

Analysing The Influence Of Teaching Learning Dynamics On Total Quality Management Practices

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ABSTRACT

In olden days there are Didactic lectures where instructor teaches to large number of students where there is very low involvement of students. In traditional preferences of teaching students are unable to retain, remember and interpret the things. To make the students to learn more, retain more and interpret more there should be mutual sharing between teacher and student. So that student can share his feed back to the teacher and also can visualise the things. In medical education this practical approach and mutual sharing is highly prioritised as it directly effects the society if the teaching-learning process is ineffective. The present study focuses on knowing the different Teaching-Learning processes adopted in Medical Education, factors that hinder implementation of Teaching-Learning Practices, analyses the relationship between Teaching -Learning Process and Total Quality Management as well as evaluates impact of TQM on student learning, faculty development and institutional performance. Convenience sampling method is used to collect the data and the data is analysed by using factor analysis and ANOVA test and it is found that there is a strong relationship between teaching-Larning Process and Medical education.

Keywords: TQM, Medical Education, Teaching-Learning process.

INTRODUCTION:

Quality in education is a diversified skill to build and satisfy the educational needs of the clients or students. Assimilation of educational knowledge is very difficult to implement and satisfaction of customers is bit more difficult (Campatelli et al., 2011). The quality and the results of the education system is very dependent on the educational attainment of educators/student, because no education system is qualitatively higher than the quality and commitment of educators (Bua & Ada, 2013). Many educators provide services based only on experience, routine, and intuition; which goes well at certain times but from year to year, customers (students and parents) change and so do their needs, demands, and expectations. Therefore, there is no appropriate benchmark to meet the needs of students to produce quality education. Besides, educators are not empowered with the ability and knowledge to meet these new needs, new demands and new expectations to improve the quality of private secondary education (Gomes & Panchoo, 2017). Through compulsion and increasing demand for quality education, stakeholders involved in education are actively deliberate for adopting total quality management in the private sector to TQM for education (Sarrico et al., 2010). He uses this thought depends on a few elements, for example, request from industry, the outlook of the data age, as well as expanded contest and understudy search. To guarantee training can manage changes in business sectors and innovation combined with worldwide necessities, it is significant for foundations offering schools to utilize proper teaching plan, topics, and instructing procedures that are current as well as viable according to the point of view of understudies. Dramatic information development, detonating showing innovation, expanding admittance to key institutional practices, availability to information, and globalization of training expects teachers to constantly assess themselves and increment their adequacy by applying the TQM idea in school. Absolute quality administration implies the executives of all components of authoritative cycles, rehearses, frameworks, philosophies, and all gatherings included (Stanciu, 2003). The main aim of TQM is to create a climate in the organization where all resources are used creatively and efficiently which gives staff confidence in management. TQM models based on quality teacher teaching generally involve several principles such as teamwork, top management, leadership, customer focus, employee involvement,

continuous improvement tools, training, etc. (Murad & Shastri, 2010). TQM is viewed as more important to capture the pith of value improvement in optional schooling settings since it gives a structure that advances positive turn of events. Therefore, commitment to quality makes educators proficient and engages the students study and work hard for progress. TQM provides guiding principles for the education reform needed (Gomes & Panchoo, 2017). Although TQM was originally intended for the development of the industrial sector, Deming (1993) stated that management principles could be applied equally to the service sector, which also included education. On the other hand, the quality of education is becoming increasingly important for those involved in it. Therefore, the TQM approach in education not only involves achieving high quality but also affects all segments of the educational process, organization, management, interpersonal relations, material, and human resources, etc. According to Pratasavitskaya and Stensaker (2010) education is not only about quality and excellence, but also involving the quality of the effective presence of students, teachers, systems, and stakeholders, and the relationships among each other. Adopting the TQM factor in education is a way to improve the morale of students and educators, improve performance, provide high-quality services to customers (students and parents), and provide direction for schools (Mishra & Pandey, 2013; Wani & Mehraj, 2014). However, regarding the application of TQM in education, there is a serious debate because this concept was originally developed for manufacturing organizations. Pratasavitskaya and Stensaker (2010) referenced that not all administration speculations can be applied on the grounds that the modern world has an alternate idea from the universe of training. In this manner, schools need to focus on the significance of applying TQM variables to work on the course of instructive organizations. Likewise, it is important to address the basic difficulties looked in carrying out TQM in Training so that schools can make suitable strides proactively while applying TQM in instruction.

OBJECTIVES:

1. To know the different Teaching-Learning processes adopted in Medical Education.
2. To determine the factors that hinder implementation of Teaching-Learning Practices in Medical Institutions.
3. To analyse the relationship between Teaching-Learning Process and Total Quality Management.

RESEARCH METHODOLOGY:

Data is collected from various medical colleges located in Andhra Pradesh. Convenience sampling method is used to collect the data. The sample size is 250 respondents form various medical institutions. The sample contains both faculty and students related to medical education.

DATA ANALYSIS:

1. Different types of Teaching-Learning Processes adopted in Medical Education.

S.NO	Teaching-Learning Method	Description
1	Case based learning	It is the learning where students are given opportunity to explore real cases and asked to explore the symptoms of the patients. Students were allowed to discuss and find the problem. It enhances clinical knowledge among the students. (A.Singhal, 2017).
2	Team based learning	It is a learning strategy that where students are given a chance to apply educational strategies', brain storming is encouraged and followed by immediate feedback form students. TBL encourages students to communicate in a better way and increases patients care. (Michelle O'Daniel; Alan H. Rosenstein, 2008)
3	Flipped classroom	In this type online or offline classes are given to students in the form of prerecorded videos and the students are asked to do home work for gaining knowledge. This encourages self-directed learning rather than teacher-based learning. This encourages the students to analyse the facts and real problems that arises. (Hew and Lo, 2018).
4	Observational learning	The approach to observational learning involves the commitment of the motor system to learn, requiring its implicit engagement by the observer (Lawrence, Callow and Roberts, 2013)
5	Peer assisted learning	It is a team-based, analogous, non-professional learning framework which comprises a group of motivated people helping each other in the learning process. These participants, tutors and tutees, come from similar educational backgrounds. This learning strategy is

		conducted through selection of students with suitable characteristics of teaching medical concepts (Awasthi and Yadav, 2015)
6	e-learning	Computer technologies have shown greater impact on medical education, most recently through the electronic distribution of videos. The extensive usage of the vast educational resources available through the internet has significant medical importance. These online resources can be used for practical learning of clinical procedures, demonstrations of anatomical dissections as well as asynchronous learning through online lectures (Taveira et al., 2016).
7	Problem based learning	PBL is done through small group tutorials in which instructions are relayed by the teacher serving as a facilitator. These tutorials typically consist of various sessions, each dedicated to a problem in which a self-study period is allocated for searching and gathering information. This creates opportunities for students to pursue and lay a firm foundation of self-directed learning. (Donner and Bickley, 1993).
8	Simulation based learning	Simulation represents a man-made illustration of a true world to attain instructional motives through experiential learning. The main principle behind simulation learning is to utilize simulation aids to mimic real clinical scenarios. (Mulugeta et al., 2018).
9	Evidence based learning	EBM provides students with the necessary tools to learn, comprehend, and appraise medical literature. Implementing EBM into the conventional medical curriculum improves students' research knowledge, personal application, outlook, and future use of the learned methods (Ma et al., 2014).

2. Factors that influence implementation of Teaching-Learning Process in Medical Institutions:

Factor analysis:

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.932
Bartlett's Test of Sphericity	Approx. Chi-Square	53142.708
	Df	1081
	Sig.	.000

The above Table shows that KMO measure of sample adequacy is .932 which means there were sufficient items for each factor. In addition, the Bartlett value has to be significant ($P < .05$) in order to be used for factor analysis. In this study the significance value for each variable was .000, represents that the variables are correlated highly and were enough to give logical support for factor analysis.

Communalities		
	Initial	Extraction
Curriculum design	1.000	.987
Educational Pedagogy	1.000	.808
Technology	1.000	.900
Clinical Exposure	1.000	.910
Effective teaching methods	1.000	.858
Faculty development	1.000	.909
Assistance strategies'	1.000	.929
Professional education	1.000	.900
Diversity	1.000	.987
Inclusion	1.000	.862
Feedback	1.000	.849
Reflection	1.000	.880
Institutional support	1.000	.812
Patient safety	1.000	.857
Regulatory and Legal issues	1.000	.736
Health Information technology	1.000	.857

Ethics	1.000	.930
Assessment and Evaluation	1.000	.917
Medical terminology	1.000	.892
Clinical exposure and training	1.000	.854

Total variance explained:

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.121	30.044	30.044	14.121	30.044	30.044	7.924	16.859	16.859
2	8.130	17.298	47.342	8.130	17.298	47.342	7.283	15.496	32.355
3	6.569	13.976	61.318	6.569	13.976	61.318	7.164	15.243	47.598
4	5.412	11.515	72.833	5.412	11.515	72.833	6.195	13.180	60.778
5	2.858	6.081	78.914	2.858	6.081	78.914	6.188	13.166	73.944
6	2.256	4.801	83.715	2.256	4.801	83.715	4.593	9.771	83.715
7	1.000	2.127	85.842						
8	.712	1.514	87.356						
9	.551	1.171	88.528						
10	.424	.901	89.429						
11	.345	.734	90.163						
12	.340	.724	90.886						
13	.312	.663	91.549						
14	.256	.545	92.094						
15	.246	.524	92.618						
16	.233	.496	93.114						
17	.018	.037	95.921						
18	.013	.028	97.948						
19	.013	.027	99.975						
20	.012	.025	100.000						

On the basis of Varimax Rotation with Kaiser Normalization, 6 factors have been extracted. Each factor is constituted of all those variables that have factor loadings greater than 0.5. 20 variables were clubbed into 6 factors. These six extracted factors explained 83.75 per cent of the variability in attributes of Teaching-Learning Process.

As per the outcome of factor analysis, the factor 1(Curriculum design) comes out as the most critical factor with 16.859% of total variance. This is followed by factor2 (Self learning) that describes 15.496 % of total variance, followed by factor 3(Instructor based teaching) that describes 15.243 % of total variance, followed by factor 4 (Assessment based teaching) that describes 13.180 % of total variance, followed by factor 5 (Technology based education) that describes 13.166% of total variance and finally the factor 6 (Regulatory based learning) describes 9.771 % of total variation. Moreover, all statistically significant factors together (all six factors) explains 83.7% of variation.

3. Relationship between Teaching-Learning Process and Total Quality Management.

H₀: There is no association between TLP and TQM.

		Sum of Squares	df	Mean Square	F	Sig.
Curriculum design	Between Groups	.544	1	.544	3.353	.008
	Within Groups	94.067	580	.162		
	Total	94.611	581			
Self-learning	Between Groups	6.234	1	6.234	29.727	.000
	Within Groups	121.636	580	.210		
	Total	127.870	581			
Instructor based teaching	Between Groups	.225	1	.225	.792	.003
	Within Groups	164.551	580	.284		
	Total	164.776	581			
Assessment based teaching	Between Groups	1.145	1	1.145	7.345	.007
	Within Groups	90.446	580	.156		
	Total	91.591	581			
Technology based education	Between Groups	1.152	1	1.152	10.214	.001
	Within Groups	65.443	580	.113		
	Total	66.595	581			

Regulatory learning based	Between Groups	1.1422	1	1.231	9.214	.001
	Within Groups	75.443	580	.108		
	Total	76.595	581			

From the above table it can be seen that, the F statistic of all the Teaching learning factors is found to be significant at $p > 0.01$. Therefore, Null Hypothesis is rejected. It indicates that there is a strong relationship between teaching-learning process and Total Quality Management.

FINDINGS:

1. Teaching- Learning processes in medical education are very diversified. It includes case-based learning, Evidence based learning, Team based Learning, Flipped classrooms and so on.
2. Curriculum design is the most important factor that influence Teaching-Learning process followed by self-learning, instructor-based learning, Assessment based teaching, Technology based Learning and Regulatory based Learning.
3. It found that there is a strong relationship between Teaching-learning process and Total Quality Management.

CONCLUSION:

Total Quality Management is very long term, it comes from continuous review and revision. TQM not only focus on achieving higher quality; it focusses on upliftment of the society and educational field to the next higher level. The application of TQM in medical colleges is always challenging. This challenge can be achieved by implementing better teaching-learning practices at the medical institutions. For better implementation of teaching learning process there should be sophisticated technology in the medical colleges, good infrastructure that facilitates more learning, Quality staff, quality management as well as enthusiastic students. If this is done then there will be betterment of medical practioners in the society that ultimately leads to better medical services in the country.

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