio-economical status (Table 8).

The results indicate that faculty having MBA mostly intend to prefer case-study teaching method. On the other hand, MS faculties prefer case-study teaching method in the first place, common methods in the second and problem-based in the third place.

Teacher having MA degree were observed to use case-

Table 9. Correlation between instructional strategies and educational status.

Variable			Educational status					Total
			MBA	MS	MA	PhD	Other	
S T R A T E G Y	Problem-based method	Count	24	4	0	0	3	31
		Expected count	19.4	7.8	1.3	0.2	2.3	31.0
		% Within strategy	77.4%	12.9%	0.0%	0.0%	9.7%	100.0%
		% Within educational statue	15.0%	6.3%	0.0%	0.0%	15.8%	12.1%
	Case-study method	Count	115	20	1	1	2	139
		Expected count	86.9	34.8	6.0	1.1	10.3	139.0
		% Within strategy	82.7%	14.4%	0.7%	0.7%	1.4%	100.0%
		% Within educational statue	71.9%	31.3%	9.1%	50.0%	10.5%	54.3%
	Common teaching method	Count	21	40	10	1	14	86
		Expected count	53.8	21.5	3.7	0.7	6.4	86.0
		% Within strategy	24.4%	46.5%	11.6%	1.2%	16.3%	100.0%
		% Within educational statue	13.1%	62.5%	90.9%	50.0%	73.7%	33.6%
Total			160	64	11	2	19	256
		Expected count	160,0	64.0	11.0	2.0	19.0	256.0
		% Within strategy	62.5%	25.0%	4.3%	0.8%	7.4%	100.0%
		% Within educational statue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10. Instructional strategies and educational status Chi-square test.

Variable	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-square	86.803(a)	8	0.000
Possibility rate	91.575	8	0.000
Linear-by-linear association	33.940	1	0.000
Total	256		

study teaching method, while those having PhD degree were observed to use problem-based learning as their teaching method. Graduates of other faculties were also observed to employ problem-based strategy. After the data was reanalyzed using Chi-square test for independence, results were again supportive or similar (Table 9).

It was observed that expressiveness value was $p = 0.000$, which meets the requirement for $p < 0.05$, and means that there is a meaningful correlation between finding instructional strategies and educational status (Table 10).

The correlation between instructional strategies and experience of faculty is depicted in Table 11.

When faculty's preference of instructional strategy was assessed through their term of service, it was observed that the longer term of service they have, the more they prefer problem-based method as their instructional strategy. On the other hand, case-study teaching method and common teaching methods were observed to be implemented more when teachers are new beginners, but this trend was observed to decline much when they had longer term of service. After the data was reanalyzed using Chi-square test for independence, results were again supportive or similar.

It was observed that expressiveness value was $p = 0.000$, which meets the requirement for $p < 0.05$, and means that there is a meaningful correlation between

Table 11. Correlation between instructional strategies and experience.

Variable			Experience						Total
			0–5	6–10	11–15	16–20	21–25	26+	
S T R A T E G Y	Problem-based learning	Count	10	10	1	3	5	2	31
		Expected count	8.5	6.1	6.2	5.9	1.9	2.4	31.0
		% Within strategy	32.3%	32.3%	3.2%	9.7%	16.1%	6.5%	100.0%
		% Within term of service	14.3%	20.0%	2.0%	6.1%	31.3%	10.0%	12.1%
	Case-study teaching Method	Count	39	32	44	16	2	6	139
		Expected count	38.0	27.1	27.7	26.6	8.7	10.9	139.0
		% Within strategy	28.1%	23.0%	31.7%	11.5%	1.4%	4.3%	100.0%
		% Within term of service	55.7%	64.0%	86.3%	32.7%	12.5%	30.0%	54.3%
	Common teaching Method	Count	21	8	6	30	9	12	86
		Expected count	23.5	16.8	17.1	16.5	5.4	6.7	86.0
		% Within strategy	24.4%	9.3%	7.0%	34.9%	10.5%	14.0%	100.0%
		% Within term of service	30.0%	16.0%	11.8%	61.2%	56.3%	60.0%	33.6%
Total			70	50	51	49	16	20	256
		Expected count	70.0	50.0	51.0	49.0	16.0	20.0	256.0
		% Within strategy	27.3%	19.5%	19.9%	19.1%	6.3%	7.8%	100.0%
		% Within term of service	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 12. Instructional strategies and experience Chi-square test.

Variable	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-square	65.437(a)	10	0.000
Possibility rate	68.338	10	0.000
Linear-by-linear association	12.182	1	0.000
Total	256		

finding instructional strategies and term of service (Table 12).

DISCUSSION AND CONCLUSION

Here, discussions were made about the findings of this study, followed by some limitations, implications and recommendations for future research.

The validity and reliability study of finding instructional strategies scale was completed. Construct validity was achieved using factor analysis, and for the final format of the scale component factor analysis, and item test and analysis of correlations between item, and specialists opinions were taken.

Completing the study, it was verified that it was adequate for the scale to have 3 dimensions and enough variance. The variance in which 3 dimensions were explained together was 33.328%, coefficient of reliability was found as 0.732 according to Cronbach Alpha. Taking the measurement tools and anticipated 0.70 reliability

levels into consideration, it can be concluded that the reliability level of the scale was acceptable.

This scale, however, does not involve every strategy implemented in the classroom. Yet, it was developed in line with the instructional strategies commonly used in classroom. In future research more instructional methods can be used. Having applied the scale and obtained its results, it can be claimed that the 33-item finding instructional strategy scale is a reliable and valid one. For further studies, applying this scale to different samples and different populations can be suggested.

Due to time and resources constraints the quantitative method was used, however the future studies can adopt a qualitative methodology so to get to the root of the problem and explore the possible reasons for the use of each instructional strategy. The results of the present study revealed that teachers of business school mostly use either case-study method or the other common strategies. The faculty can be trained to make more use of problem-based strategies in order to create managers of action which is the requirement of the present era.

Moreover, the results of this study can be used by the people involved in curriculum development of the business schools to enable them to know the real scenario and strategically plan to shift the paradigm towards innovative learning methods. This will reduce the gap between the business schools and the industry, as business environment wants managers well-equipped with innovative ideas to beat the competitors not managers reproducing the traditional ideas of business which have become obsolete in the current time.

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